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**EXPORT MEMORY: A PRELIMINARY INVESTIGATION OF ITS QUALITY,
ITS USE, AND ITS LINK TO EXPORT PERFORMANCE**

VOL. I

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Abstract

Exporting is one of the main ways in which organizations internationalize. With the more turbulent, heterogeneous, sophisticated and less familiar export environment, the organizational learning ability of the exporting organization may become its only source of sustainable competitive advantage. However, achieving a competitive level of learning is not easy. Companies must be able to find ways to improve their learning capability by enhancing the different aspects of the learning process. One of these is export memory. Building from an export information processing framework this research work examines export memory empirically. It particularly focuses on the quality of export memory, its determinants, its subsequent use in decision-making, and its ultimate relationship with export performance. This research has pioneered in the conceptualization and measurement of export memory quality and export memory use constructs. Within export memory use, four export memory use dimensions have been discovered: instrumental, conceptual, legitimizing, and manipulating. Results from the qualitative study based on the data from a mail survey with 354 responses reveal that the development of export memory quality is positively related with quality of export information acquisition, the quality of export information interpretation, export coordination, and integration of the information into the organizational system. Several company and environmental factors have also been examined in terms of their relationship with export memory use. The two factors found to be significantly related to the extent of export memory use are acquisition of export information quality and export memory quality. Lastly, the relationship between export memory quality and export performance has been found to be mediated by the extent of export memory use. The results reveal that export memory quality is positively related to the extent of export memory use which in turn was found to be positively related to export performance. Furthermore, results of the study show that there is only one aspect of export memory use that significantly affects export performance – the extent of export memory use. This finding could mean that there is no particular type of export memory use favored since the choice of the type of use is situation specific. Additional results reveal that environmental turbulence and export memory overload have moderating effects on the relationship between export memory use and export performance.

Keywords: export marketing, organisational learning

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Chapter One: INTRODUCTION

“Mastery of the complete learning process is rare. Most firms suffer disabilities at one or more stages of the process. Their inquiries may be constipated, their mental models myopic, the circulation of information constricted, or the collective memory afflicted by amnesia. The cost of these disabilities is high and mounting rapidly in markets experiencing accelerating rates of change. Yet organizations can develop better ways to learn about their markets, by understanding each step in their learning process, critically assessing their learning competency, and then correcting the learning disabilities.”

George S. Day, “Continuous Learning about Markets”, 1994 p. 3.

1.1. Background

1.1.1. Significance of Exporting

Exporting is a key feature of the 21st century global economy. It is an economic activity, dominated by marketing-based commerce (Morgan et al. 2003), accounting for over \$ 5 trillion of the value of world trade (World Bank 2001; Morgan et al. 2003) and 10% of global economic activity (International Monetary Fund 2001; Morgan et al. 2003).

International marketing is becoming increasingly important for companies from all economies, regardless of size, as a mode of delivering commodities to consumers worldwide (Leonidou 1995). Contemporary global business conditions favor exporting in achieving business success (Katsikeas 1994; Diamantopoulos et al. 2003) with the concurrent increase in the number of internationalized enterprises (Knight and Liesch 2002).

Exporting remains one of the most common ways by which organizations interact on an international scale (Katsikeas 1994; Yeoh 2000). It is generally the initial phase of international involvement (Hansen 1994; Diamantopoulos et al. 2003) through which

companies further internationalize (Johanson and Wiedersheim-Paul 1975). In entering the foreign market, these organizations reciprocally counter and monitor their growing foreign competitors, enlarge their market base, and augment profitability (Burpitt and Rondinelli 1998).

The movement of companies worldwide to internationalize is not merely an option to profit from the international conditions created by the synergy of international market globalization, declining trade barriers and increasing competition with foreign exporters. Exporting may also be seen as a response to the challenges for business survival in a morphing international market climate adverse to companies confined to serving their domestic market (Craig and Douglas 1996). This means that companies are compelled to internationalize when foreign factors (i.e., regulatory changes, trade agreements and foreign competition for domestic customers) alter the domestic business atmosphere (Katsikeas and Piercy 1993).

1.1.2. Importance of Export Learning and Export Memory

Despite the advantages that exporting can provide, it can be halted by factors internal and external to companies. By getting involved in exporting, an organization exposes itself to higher risks due to reduced knowledge and familiarity with the market abroad, and export markets' heterogeneity, sophistication or turbulence (Cavusgil 1984; Leonidou and Adams-Florou 1999; Leonidou and Katsikeas 1997). While opportunities for growth through exporting exist (Hansen et al. 1994), Yeoh (2004) warns that the probability for business collapse is also high, especially for newly created internationalizing companies.

The complexity of the international market (Raven et al. 1994), accounts for the main external barrier to exporting. The volatility of the global business arena means that what worked before may cease to be relevant today.

In this context, exporters' sustainable competitive advantages may lie in their ability to learn (cf., Shaw et al. 1992; White et al. 2003). The importance of export learning is highlighted by the fact that "competitive competence rests in a major way on a firm's level of export related skill, the learning that takes place and the knowledge that flows

from it" (Seringhaus 1988, p.100). In fact, continuous learning in a dynamic and competitive environment such as seen in the export market is crucial (cf., Schein 1990; Nonaka 1991; Day 1992; Garvin 1993) and becomes a true sustainable competitive resource when that learning ability is rare, valuable, and difficult to imitate and substitute (Wernerfelt 1984; Barney 1986; Barney 1991; Mahoney and Pandian 1992; Grant 1996; Decarolis et al. 1999). Thus, for exporting organizations to make learning their sustainable competitive advantage, they should enhance their export learning process (cf., Moorman and Miner 1997), making sure that they learn faster than the rate of environmental change (DeGeus 1988; Senge 1990; Day 1991). Along with the ability to learn, exporting companies must also exercise their ability to unlearn what has been learned in the past and which may have become obsolete (cf., Piaget 1968; Olofsson et al. 1973; Hedberg 1974, 1981).

At the heart of export learning (and unlearning) is export memory (cf., Simon 1957; Cyert and March 1963; Piaget 1968; Huber 1991; Moorman and Miner 1997; Akgun et al. 2003). Export memory, a kind of organizational memory, can be defined as export market information that has been stored in the organization in the form of assumptions and beliefs, export culture (i.e., language, shared frameworks, stories, grapevine), written documents, files and databases, know-how and skills, formal and informal relationships with export personnel and business partners, physical structure, and intuition that all personnel may have about the export business that could be brought to bear on present export-specific decisions (cf., Huber 1990; Walsh and Ungson 1991). Organizational memory influences the way organizations make decisions (Grant 1996; Kyriakopoulos and De Ruyter 2004) and the way they choose which area to focus their attention on (cf., Bardin and Majer 1983; Day 1991; Choo 2001).

Research has shown both the positive and negative influences organizational memory can have on organizational performance (Hedberg 1981; Day 1994; Moorman and Miner 1997; Kyriakopoulos and de Ruyter 2004). Moorman and Miner (1997) have argued that a deep understanding of, and an ability to manage, organizational memory will enable organizations to make use of the full value of organizational learning. Furthermore, organizational memory also confers competitive advantage to an organization (Wexler 2002). As Day (1991, p. 8) notes:

“Organizations without practical mechanisms to ‘remember’ what worked and why have to repeat their failures and rediscover their success formulas over and over again. Memory mechanisms are needed to ensure that useful lessons are captured, conserved, and can be readily retrieved when needed.”

In contrast, organizational memory is detrimental to a company’s performance if its use leads to the formation of competency traps (Cooper and Schendel 1976; Zucker 1977; Hedberg 1980; Daft and Weick 1984; Nystrom and Starbuck 1984; Herriott et al. 1985; Levitt and March 1988; Lawler and Galbraith 1994; Sinkula 1994) and induces companies to have “false sense of security with its current routines rather than experiment with superior procedures” (Sinkula 1994, p. 24). Competency traps arise when “favorable performance with an inferior procedure leads an organization to accumulate more experience with it, thus keeping experience with a superior procedure inadequate to make it rewarding to use” (Levitt and March 1988, p. 322). Furthermore, maladaptive specialization occurs with these traps especially when an organization is undergoing rapid learning (Herriot et al. 1985). False security has been associated with organizational memory when organizations stick to their successful routines that make an organization “too historically driven” leading to “selective attention to information which confirms past historical pattern” (Sinkula 1994, p. 42).

Organizations become blind to the peculiar merits of their own experience (Levitt and March 1988; Dixon 1992). This leads to rigid adherence to past successful routines (Hedberg 1980) that taints the interpretation of new market information (Nystrom and Starbuck 1984). As Sinkula (2002, p. 266) would put it, “[r]outines that have been successful in the past are quick to inhabit organizational memory and narrow an organization’s vision.” Such an attitude may render a company myopic in its vision. This would be dangerous in cases where export markets and the structures of competition have already evolved as “new insights fail to gain acceptance because they conflict with deeply held internal images that limit the individual to familiar ways of thinking and acting” (Cathon 2000, p. 7).

It is therefore crucial to develop a profound understanding of the nature of export memory in order for managers to be in a better position to use this potent resource (cf., Grant 1996) in the most effective and efficient way, and thus achieve a level of learning that sets them above their competitors (Stata 1989). In particular, the study on export memory quality would be very useful since an export memory that is erroneous,

unfounded, or unclear is prone to mislead the organization and impede learning (Day 1991). In case export memory is used, the quality of that export memory could influence the outcome. Using outdated export information in highly turbulent exporting environments (Ottesen and Grønhaug 2004) may seriously damage an organization's prospect for success (cf., Kohli and Jaworski 1990)

Weick (1979, p. 206) has emphasized the importance of memory quality and has argued that organizations must accept and live with their memories because memory is an important co-producer of the personality of the firm:

"If an organization is to learn anything then the distribution of its memory, the accuracy of that memory, and the conditions under which that memory is treated as a constraint become crucial characteristics of organizing. If knowledge is packaged in the mind of one individual presumably the organization will unfold in a different manner than if the memory is housed in a set of committees, with different interests. Furthermore, the organizations usage of its retained interpretations will also be affected by whether that memory is placed in files, rule books, or on computers and how much of that information that organization admits to."

An integral part of the study on export memory quality is the search for its determinants and possible moderating variables. Such knowledge would enable organizations to be proactive in developing export memory quality.

Export information studies show that export information possession is only indirectly related to export performance through export information use (Souchon and Diamantopoulos 1997; Diamantopoulos and Souchon 1999; Souchon and Durden 2003). As a result, a study on the nature and effect of export memory quality would not be complete without taking into consideration the different ways in which export memory is used and the impact this use has on export performance.

There are factors that are likely to intervene in the relationship between export memory use and its influence on export performance. For example, moderating factors are likely to include the turbulence of foreign market environments (Raven et al. 1994; Leonidou 1995). These foreign market environments could radically differ from those found in domestic markets (Leonidou 1995). Rate of change in some environments (e.g., exchange rate fluctuations, technological revolutions) may be so immediate that even working with organizational memory could not aid an industry to adjust (Anderson and Tushman 1990; Moorman and Miner 1998; Branch 2000). The results of these changes

could be unpredictable as the foreign market behaves in ways not observed in domestic markets (Czinkota and Ronkainen 1995). The mode of adjustment in these conditions is made even more difficult by the competition from other companies also aiming to adjust (Branch 2000).

Another possible mediating factor is the overload of export memory itself in the same manner that information overload may have an effect on the relationship between use and company performance (Peters et al. 1984; Hann et al. 1992; Speier et al. 1999). This investigation would test whether Speier et al.'s (1999, p. 338) findings that if information overload occurs, then "it is likely that a reduction in decision quality will occur", would be applicable to export memory overload. This is an opportunity to find out if the information processing requisite – time availability ratio paradigm for information overload (Schick et al. 1990; Hann et al. 1992) would apply to export memory overload. As information overload may have a distracting effect on the organization (Glazer et al. 1992), this may also be true in the case of having an amount of memory which is more than what the organization can handle.

The risks accruing from these internal, external and intervening factors necessitate time for "domestic maturation" before internationalizing (Yeoh 2000 p. 36). They could also be reduced by obtaining and using market information such as results from market research or readily available export data (Douglas and Craig 1983). In sum, companies tend to need prior experience related to exporting to enable them to learn how to internationalize further. That said, the rate of learning must be higher for "born-global firms" – companies that immediately internationalize upon their constitution (Chetty and Campbell-Hunt 2004).

Studying more the role of export memory use in exporting would shed light on some contentious issues. For example, some conceptual papers (e.g., Kotler 1966; Feldman and March 1981; Goodman 1993) have warned of the possible detrimental effects of symbolic information use. However, applying it to export memory, it may be possible that symbolic use of export memory may not be completely detrimental to performance (cf., Vyas and Souchon 2003). Furthermore, export memory may make decision-making faster since lessons from the past, for example in the form of routines, help facilitate choice of action (cf., Huber 1990). This is truly relevant in such an area as export marketing where speed of decision is crucial (cf., McNaughton 2001).

On a theoretical level, this inquiry would extend to export information processing and export learning through a more in-depth understanding of the nature of export memory and its accompanying nomological relationships. To a greater extent, this furthers knowledge on the resource-based and knowledge-based views on organizations. In this study, export memory is considered both as resource-based (cf., Barney 1991; Smith et al. 1996) and knowledge-based (cf., Penrose 1959; Cohen and Levinthal 1990; Day 1994; Spender and Grant 1996; Eriksson et al. 1997; Stewart 1997; Barkema and Vermeulen 1998; Imparato 1999; Autio et al. 2000; Davis and Harrison 2001; Wexler 2002) assets of an organization that are geared for creating competitive advantages in strategic management (cf., Porter 1985). In the resource-based view, competitive advantages are made from resources that are “valuable, rare, inimitable and non-substitutable” (Smith et al. 1996, p. 42). On the other hand, knowledge-based perspective would consider the “intangible material – knowledge, information, data, experiences, routines, structures, cultural apparatus and relationships – that can be put to use by a collectivity to create wealth” (Wexler 2002, pp. 393-394). Export memory could satisfy the characteristics of both frameworks of organizational assets for so long as it would be clearly conceptualized (cf. Wexler), with scope that includes both explicit and tacit knowledge (cf., Day 1994), where it could be used to explain internationalization of firms (cf., Cohen and Levinthal 1990; Grant 1996; Spender and Grant 1996; Eriksson et al. 1997; Barkema and Vermeulen 1998; Autio et al. 2000).

1.1.3. Identification of Research Gaps

As mentioned previously, export memory can be defined as export market information that has been stored in the organization in the form of assumptions and beliefs, export culture (i.e., language, shared frameworks, stories, grapevine), written documents, files and databases, know-how and skills, formal and informal relationships with export personnel and business partners, physical structure, and intuition that all personnel may have about the export business that could be brought to bear on present export-specific decisions (cf., Huber 1990; Walsh and Ungson 1991). More succinctly, export memory pertains to export information and knowledge stored within the organization. As a result of the link between export memory and export information/knowledge, a solid

platform from which to examine export memory quality and use is the literature on information processing (cf., Souchon et al. 2003).

The importance of information in business has been discussed for more than 100 years when the first efforts were made to theorize on management and organizational behavior (Laudon and Laudon 2000). Information has been considered in different contexts, one of which is within the market information system. Within the marketing information context, several trends of studies exist: the value of information within the marketing context (e.g., Glazer 1991); the antecedents of market information processes (e.g., Deshpande and Zaltman 1982; Kohli and Jaworski 1990; Moorman 1995); the link between market information processing and organizational learning (e.g., Sinkula 1994; Slater and Narver 1995), the factors that influence information/knowledge utilization in firms (e.g., Menon and Varadarajan 1992; Moorman et al. 1992), the association between market turbulence and information processing (e.g., Glazer et al. 1993), and information acquisition and use considered within the context of export marketing (e.g., Diamantopoulos and Souchon 1996, 1997; Souchon and Diamantopoulos 1997; Yeoh 2000; Souchon and Durden 2002; Souchon et al. 2003; Diamantopoulos et al. 2003; Vyas and Souchon 2003; Toften and Olsen 2003; Williams 2003).

As far as export marketing is concerned, export information has been touched upon or alluded to within the framework of a vast research area that includes the following, namely: export stimulation (e.g., Leonidou 1995), export barriers (Rabino 1980), the export development process (e.g., Leonidou and Katsikeas 1996), the managerial, firm-specific, and marketing strategy determinants of export performance (e.g., Aaby and Slater 1989; Chetty and Hamilton 1993; Leonidou et al. 1998, 2002; Zou and Stan 1998; Katsikeas et al. 2000), export information system (e.g., Leonidou and Theodosiou 2004), acquisition and use of export information (e.g., Diamantopoulos and Souchon 1996, 1997; Souchon and Diamantopoulos 1997; Yeoh 2000; Toften and Olsen 2003) and export information quality (Toften and Olsen 2004).

In fact, the study of export information started in the 1960s to determine the role of export information in stimulating exports and in deciding on foreign market entry strategies and on strategic marketing elements (Leonidou and Theodosiou 2004).

With the well advanced study on export information, it is striking to note that export memory has received so little attention. This research dearth is critical since organizational (or export) memory is a prerequisite to organizational (or export) learning (cf., Day 1994; 2002; Sinkula 2002). With today's turbulent business environment, export learning may be the only source of sustainable competitive advantage left to exporting organizations (cf., De Geus 1988; Stata 1989). Thus, a greater understanding of export memory becomes more urgent and crucial. Besides export memory's role in export learning (cf., Cyert and March 1963; Huber 1991), it has also been linked to improved decision quality (Day 1994, 2002), order achievement, and uncertainty reduction in ambiguous and multidimensional market environments (cf., McNaughton 2001).

Organizational memory facilitates efficiency and responsiveness since it provides the structure "to ensure that useful lessons are captured, conserved, and can be readily retrieved when needed" (Day 1994, p. 22). Lessons from past decisions become the present decision makers "valuable guidelines for future activities" (Miyashiro 1996, p. 61) doing away with the need to reinvent the wheel (Day 1994; Miyashiro 1996).

Furthermore, organizational memory dictates the interpretation of reality and influences what information the organization should seek and select, and the lessons to be extracted from them (Day 1994). Along with the potential positive impact of organizational memory on the organization's operations and eventual performance, if unchallenged, an obsolete organizational memory may lead to the organization's demise when it is not exposed and properly examined (Day 2002).

Following the high level of interest which organizational learning and organizational memory have attracted among both academicians and practitioners of late (e.g. Argyris and Schon 1978; Weick 1979; Hedberg 1981; Nystrom and Starbuck 1984; Cohen and Leventhal 1989; Stata 1989; Huber 1991; Walsh and Ungson 1991; Day 1994; Sinkula 1994, 1997; Lukas et al. 1996, Moorman and Miner 1997, Autio et al. 2000), a study on organizational memory within the context of export marketing is warranted, and as explained earlier, export memory quality and export memory use are key relevant constructs.

1.1.3.1. Export Memory Quality

Because of the impact which export memory may have on the export learning capability of the organization as well as on the export organization's ability to exercise better quality decisions, it is appropriate to consider the issue of quality in a study on export memory. As Day (1994 p. 24) said, "Nothing is likely to happen unless there is a wide-spread recognition of the need to improve the depth, quality, and timeliness of the base of market knowledge and its availability when decisions have to be made". Poor quality export memory may result to short-sightedness and an inability to distinguish relevant issues from unimportant ones. Because of potentially turbulent export environments, the relevance and validity of export memory may diminish quickly if not properly updated (cf., Day 2002). Since export memory is used by others who may not be its progenitor, the clarity and ease of understanding of this memory should facilitate its use (Wang and Strong 1996).

The first research gap identified is the lack of a holistic conceptualization of export memory quality. Scholars have applied the organizational memory construct at various different organizational levels. It has been adopted in a macro-level perspective, treating it as an organization-wide phenomenon (Kirsch 1971; Pautske, 1989; Walsh and Ungson 1991; Stein and Zwass 1995). Others have chosen to consider it in a micro-level, taking it as a phenomenon that exists within sub-levels in an organization (e.g., Day 1994; Sinkula 1994; Moorman and Miner 1997; Sorensen 1997). To the best knowledge of the author, a good number of studies have already dealt with the general conception of organizational memory (e.g., Huber 1991; Walsh and Ungson 1991) but no one has yet endeavored to study it in an export marketing context, and no study can be found specifically tackling the issue of export memory quality. Studies have focused on attributes of information quality (e.g., Strong et al. 1997; Wang et al. 1998; Huang et al. 1999) but not yet export memory.

Having established the importance of export memory quality, it is surprising that little has been done to date to define and delineate this construct. As a result of the dearth of research studies on export memory quality, no psychometric measurement of this construct currently exists. Yet, development of a scale of export memory quality would allow researchers to gain further understanding of the state of export memory in organizations, and provide a platform from which to examine its nomological network

of relationships. From a practical point of view, exporters would be in a position to ascertain the adequacy of their export memory resource.

With the lack of appropriate measures of export memory quality, also comes the lack of knowledge about those factors that are likely to determine it. Substantively, knowledge of antecedents to export memory quality would allow researchers to develop clear practical guidelines to exporters wishing to enhance their internal knowledge base.

Finally, little is still known about the outcomes of export memory quality. Indeed, why expand the effort to enhance the internal export knowledge base, if this is unlikely to be beneficial to the firm? Yet, the link to export performance is more likely to be an indirect one. Indeed, mere possession of optimal export memory would be pointless, unless this memory is actually put to good use (cf., Hart and Diamantopoulos 1993). It has already been established that export information availability and acquisition are related to the extent to which export information is used (Souchon and Durden 2002). Transferring this logic to the concept of memory, it is likely that the existence of good quality export memory would result in higher incidences of export memory use.

1.1.3.2. Export Memory Use

Studies have focused on the different dimensions of both the uses of information in general and export information in particular (Menon and Varadarajan 1992; Souchon and Diamantopoulos 1996, 1997; Diamantopoulos and Souchon 1999). However, research on export memory use is still lacking. To date, and to the author's best knowledge, no conceptual model or psychometric measurement of this construct exists. Our current lack of knowledge of how and to what extent export memory is actually put to use by export decision-makers hinders the development of export memory theory and measurement. Yet, understanding export memory use has both practical and theoretical implications. First, conceptual clarification and delineation of this construct is the first step to take before attempting measurement (cf., Churchill 1979). In turn, availability of psychometrically sound scales of export memory use can serve both as a diagnostic tool for decision-makers to ascertain whether they are maximizing use of

export memory as a key resource, and also as a platform from which to empirically study antecedents and outcomes of export memory use. The results of such a study would serve to guide export decision-makers towards better (more effective) use of export memory and recommendations as to how to enhance the more effective use of export memory. Despite research done on export information use's impact on export performance (Souchon et al. 2003), studies that relate export memory use to export performance are lacking in the literature.

Environmental turbulence has been found in some studies to affect the relationship between information use and performance (Glazer et al. 1993, Moorman and Miner 1997; Malhotra 2002; Kyriakopoulos and de Ruyter 2004). Environmental turbulence may also enhance the need for rapid decision-making, precluding the opportunity to collect new export information. In this context, export memory (an internal knowledge base) would become the only knowledge resource available to the exporter. However, ironically, the more turbulent the environment, the more quickly outdated this memory is likely to become (cf., Dickson 1992). Thus, environmental turbulence may well weaken, or even change the direction of, the relationship between export memory use and export performance. It would thus be beneficial to discover the moderating effects of environmental turbulence between export memory use and export performance.

1.2. Research Objectives

Given the research gaps outlined above, the objectives of this study include:

- a. Definition, delineation, and conceptualization of export memory quality. As explained earlier, little (if any) literature can be found on export memory quality. The present study tries to fuse the literature on organizational memory and quality literatures and consider them within the context of exporting. For example, the framework proposed by Walsh and Ungson (1991) and the different quality studies of Wang et al. (1998), as well as in-depth qualitative research are used to develop a conceptual definition of export memory quality.

b. Measurement of export memory quality. Established measure development techniques are used to develop a reliable and valid scale of export memory quality (e.g. Churchill 1979; Spector 1991; DeVellis 1992).

c. Development and testing of a conceptual framework of the antecedents and outcomes of export memory quality. This involves identifying factors influencing export memory quality while developing reliable and valid measures for the factors concerned, if they still don't exist. In this way, organizations will be in a better position to gain control over the quality level of their export memory. The domain of this research must be properly specified in order that it be properly examined (e.g., Churchill 1979). This research tries to build on factors that have been considered in past studies as they related to export market information, with its development and uses. To a great extent, factors considered in research on export market information are adapted to the context of export memory. Also, in-depth qualitative research is used to steer the conceptual model.

d. Definition, delineation, and conceptualization of export memory use. As has been mentioned earlier, it is likely that export memory will only affect export performance if it is actually put to use. However, very little academic knowledge on how and to what extent export memory is used currently exists. A solid platform from which to build a theory of export memory use lies in the export information use literature (Vyas and Souchon 2003).

e. Measurement of export memory use. Export information use has been developed as a multi-dimensional construct (Diamantopoulos and Souchon 1999). Following these findings, it is expected that export memory use will also be a multi-dimensional construct. Adaptation of the measures of Jaworski and Kohli (1993); and Diamantopoulos and Souchon (1999) are used, in conjunction with items revealed in the qualitative research phase of the study.

f. Development and testing of a conceptual framework of the antecedents and outcomes of export memory use. In order to develop an understanding of export memory use, its antecedents need to be identified and measured. Potential factors are considered following previous studies undertaken in the export information use field (Souchon and Diamantopoulos 1996). In terms of outcomes, several past studies have looked into the

effects of organizational memory in general on performance. These are used as a platform from which to begin the study of the relationship between export memory use and export performance. Moderating effects on this relationship are also considered.

1.3. Research Overview and Structure of Thesis

An outline of the flow of research work undertaken in order to achieve the objectives set in previous section can be gleaned from Figure 1.

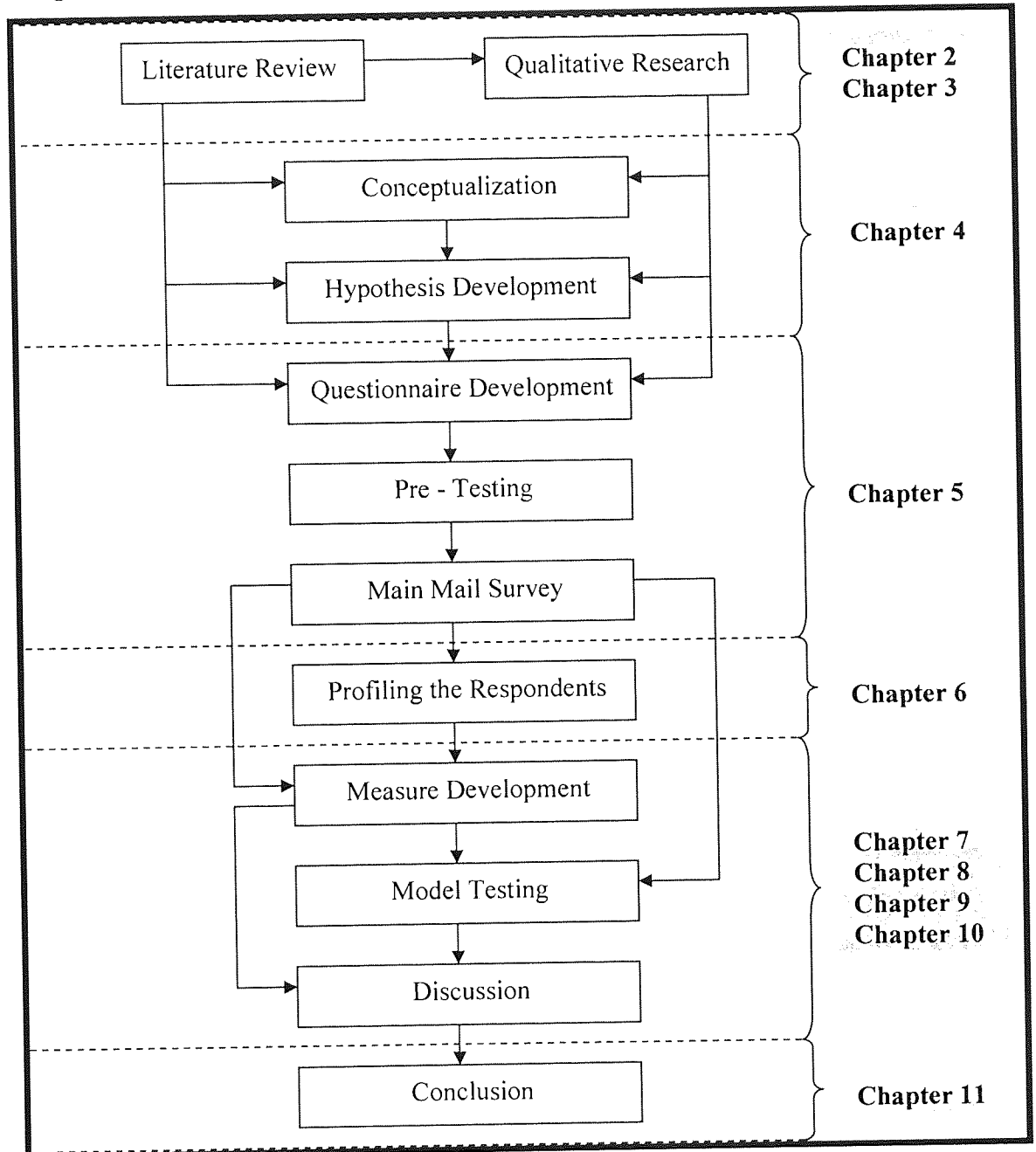
In Chapter Two, with the topic on organizational memory encompassing diverse areas, a multi-disciplinary approach to the literature is undertaken. Since organizational memory has been studied extensively in other areas outside of export marketing (e.g., Walsh and Ungson 1991; Grant 1996; Moorman and Miner 1997; Kyriakopoulos and de Ruyter 2004), it is deemed natural that an understanding of its roots be provided. The second part of the literature review covers the areas of research done on exporting, export information and organizational learning since they form the background upon which the study on organizational memory (i.e., export memory in this research) is considered.

Chapter Three is devoted to the qualitative part of the research. Since very scant research has been done on export memory quality and use, it was deemed necessary that an exploratory qualitative research be done first to identify factors that may be of value to the model covering export memory quality and the use of export memory. The first part of this chapter covers the methodology used which is then followed by the preliminary results. These findings are instrumental in defining constructs, hypothesizing relationships, and developing a pool of items to be used in measuring constructs. This goes hand in hand with the development of items based on the literature review.

Following the findings in the literature review in Chapter Two and the exploratory study in Chapter Three, a master framework of export memory quality and the use of export memory is proposed in Chapter Four and the focus of the research is outlined in

a model showing the relationships to be studied. The hypotheses to be tested through a quantitative manner are also presented.

Figure 1.1. Summary of the research process of the study.



Chapter Five covers the procedure involved in the quantitative study which is essential in order to achieve the objectives for this thesis. A description of how the questionnaire

was developed is provided. The pilot study methodology is discussed in detail, including the sampling procedure, data collection method, non-response analysis and the different changes implemented all throughout the three pretests which were undertaken. The process involved in the main survey is also discussed. The different statistical tools used are outlined and explained. This is crucial in the development of reliable and valid measures of the constructs used as well as in hypothesis testing.

Chapter Six provides a profile of the exporting companies that participated in the main survey. Two sections are provided to discuss the general company characteristics and the export-specific characteristics. The findings in these sections justify the specific analysis techniques used in the following four chapters. Furthermore, it may help explain the findings in the quantitative study.

Chapter Seven covers the development of export memory quality measures. It covers the process of developing reliable and valid measures for export memory quality.

In Chapter Eight, antecedents to export memory quality are examined. All of the constructs, except for one, are captured via multi-item measures "which tend to be more reliable and have less measurement error than single item scales (e.g., Spector 1992). There is a discussion of the hypotheses tested as they relate to export memory quality and its antecedents.

Chapter Nine covers the development of export memory use measures, again following rigorous procedures in achieving reliable and valid measures of constructs. Antecedents to export memory use are also examined. Measures are also developed for export memory overload and for environmental turbulence. Following measure development, the relationships hypothesized between export memory use and its antecedents are discussed using regression analysis.

In Chapter Ten, a discussion on the development of an export performance index is included since export performance has been considered to be a multi-dimensional construct and must be measured accordingly. Again through regression analysis, the resulting findings on the relationships between export memory use and export performance are discussed.

Finally, Chapter Eleven presents the conclusions. It covers a summary of the research findings, an enumeration of the theoretical and managerial implications, a presentation of the study's strengths and weaknesses, and a listing of areas for future research.

Overview of

Chapter Two: REVIEW OF THE LITERATURE

2.1. Review of Preliminary Constructs for Studying Export Memory Quality and Export Memory Use

2.1.1. Organizational Knowledge

2.1.2. Organizational Learning

2.1.3. Organizational Memory

2.1.3.1. Relationship between Organizational Learning and Organizational Memory

2.2. Export Information, Export Learning and Export Memory

2.3. Information Quality and Export Information Use

2.4. Export Memory Quality and Export Memory Use

Chapter Two: REVIEW OF THE LITERATURE

Conducting a literature review on export memory quality and export memory use is essential before undertaking any field research on these topics. This stage will provide a strong foundational backing for the development of a theory of export memory. It will also help develop specific, directional hypothesis to guide research implementation and data analysis. First, this literature review will provide a discussion of organizational knowledge, organizational learning and organizational memory as preliminary constructs for studying export memory quality and export memory use. This is important because it will show the close relationship that exists between the first three constructs. Second, organizational knowledge, organizational learning and organizational memory would be discussed within the context of the export function. Third, after expounding on export information, export learning, and export memory, there will be a review of studies on information quality and export information use which will be extended to export memory quality, and export information use, respectively. This is important because quality is theorized to influence the use of export memory which is expected to impact export performance. Finally, literature on export memory quality and export memory use, the two main central constructs of the study would be discussed.

2.1. Review of Preliminary Constructs for Studying Export Memory Quality and Export Memory Use

2.1.1. Organizational Knowledge

A comprehensive overview on knowledge will be considered first because of the integral role it plays in the development of the organization's memory. Desphandé (2000, p.1) provides the following succinct overview of knowledge:

“Knowledge is the lifeblood of any organization. Commonsense, intuition-based knowledge influences all decisions. Knowledge grounded in professional, scientific inquiry informs judgment. And no knowledge is as critical to management, or as elusive, as knowledge about customers, competitors, and markets.”

Technically speaking, knowledge is “codified information” in contrast to information which is a “pattern in data” (Bell 1973; Glazer 2000). A pragmatic view would treat knowledge as the awareness of the efficiency and effectiveness of different courses of action in producing particular outcomes based on experience (Ackoff and Emery 1972). To be precise, knowledge refers to “clear understanding of information and their associated patterns”; which should not be confused with data (“raw facts”), information (“meaningful, useful data”) or wisdom (“ability to best use knowledge for establishing and achieving desired goals”) (Bierly et al. 2000, p. 599). Knowledge serves as a template for interpretation and action either for individual members or for the organization itself (Walsh 2005). In an organization, knowledge is perceived as the interpretation of information (Nevis et al. 1995) and the result of its use (Tsoukas and Vladimirou 2001). When the emphasis is on the utility of knowledge taken in relation to an organization, knowledge becomes organizational. With this knowledge, the actions of the members of an organization are guided by the “sets of generalizations” formed by the organization from the “evolved collective understandings” of its members (Tsoukas and Vladimirou 2001).

The structure of knowledge could be viewed as the process of careful selection (Keegan 1974) of specialized information (Lehner and Maier 2000) responding to vital business decisions of a company. This is presented in Reisenberger's (1998) enumeration of significant “types of knowledge” which includes knowledge about customers, best practices/effective processes, their own competencies and capabilities, their own

products and services, emerging market trends and competition. Utility of certain information would transform them into core elements of organizational knowledge, i.e., information about overseas customers (Leonidou and Adams-Florou 1999).

The knowledge that an organization has can be either explicit or tacit (Kogut and Zander 1992; Reisenberger 1998; Bhatt 2000). Researchers have distinguished them based on their degree of materialization and ease of sharing, and difficulty of storage. Using the first criterion, explicit knowledge includes knowledge that can be expressed in numbers and words which could easily be shared with others; as opposed to tacit knowledge which includes “unarticulated knowledge” that is difficult to share with others (Reisenberger 1998). Using the second criterion, explicit knowledge is easy to store. In contrast, tacit knowledge is difficult to store because retrieved from individual minds that would have difficulty in expressing their knowledge (Kogut and Zander 1992; Bhatt 2000). Despite the difficulty in measuring tacit knowledge, it has been studied because it determines collective organizational competence (Nevis et al. 1995).

Organizational knowledge is a unique asset because it develops with use rather than being depleted (Reisenberger 1998). It is context-specific (Morgan et al. 2003) gained by deliberate attempt to achieve balance by maintaining old patterns and accommodating novel developments (March 1991). Balance would also be required in the intake of information so as to avoid information overload (Deshpandé 2000).

Although organizational knowledge allows an organization to navigate through a mass of information for decision-making, it can also narrow the options considered by managers (Walsh 2005). The existing knowledge structure encourages a) adherence to existing status quo solutions and b) disregarding novel inputs contrary to these (Walsh 2005). Lee et al. (1987, pp. 193-194) reported that “decision makers tended to discount research that were not in agreement with prior beliefs” which was similar to findings of Deshpandé and Zaltman (1982). On the question on whether such practice is beneficial to an organization, Lee et al. (1987, pp. 194) adds that:

“Whether or not this perseverance is undesirable depends on one’s view of the general quality, accuracy, and validity of corporate marketing research. If the presumption is made that conclusions based on marketing research are unlikely to be colored by political forces in an organization and are unlikely to reflect idiosyncratic personal bias, we would conclude that steps are needed to compensate for the human judgmental shortcomings observed in our experiment.”

As the importance of organizational knowledge has been discussed in this section, the next section explains its role in organizational learning. A background for organizational and export learning would also be provided.

2.1.2. Organizational Learning

Organizational learning is considered by organizational economists as a “capability in and of itself” (Cohen and Levinthal 1989). Organizational success is attributed to organizational learning (Lukas et al. 1996) which is associated with concepts of innovations, entrepreneurship, creation of new industries, foreign investment, synergy and diversification (Van Deusen and Mueller 1999). Together with innovation and specialization, learning is a recognized comparative advantage (Dijk 2002) in the emerging neo-technology or technology gap theories on international trade (Dosi 1990; Dijk 2002).

Organizational learning is the “process in which an organization’s members actively use data to guide behavior in a way as to promote the ongoing adaptation of the organization” (Edmonson and Moingeon 1998, p. 12). It includes “being aware of the need for different levels of learning, and the storing of knowledge in the organization” (Örtenblad 2004, p.132). At the core of organizational learning are the cognitive processes of understanding and reflection (Lukas et al. 1996). Learning includes the perception of the reasoning behind an action and not merely a calculated reaction to a certain stimuli. This way, learning takes place through the intake of new ideas into the knowledge-based nucleus of the company (Baets 1998). For organizations, learning occurs by edifying observed patterns from history into habitual conduct (Levitt and March 1988). In general, learning includes the stages of “discovery, retention, and exploitation of stored knowledge” (Epple et al. 1991; Moorman and Miner 1998). The process of organizational learning mainly involves the single loop learning that takes place by the accretion of behaviors to an established routine - done with the objective of improving it (Sinkula 2002). In this type of learning “only incremental behaviors are added to the routine to improve it” (Sinkula 2002, p. 257). But there is a higher level of learning – double loop learning – which organizations also undertake although in a less frequent manner since it involves more time and effort as well as demands a change of

model (Argyris and Schon 1978). This is also called generative learning which questions the assumptions and the basis of how the organization makes its decision. In a way it “involves discarding (unlearning) the present way of doing something and substituting it with a new way” (Sinkula 2002, p. 256)

The cognitive model and the routine model are useful in integrating the process of organizational learning. The first model suggests that decision makers mainly rely on their cognitive frameworks and mental models to make sense of, and act in, their environments (Abelson 1976; Fiske and Taylor 1991). These models or frameworks which are like abstract representations of things and events are developed over time through experience, dealings and communicating with other people, as well as through vicarious ways (Fiske and Taylor 1991) where “individuals interact with their environments and build cognitive frameworks” such that “the past shapes the template for understanding the future” (Bogner and Barr 2000, p. 213). The individual decision-maker uses this conceptualization of the past to understand the future.

The second model claims that routines are the foundation of organizational learning (Levitt and March 1988). Routines operate as independent superstructures that transcend the individual actors in the organization. As such, organizational learning can be sustained despite a substantial change in the membership of an organization. Imprints of these routines are stored through forms, rules, procedures, conventions, strategies, and technologies that perpetuate a particular learning scheme. However, this scheme would still be materialized and transfused through interactions within or between organizations whose accounts are stored in the collective memory of the organization (Levitt and March 1988). The routine model could be useful in explaining the process of accumulating knowledge by showing that “[o]rganizational knowledge is reinforced in all the activities of a firm and over time, becomes increasingly calcified in organizational practices” (Autio et al. 2000, p. 911). As knowledge gets “encoded into decision models” of an organization, routines for information processing are formed (Day and Nedungadi 1994, p. 33). Such routines are formed throughout an organization since these involves a lot of actors interacting through closely-knit relationships (cf., Cohen and Bacdayan 1994).

Only some of the experiences of the organization are transformed into routines mainly because of the high cost of transformation (Levitt and March 1988). The existence of

the resulting routines are dependent upon the efficiency of their storage and application vis-à-vis the changing composition of the organization. Part of the cost in managing the experiences is used for retrieval of the contents of such memory (Levitt and March 1988).

Viewing organizational learning as composed of routines has several underlying assumptions. First, an organization's behavior is dictated by routines (Cyert and March 1963; Nelsons and Winter 1982). The main justification for the process is the apparent acceptability of these actions by virtue of their habitual repetition. Second, these routines are history dependent, in so far as the actions of the organizations are responses to past experiences more than to current circumstances. In short, organizational learning is backward-looking (Lindblom 1950; Steinbruner 1974). Third, an organization's behavior is oriented to targets (Simon 1955; Siegel 1957) which change according to the difference between the expected and resulting output.

When organizations become competent at learning, they are referred to as learning organizations (Sinkula et al. 1997). These are "skilled at creating, acquiring, and transferring knowledge, and at modifying [their] behavior to reflect new knowledge and insights" (Garvin 1993, p. 23). Learning organizations are able to adjust to the shifting business environment (Örtenblad 2004) by sustaining the process of learning among their members while constantly upgrading themselves.

Organizational learning also involves discarding organizational models, also known as unlearning, especially when organizations are compelled by changes in the environment or fortuitous events such as changes in leadership and environmental shocks (Sinkula 2002). This is especially helpful for successful organizations which equate the continuation of routines with guaranteed success. (cf., Day and Nedungadi 1994).

This practice, based on the subjective feeling of learning, further reaffirms the commitment to perpetuate these routines which may no longer be relevant and useful, and at the same time alienating other habits (Levitt and March 1988). The organizations that would profit most are those that can unlearn entrenched routines at opportune times to provide better value to their customers (Sinkula 2002). In fact, the process of unlearning itself may become beneficial when an organization changes its leadership to "symbolize" change (Nystrom and Starbuck 1984).

There is a theoretical debate, however, on the locus of learning – whether it occurs in individuals alone or in organizations as a result of the storage of knowledge in the organization's systems, structures, cultures, artifacts (Van der Bent et al. 1999). Adherents of the former view argue that learning takes place in individuals and only the product of such process is adopted by the organization (Kim 1993). For example, some consider the process of learning and its product of knowledge as organizational as long as the output of individual learning is kept in the organization's memory (Hedberg 1981; Örténblad 2004). Organizational learning is treated as the absorption of the knowledge of its members into the organization's memory (Örténblad 2004). Those who support the latter view that learning is an organizational process, as opposed to a purely individual one, argue that the factors involved exist in the organization (i.e., social, political and structural variables) and in the relationships among individuals (Shrivastava 1983). A better view is not to confine learning to either individuals or organizations. Organizational learning takes place in much the same way as individual learning, by transforming information into knowledge coupled with a clear idea of the process (Abell and Oxbrow 2001).

Table 2.1 shows a sample of organizational learning dimensions as they were developed by different authors in the last fifteen years.

Table 2. Survey of the different organizational learning process constructs.

Author	Organizational Learning Constructs
Huber (1991)	1. Knowledge acquisition 2. Information distribution 3. Information interpretation 4. Organizational memory
Lessem (1993)	1. Knowledge origination 2. Knowledge development 3. Knowledge refinement 4. Knowledge promotion 5. Knowledge adaptation 6. Knowledge implementation (dissemination) 7. Knowledge application
Dixon (1994)	1. Generate 2. Integrate 3. Interpret 4. Act
Sinkula (1994)	1. Information generation 2. Dissemination 3. Interpretation 4. Memory
Hult and Ferrel (1997)	1. Adaptation 2. Assumption sharing 3. Developing knowledge base 4. Institutionalized experience effects

Table continues on next page.

Berthon et al. (1998)	<ol style="list-style-type: none"> 1. Knowledge Acquisition 2. Information Interpretation and Diffusion 3. Translation into Action 4. Storage in Organizational Memory
Crossan (1999)	<ol style="list-style-type: none"> 1. Intuiting 2. Interpreting 3. Integrating 4. Institutionalizing
Buchel and Raub (2000)	<ol style="list-style-type: none"> 1. Information Acquisition 2. Information Distribution 3. Information Interpretation 4. Organizational Memory
Popper and Lipshitz (2000)	<ol style="list-style-type: none"> 1. Collection 2. Analysis 3. Abstraction 4. Retention
Sadler (2000)	<ol style="list-style-type: none"> 1. Inputs 2. Processing of inputs 3. Arrange for the storage and retrieval of accepted inputs 4. Dissemination and ongoing reinforcement of what has been learned
Ellis and Shpielberg (2003)	<ol style="list-style-type: none"> 1. Formal learning 2. Information dissemination 3. Training 4. Information gathering 5. Information storage and retrieval

Table continues on next page.

Chen (2005)	<ol style="list-style-type: none"> 1. Discovering 2. Selecting 3. Transferring 4. Reflecting 5. Acquiring knowledge from environment 6. Contributing knowledge to environment 7. Building organizational knowledge
Ke and Kwok (2006)	<ol style="list-style-type: none"> 1. Knowledge acquisition 2. Information distribution 3. Information interpretation 4. Organizational memory
Akgun et al. (2006)	<ol style="list-style-type: none"> 1. Information acquisition 2. Information dissemination 3. Information implementation

What is striking with the different models developed is the similarity in the main ideas proposed. It could be deduced that most scholars propose a learning process that consists of four basic steps: acquisition, distribution, interpretation, and storage of information. Others would add a fifth one – action or response to information. Terminologies used may differ but their meanings are common. Take for example the acquisition of information (e.g., Berthon et al. 1998); it may be called collection (Popper and Lipshitz 2000), inputs (Sadler 2000), or generation (Sinkula 1994). But all of them signify the activity of obtaining external information.

The different learning steps seem to follow each other. A review would show that many authors (Huber 1991; Sinkula 1994; Berthon et al. 1998; Buchel and Raub 2000; Ellis and Shpielberg 2003; Akgun et al. 2006; Ke and Kwok 2006) would present an information resource life cycle (Weitzel 1987). Before information can be distributed, it has to be acquired; before it can be interpreted, it must be distributed; and before it can be stored, it must also be interpreted for organizational learning to happen. Their conceptualization of learning implies that memory forms part of the organizational learning process.

In the study, although organizational memory is affected by the acquisition, distribution, and interpretation of information; organizational memory is treated as an output of the learning process following Lukas et al. (1996, p. 240):

“It is important to distinguish between memorizing information, which refers to the encoding of information, and memory, which refers to the stored information. This distinction is important because memorizing and memory can be easily interchanged in the context of information-processing. The difference lies in their temporal qualities and their uses in the organization (cf. Walsh and Ungson 1991).”

Conceptually, psychological studies would provide the dichotomy that “[l]earning has more to do with acquisition, whereas memory has more to do with retention of whatever is acquired”, although this may not be readily observed in reality (Lim 1993, p. 39). Roth (2001, p. 578) would add that “no one theory can be identified as the definitive account of how memory works.” Even in marketing researches, “[a]lthough there is a widespread recognition of organizational learning and its importance to business performance, no model of organizational learning is broadly accepted” (Lukas et al. 1996, p. 234). Thus, organizational memory in this study is also treated as an output of the learning process to observe its individual effect on export performance. This was also done since this is an exploratory study that involves measure development of export memory quality and use (Chapter Five).

Organizations learn by accumulating and adopting the collective knowledge of their members, and in turn, the individuals learn from the knowledge formed by the organization (March 1991). Regardless of the locus, learning can occur only under a knowledge-based approach (Baets 1998) when there is past knowledge and experience – which Stata (1989) refers to as organizational memory.

After presenting the nature and importance of organizational learning, a discussion on organizational memory follows because of the crucial role it plays in organizational learning (Conklin 1996; Lukas et al. 1996; Lehner and Maier 2000; Schwartz et al. 2000).

2.1.3. Organizational Memory

With the positive effect of organizational knowledge on productivity, organizational effectiveness and innovative capacity, companies often make significant investments in the storage of this knowledge (Lesser and Prusak 2001). Organizational memory is the collective knowledge of an organization and contains policies, procedures (Day 1994), theories in use, shared mental models, information databases, formalized procedures and routines, formal cultural mores that guide behavior (Slater and Narver 1995). Organizational memory is “stored information from an organization’s history that can be brought to bear on present decisions” (Walsh and Ungson 1991, p. 61), composed mainly of shared understandings, norms and values (Örtenblad 2004). It is the means by which knowledge is stored in an organization for future use (Levitt and March 1988; Ackerman 1994; Sinkula 1994; Hong 1999; Arkun et al. 2002).

The coverage of organizational memory is broad as it includes everything that is contained in an organization that is somehow retrievable (Kim 1993). Its contents can include both “hard data” (i.e., numbers, facts and figures) and/or “soft information” (i.e. tacit knowledge, expertise and experience) (Morrison 1993; Balasubramanian 2003).

Although organizational memory could be seen as the ultimate receptacle of organizational knowledge (Argyris and Schon 1978), organizational memory is not meant to store all the information possessed by an organization (Schwartz et al. 2000). Instead, it should serve as a low maintenance receptacle for knowledge responsive to specific needs of the organization (Schwartz et al. 2000; Morgan et al. 2003).

Although organizational memory generally contains past knowledge, it may also contain the “anticipation of experiences not yet experienced” (Wexler 2002) (e.g., sales forecasts). Also, organizational memory includes the awareness of the contents of the collective knowledge of the organization and the segments of the organization where these could be accessed (Örtenblad 2004).

Regarding the locations of organizational memory, two theories exist. In the first theory, retention of memory falls into two basic receptacles: people and documents (Cyert and March 1963; Argyris and Schon 1978; Miller 1978; Morgan and Root 1979; Weick 1979; Covington 1981; Hedberg 1981; Smith and Stein 1989, 1992). These

structures could be extended to cover decision information (Walsh and Ungson 1991), stored in various depositories within the organization composed of individuals (Argyris and Schon 1978), accepted procedures (Cyert and March 1963) and standards of dress, protocol and furniture arrangement (Smith and Steadman 1981). These reservoirs are summed up into the categories of "brains and paper" (Pondy and Mitroff 1979). People are involved in the cognitive and emotive part of storage that encompasses cognitive maps, shared understanding, norms, roles, routine patterns of behavior, schema, scripts, language, etc. The documented aspect covers standard operating procedures, files, databases, photographs, recordings, etc. These two divisions of knowledge storage are not mutually exclusive since knowledge kept by people in their cognitive power could also be documented. Likewise, it is possible that documented knowledge reside in people's memory (Cyert and March 1963; Argyris and Schon 1978; Weick 1979; Covington 1981; Stein 1989).

Primacy is given to individuals as the basic storage units of information contained in structures. These are the individuals who compose the organization, transform their individual experiences in their memory stores as part of organizational memory (Cowan 1988). Contents of these memory stores would include their belief structures (Walsh 1988; Walsh et al. 1988), mental models (Weick 1979) and articulated beliefs (Sproul 1981). Their memory is facilitated by records and files that serve as memory aids which also form part of the organization's memory (Walsh and Ungson 1991).

In addition, Wexler's (2002) findings that information hoarded by one individual would not become part of organizational learning, and eventually organizational memory, supports the idea that one of the main repositories of organizational memory would still be the memory of its individual members. This is seen in the case where a member of the organization should leave for any reason (e.g., to join the competition), where the memory that he or she has would be lost (assuming still that s/he has not saved it in the organization). This case illustrates that individual memory can therefore be considered too transient to be an effective part of the organizational or functional memory. In contrast, an integral part in the creation of the organizational or functional memory is the process of information sharing among the individual decision makers. The sum of individual memory is transferred into an organizational or functional memory through this process (e.g., Argyris and Schon 1978; Traugott 1978; Levitt and March 1988;

Sinkula 1994; Moorman and Miner 1997). These studies assert that only individuals have the rational capacity to relate a particular decision in light of an organization's experiences because causality can only be done by individual members of the organization (Wong and Weiner 1981). This understanding is imputed to the organization through the culture that emanates from the collective interpersonal assessment. This resulting culture, which is usually vague, would then reflect the perceived who, what, when, where and how between the cause and the upheld decision (Walsh and Ungson 1991). In the retrieval stage, individuals draw from the content of the organization's memory by heuristics and schemata (Nisbett and Ross 1980; Albenson and Black 1986) in problem solving (Taylor et al. 1978).

The focus on individuals as primary storage units of organizational memory would necessarily involve the interpersonal interaction among them. At this stage, culture will have repercussions on inputs to organizational memory. Culture, as a part of an organization's memory, refers to the common learned and transmitted means of dealing with a problem among members of an organization (Schein 1984; Walsh and Ungson 1991). Components of culture include language (Donellon 1986), shared frameworks (Duncan and Weiss 1979; Shrivastava and Schneider 1984), symbols (Pfeffer 1981; Dandridge 1983), stories (Martin et al. 1983; Wilkins 1983), sagas (Clark 1972) and the grapevine (Davis 1953). Culture as a receptacle of memory would accommodate the supra-individual collectivity (Halbwachs 1950; Douglas 1986).

In the second theory, organizational memory is located in many sites within the organization (Lukas et al. 1996; Hong 1999) which could be grouped into six, namely: individuals, organizational culture, organizational transformations, organizational structures, organizational ecology, and external archives (Walsh and Ungson 1991; Ackerman 1994). The second theory encompasses the first one by expanding the locus of organizational memory from individuals and documents to the other receptacles mentioned above. Individuals have recollections of the history of the organization through their experience, which they retain in their own memory stores (Cowan 1988). Culture has been defined as a "learned way of perceiving, thinking, and feeling about problems that is transmitted to members in the organization" (Walsh and Ungson 1991, p. 63). Transformation is standard operating procedures which the organization upholds in all areas of its operation (Walsh and Ungson 1991). Knowledge is preserved as

procedures (Cyert and March 1983), rules, (March and Sevón 1984) and formalized systems (Walsh and Dewar 1987). Structures cover individual roles which store organizational information (Walsh and Ungson 1991). Ecology covers actual physical structure or workplace of an organization. Lastly, external archives are repositories outside of the organization, e.g., former employees, which still contain information on the organization.

The discussion on the receptacles of organizational memory and their locus is significant because organizational memory could be studied in relation to its storage depots as done by Walsh and Ungson (1991).

2.1.3.1. Relationship between Organizational Learning and Organizational Memory

Memory development refers to the process of encoding the company's experience and accumulated learning (Berthon et al. 2001). Closely related to this concept is organizational learning. This means that organizations refer to their past experiences in order to direct their current behavior.

There are different views on the relationship between organizational memory and organizational learning. For example, Lukas et al. (1996) perceive organizational memory to be a concrete outcome of organizational learning, where organizational learning could occur independently of organizational memory. An alternative perspective on the relationship between organizational learning and organizational memory is that the former proceeds from the latter (Conklin 1996; Lehner and Maier 2000; Schwartz et al. 2000). In this context, remembering (i.e. memory), is *sine qua non* for organizational learning (Van der Bent et al. 1999). Organizational memory is regarded as a vital repository for the yields of organizational learning to the extent that organizational learning remains incomplete until the contents of individual learning are assimilated within organizational memory (Argyris and Schon 1978).

As a concept, organizational memory is a phenomenon that is part of an organization's information processing cycle (Huber 1991; Sinkula 1994; Slater and Narver 1995). Day (1994, p.18) noted that "[o]rganizations without practical mechanisms to 'remember' what worked and why have to repeat their failures and rediscover their success

formulas over and over again". Scholars have repeatedly stated that although organizations do not "remember" in the true sense of the word, using organizational memory as a metaphor (Moorman and Miner 1998) is very valuable in understanding organizational knowledge, its acquisition, storage, retrieval, and use by its members (Weick 1979; Huber 1991; Walsh and Ungson 1991; Anand et al. 1998). Thus, organizational memory in any form improves organizational decision-making (Johnson 2000) by providing patterns of judgments (Souren et al. 2002). Organizational memory, as a receptacle of information, reinforces desired behavior (Walsh and Ungson 1991) while contributing to the honing of core competencies, increased autonomy and eventual lowering of transactional costs (Hedberg 1981). Organizational memory is vital since lessons from experience which do not enter into collective memory cannot be fully utilized. Nevertheless, organizational memory could either enhance or inhibit the learning process. Organizational memory could be a "two-edged sword" that either aids learning from varied sources or isolates the organization's knowledge to what it already has (March 1991).

The negative aspects of organizational memory use have been related to its history-dependent approach (Lindholm 1959; Steinbruner 1974), where the organization could be induced to re-use defective procedures which in the past have yielded good results. As a result, the opportunity to test better alternative procedures available is limited. Instead, the organization continues to rely on inferior procedures which it has engaged. This infirmity is referred to as the competency trap (Levitt and March 1988) which is a factor that prevents the adoption of new technologies (Cooper and Schendel 1976) and procedural adjustments (Zucker 1977). The organization then would have difficulty in improving entrenched habitual competencies (Maidique and Zirger 1985; Whetten 1987). Consequently, an organization would fail to employ new procedures that could have optimized its operations (Arthur 1984).

These criticisms are outweighed by the advantages of organizational memory (March 1981; Cohen and Levinthal 1990). Organizational memory, although relying on previous knowledge, enables an organization to make better use of new knowledge. For example, the content of organizational memory greatly influences the choice of alternatives (March 1981; Burgelman 1988) along several tiers of competencies of an organization. High levels of past knowledge on a particular field enable an organization

to absorb better new information related to such field. The organization can have a credible basis to adjudge the probative value of the new information and use it to achieve the organization's ends. This is the concept of "absorptive capacity" (Cohen and Levinthal 1990).

Absorptive capacity rests on the premise that prior knowledge is a vital requisite for efficient utilization of new and related information through the process of association (Cohen and Levinthal 1990; Argote et al. 2003). This means that it would be easier for an organization to see and use opportunities which it is familiar with. This claim was strengthened by studies on memory development where prior knowledge was positively related to the integration of new related knowledge into memory (Cohen and Levinthal 1990). One of the types of prior knowledge that increases absorptive capacity is problem-solving skills (Pirolli and Anderson 1985; Cohen and Levinthal 1990). These skills increase creativity by aiding the identification of new permutations (Cohen and Levinthal 1990). In the process of integration, the existing structures of the prior knowledge are re-enforced, a fact that further facilitates the acquisition of new information. Both the process of absorption and the content accumulated are enhanced (Bower and Hilgard 1981; Cohen and Levinthal 1990). This process is supported by the theory that learning is cumulative. Learning is more efficient when the new material could be associated with prior knowledge (Cohen and Levinthal 1990).

An application of absorptive capacity is intuition (Jett and Brown 2002) and "blind luck" under the null hypothesis (Shane and Venkataraman 2000). Intuition is a kind of intelligence and is formed through experience that is accumulated from extended observation, action and feedback (Lieberman 2000). Decision makers often use intuition for decision-making despite the availability of information (Yeoh 2000). With intuition, they are able to instantly grasp problems (Weintraub 1998) then arrive at solutions even if the decision-makers' explanation for arriving at the solution only remains in the subconscious level (Jett and Brown 2002). Since the explanation is not articulated, intuition is dismissed as "guesswork or clairvoyance" (Jett and Brown 2002). However, intuition is actually a function of accumulated knowledge of a particular milieu where past problem-solving skills are applied to current or future situations bearing similar elements to those of the past (Jett and Brown 2002). Intuition occurs not only in individuals but also in groups, which is favorable to endeavors such

as product innovation (Eisenhardt and Tabrizi 1995; Jett and Brown 2002). For example, members of a team for product innovation would learn the best way in which the team works together. Each one gets to understand his/her and other people's role in that group. In the final analysis, intuition is a demonstration of the principle of absorptive capacity underlying the relationship between organizational memory and organizational learning. For example, intuition would lead to action "which may not, at the moment of commitment, be based on explicit, propositionally stable principles and of the need to handle the personal uncertainties which this kind of action involves" (Jankowicz 2001, p. 61).

Cognitive frameworks are parts of the larger concept of organizational memory that affect what is noticed, how it is interpreted, and suggest what actions should be taken (Daft and Weick 1984; Galambamos et al. 1986). Frameworks enable managers to comprehend, understand, explain, attribute, extrapolate, and predict (Starbuck and Milken 1988). These frameworks and models are not only individual-level concepts but exist at a supra-individual level since they could take an existence of their own independent of the individuals who created them. This happens when individuals communicate and share their knowledge, ideas, or concepts among themselves (Wiley 1988). When they share their experience and knowledge with one another, they begin to have a common knowledge and understanding of the world. These firm-level frameworks are also called organizational belief systems (Bartunek 1984), collective schema (Dunn and Ginsberg 1986; Houston 1993) or shared mental model (Day 1991; Day and Nedungadi 1994).

Since organizational memory is a repository of past experiences (Walsh and Ungson 1991), it has been argued that it might go against the occurrence and effectiveness of improvisation, which is an intra-organizational innovation that deviates from existing practices or knowledge (Moorman and Miner 1998). However, it can also be argued that once improvisation occurs, organizational memory becomes a catalyst in the production of commodities (Moorman and Miner 1998). This means that organizational memory might act in two different ways with regard to improvisation: it may suppress improvisation initially; and it may enhance it once improvisation begins.

A well designed organizational memory will allow the organization to find old solutions to new problems without much effort as it will help it maintain strategic

direction over time and strengthen organizational identity (Stein 1995). On its own, organizational memory will facilitate organizational learning by providing the members of the organization the benefits of the lessons from past experiences, both those that brought success to the organization and those that could be considered as failures. A developed organizational memory makes market information less equivocal (Sinkula 1994).

Preservation of organizational memory becomes increasingly important to organizations as they recognize that experiential knowledge is a key to competitiveness (Stein and Zwass 1995). With organizational memory, an organization can introspect on its past actions while learning from its own behavior (Schwartz et al. 2000). Organizational memory, as part of the learning process, captures and conserves useful information.

The nature of stored knowledge or organizational memory and its role in organizational learning was just discussed. The following section will now consider organizational knowledge and memory within the context of the export operation and eventually relating export memory to export learning.

2.2. Export Information, Export Learning and Export Memory

Seen from either the process theory of internationalization (Johanson and Valhne 1977, 1990) or the new venture theory of internationalization (MacDougall et al. 1994; Oviatt and MacDougall 1997), knowledge is a prerequisite to business success when dealing with the international market (Autio et al. 2000). Within the context of export operation, export information or knowledge has been considered to be an important factor that either stimulates (Tesar and Tarleton 1982; Katsikeas and Piercy 1993) or inhibits (Alexandrides 1983; Leonidou 2000) export operations. It is also considered to be a key factor in foreign market entry methods (Reid 1984) and strategic marketing elements (Samiee and Walters 1990; Koh 1991).

With the perceived importance of export information and knowledge in export decision making, a wealth of research on the topic already exists. Studies have covered antecedent factors to export information behavior such as company size (Benito et al.

1993; Leonidou and Katsikeas 1997; Yeoh 2000), industry type (Wood and Goolsby 1987; Leonidou 1997; Wood and Robertson 2000), ethnic background of the exporter (Chaudry and Crick 1998), export experience (Hart et al. 1994; Leonidou 1997), export market expansion strategy (Koh et al. 1993; Hart et al. 1994), psychic distance (Johanson and Valhne 1977; Bodur and Cavusgil 1985), macroenvironmental forces such as foreign economic, socio-cultural, political-legal and technological (e.g. Tesar and Tarleton 1982; Evirgren 1993). Within task environment-related factors, information on foreign customers (Samiee and Walters 1990; Leonidou 1997), foreign competitors (Samiee and Walters 1990; Koh et al. 1993) and marketing intermediaries (Benito et al. 1993; Leonidou 1997) have also been covered in an export context.

Market-related characteristics which refer to the "size and growth patterns, structures, entry conditions, preferences, potential, and company position/share in overseas markets" (Leonidou and Theodosiu 2004, p. 22), have also been investigated (e.g., Samiee and Walters 1990; Leonidou 1997; Robertson and Wood 2001) as antecedents export information behavior.

Lastly marketing mix within the export market has been also properly covered in studies in relation to exporting by Tesar and Tarleton (1982), Samiee and Walters (1990), Leonidou (1997) and Chadry and Crick (1998).

From past studies on export information acquisition (e.g., Reid 1984; Bodur and Cavusgil 1985; Leonidou and Katsikeas 1997; Souchon and Diamantopoulos 1997), dissemination (Benito et al. 1993) and utilization (e.g. Souchon and Diamantopoulos 1996, 1999; Souchon et al. 2003; Toften and Olsen 2003; Vyas and Souchon 2003); and those about the contribution of foreign market knowledge to export performance (Samiee and Walters 1990; Hart and Tzokas 1999; Yeoh 2000; Richey and Myers 2001), Leonidou and Theodosiu (2004, p. 28) found that "the effect of specific elements of information behavior on export performance was relatively weak".

Given both the cost of collecting export information (Cavusgil 1983) combined with risks of information overload (Souchon and Diamantopoulos 1997), both learning and the development of an internal knowledge base have been integrated into international learning frameworks (Yeoh 2004). Efficiencies in export decision-making are associated with the development of an internal knowledge base (cf., Rich 1977).

Within the context of an exporting organization, export memory refers to the export information and knowledge (or encoded experience) stored for future use, that is concerned about, and related to, the export function, and which could be brought to bear on present export decisions (cf., Walsh and Ungson 1991; Berthon et al. 2001; Forsgren 2002).

Proceeding from the previous discussions on export memory, the content of export memory in this study would cover export knowledge and information that are already distributed and interpreted within the organization (cf., Huber 1991; Sinkula 1994). Specifying the coverage of export memory in this study is necessary because previous researches on export knowledge and export information have not reached a consensus on the domain of export memory (e.g. Samiee and Walters 1990; Souchon and Diamantopoulos 1997; Leonidou and Theodosiu 2004).

Following the earlier discussion on organizational learning and the important role that organizational memory plays within the learning process, it would be easy to understand that within the export context, export learning (i.e., learning that is focused on the export market and exporting issues) would make use of export memory.

Companies that learn during times of business prosperity prove to be the enduring business victors (Sinkula et al. 1997). Also, learning becomes a sustainable strategic advantage in export markets when export organizations learn at a rate that at least equals the rate of environmental change (cf., Stata 1989), that must be better and faster than their competitors (DeGeus 1988). In fact, learning at the individual, team and organizational levels could be the sole competitive advantage in an environment where most organizations are induced to learn (Ellinger et al. 1999). This is particularly applicable for knowledge-intensive industries (Stata 1989) and the exporting arena which face a turbulent environment. Indeed, the ability to learn and change would not only be the advantage, but may be one of the most important mechanisms for sustaining competitive advantage (Mason 1994).

The outcomes of studies on export information and export performance could be extended to the study of export memory and its impact on export performance.

An integral part of the study on information is its effect on export performance. Information has been considered a strategic asset of an organization that allows it to sense better the market and eventually achieve a better position over its competitors in the market place (Porter and Millar 1985; Day 1994). The effective use of information is essential in gaining competitive advantage since the firm can better understand its foreign markets and in this way create a heightened customer value (Diamantopoulos and Souchon 1999).

Companies using international marketing information are more likely to compete in terms of prices, establish a separate export department which in turn results to higher export profitability (Koh 1991). These findings are qualified by the study of Souchon and Diamantopoulos (1997) where it was observed that there is no significant relationship between the dimension of export information use and export profitability; suggesting that information utilization in general in any mode would have an impact on export profitability.

There were a series of studies concluding that there is a direct relationship between foreign market knowledge and superior export performance such that companies who are deprived of the information they need were not able to maximize their potential overseas markets (Cunningham and Spiegel 1971; Kothari 1983; Christensen et al. 1987; Samice and Walters 1990; Hart and Tzokas 1999; Yeoh 2000; Richey and Myers 2001). However, the specific effects of the elements of the information did not have a significant relationship with export performance itself (Leonidou and Theodosiou 2004). In general, export information behavior has been related to export profitability – the degree of making profits from foreign market operations (Leonidou and Theodosiou 2004).

The next section considers the importance of quality information and export information use. These discussions are relevant since quality of information has been known to affect the use of information and export performance (Goodman 1993; Souchon and Diamantopoulos 1996; Diamantopoulos et al. 2003; Vyas and Souchon 2005; Toften 2005). Quality of information serves as the indicator of the value of the information, which in turn encourages its use (Toften and Olsen 2002). As found by Diamantopoulos et al. (2003), and Toften and Olsen (2002), “use of information has frequently been seen as a critical determinant to export performance (Toften 2005, p.

201),” Research on information quality is extended to export memory quality since export memory use is likely to be determined by its quality.

2.3. Information Quality and Export Information Use

Some studies on quality information focus on the difference between objective and perceived quality (e.g., Garvin 1983; Jacoby and Olson 1985; Parasuraman et al. 1986). Zeithaml (1988, p.4) refers to “objective reality” as “actual technical superiority or excellence of the products” and to “perceived quality” as “the consumer’s judgment about the superiority or excellence of a product” (p.5). “Objective reality” pertains to some predetermined standards of excellence which can be measured or verified. However, there is some debate on how to conceptualise and measure quality (e.g., Curry and Faulds 1986; Sproles 1986) with some authors (e.g. Maynes 1976) espousing the idea that there was no such thing as objective quality. For this latter group of researchers, all quality evaluations are subjective. Since “all quality is perceived by someone, be it consumers or managers or researchers” (Zeithmal 1988, p. 5), perceptual quality was embraced over and above objective quality in this study. Furthermore, quality is a “relative construct – one that varies according to a receiver’s context and perspective – than as something that is absolute” (Maltz and Kohli 1996, p. 48). In addition, people respond to what they perceive (cf., O’Reilly 1982; Menon and Varadarajan 1992).

Quality being a complex (Gronroos 1982), multidimensional (Carman 1990) and multilevel (Dabholkar et al. 2000) construct is difficult to pin down to a single definition (Reeves and Bednar 1994; Toften and Rustad 2005). Furthermore, quality is considered to be industry and context specific (Lapierre et al. 1999). Berawi (2003, p. 426) presented five definitions and perspectives on quality:

- (1) Transcendent – Quality is neither mind nor matter, but a third entity dependent of the two...even though quality cannot be defined, you know what it is.
- (2) Product-based – Quality is based on the presence or absence of a certain attribute.
- (3) Manufacturing-based – Quality is conformation to requirement.

(4) User-based – Quality means fitness for use.

(5) Value-based – Quality means the degree of the excellence at an acceptable price and the control of variability at an acceptable cost.

Any attempt at defining quality must be done in “accordance with the customers’ and users’ expectations, needs and wants” (Toften and Rustad 2005, p. 677). The evaluation of quality in information is more than ever determined by the user who evaluates it in terms of its fitness for the purpose for which it is going to be used, for example, “stock quotes delayed by fifteen minutes are accurate but of little value to real-time stock traders” (Wang et al. 1998, p. 101).

Wang and Strong (1996) identified sixteen information quality dimensions, namely, accuracy, objectivity, believability, reputation, accessibility, ease of operations, security, relevancy, value added, timeliness, completeness, amount of information, interpretability, ease of understanding concise representation, and consistent representation. These sixteen dimensions are grouped in four categories, namely: (1) intrinsic information quality; (2) accessibility information quality; (3) contextual information quality; and (4) representational information quality. These findings were adapted in the study (see Table 7.1, Chapter 7).

Research on the quality of export market information is scarce (Shuzeng 2003). Encouragingly a recent study by Toften and Rustad (2005) focused on the quality of export information wherein they considered the attributes of information quality of export market assistance. Export market assistance would include “first, standardized and customized market information and guidance on exporting and export marketing, and second, more comprehensive programs ranging from helping firms research specific foreign markets, market visits – individual or with trade missions – trade fairs, to actual market entry” (Seringhaus 1985, pp. 294-295).

Just like a product that has a life cycle which needs to be managed, information also has its own life cycle (Weitzel 1987; Souchon and Diamantopoulos 1996) which also needs to be managed for the information to remain competitive. At the heart of managing the information is the effort of ensuring that its quality stays at a level that makes it appropriate to the purpose for which it is going to be used (Wang et al. 1998; Ballou et al. 1998).

Quality of information is even more crucial for companies engaged in business abroad, than for counterparts limited to their domestic market, because of higher risks due to great diversity in foreign markets, multiplicity of the parameters involved in selling abroad, existence of new variables not present in domestic operations, and the high intensity in international competition (Johanson and Valhne 1977; Reid 1981; Denis and Depelteau 1985; Belich and Dubinsky 1995; Leonidou and Adams-Florou 1999; Yeoh 2003). Companies operating in highly complex and volatile foreign marketing environments face greater uncertainty and, therefore, require more and diverse information of good quality (Welch and Wiedersheim-Paul 1980; Cavusgil 1985; Menon and Varadarajan 1992).

Organizations use export information to reduce uncertainty and use direct modes of sharing information to reduce ambiguity (Balasubramanian 2003). But with the increasing number of export information sources available to managers and other members of an organization, greater focus is given on the quality of information that an organization adopts (Gelle and Karhu 2003).

At this juncture, it must be noted that possession of information is not the sole basis for efficient decisions in an exporting environment. The critical element is the process of making decisions based on the available data (Souchon and Diamantopoulos 1996). Although mere possession of high quality information is significant insofar as maintaining the decision-makers' levels of confidence and certainty is concerned (Diamantopoulos et al. 2003), the impact on a company's performance depends upon its use (Souchon and Diamantopoulos 1996; Diamantopoulos and Souchon 1999). In this context, the quality of information directly affects information use (Low and Mohr 2001). Higher quality of information results in higher probability of its use in decision making and performance evaluation since it gains higher trust from managers (Low and Mohr 2001). This phenomenon could be the result of greater perceived utility of information of high quality (Souchon and Diamantopoulos 1997).

The distinction between an exporting organization that only holds information and one that uses it becomes critical since the same information could easily be available to competing companies at the same time. In this context, the treatment of the information differentiates the capability of one company from another (Zaltman and Moorman 1988; Diamantopoulos et al. 2003).

Organizational success is not a function of the volume of information possessed but of the use of strategically significant information (Bierly et al. 2000). This principle of information use has been examined within several disciplines like social science research and evaluation (e.g., Weiss 1981), organizational behavior (e.g. Kilman et al. 1983), social policy decision making (e.g., Caplan et al. 1975; Knorr 1977 and Weiss 1977), management (e.g., Boisot 1998), marketing (Deshpande and Zaltman 1982, 1984, 1987; Sinkula 1990; Moorman et al. 1993; Menon and Varadarajan 1992), including export marketing (Diamantopoulos and Souchon 1999; Souchon and Diamantopoulos 1996, 1997, 1999). Studies in these fields suggest that mere possession of information does not ensure effective and efficient management actions (Souchon and Diamantopoulos 1996).

It is important that export information is available and that it is used properly by the organization in order for it to succeed in its venture abroad (Leonidou and Katsikeas 1996). Information could be used to: (a) understand better the different players in the market where the company wants to enter; (b) allow the organization to monitor the ever-changing environment which is sometimes characterized by intense environmental turbulence; (c) help develop alternative marketing plans which are reliable and doable; (d) offer solution to specific marketing concerns such as pricing issues, entry strategies into new markets, product development, and the set-up of new distribution channels; and e) improve control through better monitoring systems and a more accurate evaluation of company performance (Tull and Hawkins 1993; Zikmund 2000; Churchill 2001; Leonidou and Theodosiou 2004).

The way information is used largely depends on the nature of the information requested, the particular sources from where it is requested, as well as the extent to which it is disseminated to the right people (Souchon and Diamantopoulos 1997).

There are three dimensions to information use: instrumental, conceptual (Caplan et al. 1975) and symbolic (Vyas and Souchon 2003). Instrumental use refers to the application of information to resolve a specific problem or provides the basis for a particular decision (Deshpandé and Zaltman 1982). Conceptual use, on the other hand, refers to the application of information for the enhancement of managerial understanding of general issues, without solving any one specific decision (Moorman 1995). It broadens and enriches the managers' stock of theories, models, and

assumptions that will help them later in decision making. Symbolic use refers to the use of information in a way which differs from its original purpose (Menon and Varadarajan 1992). Examples of this phenomenon were summarized by Vyas and Souchon (2003, p. 72) such as social use (Menon and Varadarajan 1992), power-seeking use (Beyer and Trice 1982), affective use (Menon and Wilcox 2001), legitimating use (Sabatier 1978), self-promoting use (Feldman and March 1981), symbolic non-use (Souchon and Diamantopoulos (1997), haphazard use (Glazer et al. 1992), and information distortion (Bettis-Outland 1999).

The degree to which all three forms of information utilization affect decision-making could be viewed as the extent of use (Menon and Varadarajan 1992). Notably, both the form and extent of information utilization are determined to a large extent by the perceived usefulness, credibility, and usability of the information acquired, as well as the time and effort expended to acquire it (Menon and Varadarajan 1992).

Studies on export information use show only two dimensions to use, where instrumental and conceptual use has been merged into one single dimension (e.g., Diamantopoulos and Souchon 1999). For Diamantopoulos and Souchon (1999, p. 4), they merged instrumental and conceptual use into one dimension because in their study, "all factors appeared to encompass both instrumental and conceptual elements, making it very difficult to give clear differential meaning to each factor." Williams (2003) and Toften (2005) followed this approach. Since this research is an exploratory study on export memory use, three dimensions were used following the items used by Diamantopoulos and Souchon (1999). However, as it will be seen later in the measure development of export memory use in Chapter Nine, four export memory use dimensions were derived.

The way in which export information is used is affected by environmental factors, organizational influences, export-specific elements, information-specific parameters and information-acquisition modes (Leonidou and Theosidou 2004).

Companies require highly diverse information in order to cope with complex and volatile marketing environments which involve higher levels of uncertainty (Glazer 1991). Thus, in international marketing with more turbulent environment, foreign market information is an important means to business success (Belich and Dubinsky

1995). Information on the foreign market provides coherence to a market which would otherwise be difficult to comprehend. Then again, managers are often confronted with an overload of international market information, which makes it difficult, and in many cases frustrating, to sort out what is relevant, useful, timely, and consistent for the specific export management problem at hand (Cavusgil 1985; Wood and Goolsby 1987). Discussion of other likely determinants such as organizational influences, export-specific elements, information-specific parameters and information-acquisition modes would be discussed later in Chapter Four.

The foregoing discussions validates the theory that the structure of an export marketing system has three basic components: (a) the background factors influencing the information behavior of marketing managers; (b) the actual processing of information taking place in the organization with respect to determining, acquiring, disseminating, and utilizing information; and (c) the role of information activities in shaping the firm's competitive advantage (Leonidou and Theodosiou 2004).

2.4. Export Memory Quality and Export Memory Use

As noted in the previous section, export information is an important component of effective and efficient export marketing decision-making. Because of this, most organizations have a form of storing information, although this storing system is generally designed for "hard data" rather than for "soft information" (Balasubramanian 2003). This storing system would not suffice because export memory also include soft information elements such as export experience and skills that are critical but difficult to articulate and retain (e.g., "managers' ability to sort through a clutter of excess information, identify and focus on essential variables and processes, and learn how these processes drive path-dependent performance over time" (Malter and Dickson 2001, p. 100). Such elements guide organizations in maximizing opportunities (Liebeskind 1996; Yli-Renko 2002) and other resources (Penrose 1959; Grant 1996).

Export memory is especially important for an organization because knowledge plays an important role in the internationalization process of an organization (and exporting is one of the first ways in which organizations internationalize) and the greater difficulties and cost of getting information about the foreign market makes it advantageous to store

what the organization has gained (Johanson and Valhne 1977; Ongvisit and Shaw 1993; Forsgren 2002; Yeoh 2003). Furthermore, within export learning, export memory plays strategic role (cf., Day 1994). Accumulated export information and experience are strategic advantages for an organization because they provide a firm with "superior capabilities, which are costly and difficult for others, such as competitors, to attain" (Chetty and Eriksson 2002, p. 309). Furthermore, tacit knowledge further makes an organization coherent by providing the foundation for "how organizations make decisions and how they see the world" (Riesenberger 1998, p. 96).

However, following the same logic and findings that it is the use of export information and not its mere possession which will have an impact on export performance (Souchon and Diamantopoulos 1996, 1997), it is safe to say that the storage of export knowledge (export memory) does not directly create the strategic advantage of the organization but rather it is the use of that export memory which is likely to have an impact on export performance. Simply being in possession of a good memory bank is not valuable per se (Abell and Oxbrow 2001). An organization's memory use has primacy over collection of memory (Moorman and Miner 1998). It is valueless unless put to use (Moorman and Miner 1998; Örtenblad 2004).

In a similar vein on the importance of export information quality (Osman et al. 2001), what is of interest to exporters would be the development of export memory quality. The literature points to the idea that firms' memories can be high or low quality: a high quality memory system will provide access to internally stored information in a reliable way, and the information will be accurate and trustworthy, in contrast to a poor quality memory system, which may be unreliable, or provide inaccurate information (cf., Wang and Strong 1996, Low and Mohr 2001; Maltz et al. 2001; Toften and Olsen 2004; Toften and Rustad 2005). A primary prerequisite for an effective use of export memory is the export memory's level of quality. The perceived value of export memory is probably the main impetus for its use (Toften and Olsen 2004).

It must be clarified that the merits of the structures of an organizational memory should be distinguished from the content of these repositories. By structure, it would be limited to the "storage retention facilities that comprise the structure of memory" that could include "individuals", "culture", "transformations", "structures" and "ecology" (Chetty and Eriksson 2002, p. 144). This qualifies the criticisms against organizational memory

as hindrance to learning because these defects are usually directed towards the contents of organizational memory and not against its structures (Walsh and Ungson 1991). Memory quality is an important prerequisite to having a useful memory. Having said that, with high quality export information comes high quality of export memory (Low and Mohr 2001) – likely to be a key factor in distinguishing export functions that learn well versus those that do not.

Any current research on export memory should not only study export memory per se but cover the specific area on the quality of export memory since organizational memory of high quality is the main aid to the decision-making process (cf., Day 1994).

In studying export memory use, the research findings and studies on information use in general (e.g. Kilman et al. 1983; Menon and Varadarajan 1992) and export information use (e.g. Souchon and Diamantopoulos 1996, 1997; Vyas and Souchon 2003) in particular could be a good starting point for a study on the use of export memory because fundamentally export memory shares basic characteristics with information with their main difference based on their temporal qualities (Walsh and Ungson 1991). Export memory influences the way managers make decisions (cf., Grant 1996; Kyriakopoulos and De Ruyter 2004), and their agenda formation (cf., Bardin and Majer 1983; Day 1991; Choo 2001). For example, export memory on prices could be applied directly to solve a problem on pricing the product. It could also help the organization assess how the competitors will react to its own price change. From a conceptual perspective, organizations may use their export memory to simply gain a better understanding of the structure of competition without any decisions actually made for the time being. In this study, export memory use is conceptualized into three (i.e., instrumental, conceptual and symbolic uses) which would be discussed further in Chapter Four.

In Chapter Two, the importance of organizational learning in export marketing has been addressed. Specifically, organizational memory's role in learning was demonstrated both in terms of its positive and negative effects. Succeeding discussions placed organizational learning and organizational memory in an export setting. Review of literature shows that export memory quality and its use, together with their antecedents, were not studied before. Thus, it was necessary to address this gap in Chapter Three. Three general tasks would be done in the next chapter. First, the constructs of export

memory quality and export memory use would be developed; second, items for measuring these constructs would be developed; third, the nomological net surrounding these constructs would also be developed.

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Chapter Three: EXPLORATORY INVESTIGATION

The preceding literature review discussed the nature and importance of organizational learning as a sustainable competitive advantage. It also presented the role of organizational memory both as a determinant of the organizational learning process and its output. The literature review also highlighted the importance of export memory in the export decision-making process, and its likely positive impact on export performance. However although different dimensions of organizational memory have been studied within varied contexts, several important issues remain still need to be examined, such as memory quality, memory use, and memory in an export context. Since export memory has never been studied before, an exploratory study was undertaken to help conceptualize export memory and to identify critical factors affecting the creation of export memory quality. The study also intended to assess the subsequent effect of export memory on its use and on export performance (Silverman 2000). This chapter presents the exploratory investigation resulting in the formulation of a comprehensive framework of export memory. Based on the review of extensive related literature, this chapter sets out to achieve the following objectives: a) to conceptualize export memory quality and its likely dimensions, b) to develop a pool of items to capture export memory quality, c) derive a framework of the nomological net surrounding export memory quality (its antecedents and consequences), d) to conceptualize export memory use, e) to develop a pool of items to capture export memory use, and f) to complement the literature in deriving a framework of the nomological net surrounding export memory use (its antecedents and consequences).

3.1. Methodology

The methodology used in a study is determined by the objectives of the research (Silverman 2000). Decisions about design, measurement, analysis, and reporting flow from the purpose of the research (Patton 1990). Creswell (1998) explains that qualitative research is appropriate in the following instances: (a) when the research

question starts with a “how” or “what” and not with a “why”; (b) when the research topic needs to be explored; (c) when there is a need to present a detailed view of the topic; and (d) when there is sufficient time and resources with which to undertake the field of study. Thus, considering the objectives set earlier, qualitative research was deemed both appropriate and warranted.

3.1.1. Research Design Overview

Within the qualitative research stream, there are several methods to choose from, depending on the goals and setting of the research topic. A presentation of different qualitative methods together with a short description of each one of them follows (Miller and Salkind 2002, p. 163-164):

Narrative approach – the focus is on collecting stories of lived experiences, originated in the areas of literature, psychology, sociology, anthropology; data collection is done primarily through interviews and documents; analysis of data through stories, re-stories, themes, and description of context; in terms of narrative form it takes a chronological story of an individual life.

Phenomenological approach – the focus is on understanding the essence of experiences surrounding phenomenon; originated in philosophy, sociology, and psychology; data collection covers long interviews with up to 10 people; data analysis uses statements, meanings, meaning themes, general descriptions of the experiences; narrative form involves a description of the “essence” of the experience.

Grounded theory – the focus is on developing a theory grounded in data from the field; originated in sociology; data collection involves interviews with 20 to 30 individuals to “saturate” categories and detail a theory; data analysis use open coding, axial coding, selective coding; the narrative form is a theory or theoretical model;.

Ethnography – the focus is on describing and interpreting a cultural and social group; started in cultural anthropology and sociology; data collection involves primarily observations and interviews, with additional artifacts, immersing oneself as part of the group/community for an extended time in the field (e.g., 6 months to 1 year); data

analysis uses description and thematic analysis and interpretation; narrative form is in the form of a description of the cultural behavior of a group or individual.

Case study research - the focus is on developing an in-depth analysis of a single case or multiple cases; started in political science, sociology, evaluation, urban studies, and other social science; data collection involves multiple sources: documents, archival records, interviews, observations, physical artifacts, quantitative data; narrative form is in an in-depth study of a "case" or multiple "cases".

Due to the research issue being explored in this research, a case study approach was chosen as a suitable and convenient method in achieving the objectives of this specific research because it allowed the development of rich information about export memory quality and the use of export memory where no study has yet been done. Case study research, as mentioned earlier, is an in-depth study of a bounded system wherein the researcher chooses the case that will best illuminate an issue or provide substantial information on the research problem. Within this method, the researcher determines the importance of the case itself. By asking questions and gathering multiple forms of data, an in-depth understanding of the case and the issues of the research is achieved. Detailed accounts of the case/s are presented with in-depth analysis of issues and themes which the case presents. Finally, the researcher interprets the meaning of the case analysis (Stake 1995).

The interview method sets itself apart from other qualitative methods such as observations, by allowing the researcher to probe deeper into the behavior of the respondent like finding out what is in a person's mind or clarifying a person's answer. (Patton 2002). Accordingly, interviews are suitable for gaining insights into what export memory users conceive export memory quality to be, as well as find out their uses for export memory and its subsequent impact on their export performance.

Interview research is an iterative process during which the final design emerges. As the interviews progress, the interviewer gains new information from which s/he updates the interview guide and build succeeding interviews (Johnson 2002). Questions change during the process of the research to reflect an increased understanding of the problem (Creswell 1998). At each stage of the interview process, information is gathered, analyzed, winnowed and tested. The later in-depth interviews become more focused on

specific probes and act as verification of earlier interviews (Rubin and Rubin 1995; Johnson 2002). Johnson (2002) explains that the number of interviews needed to explore a research question depends on the nature of that question and the kind or type of knowledge the sought. Glaser and Strauss (1967) advised researchers to continue interviewing until a state of theoretical saturation is reached or where nothing new can be learned.

Interview limitations include response effects and level of accuracy. For example, distorted answers may occur due to political factors, personal bias, anger, and anxiety of the person being interviewed. Patton (2002, p. 306) remarked that "Interview data are also subject to recall error, reactivity of the interviewee to the interviewer, and self-serving responses." These limitations were addressed in this research by gaining the confidence of each interviewee through a professional and academic approach right from the time they were contacted for the interview. More specifically, the following techniques were employed. First, written communications were on sheets of paper bearing the official letterhead of a British university, which gave the project credibility. In the Philippines, educational institutions normally evoke respect from the public, more so a foreign university (especially a Western one). Initially, the letter was faxed, and subsequently followed up by a telephone call. Second, the research assistants who helped contact the companies were affiliated with the University of the Philippines, the most prestigious university in the country. Although Filipinos may have high regard for foreign universities over local ones, they nevertheless hold in high esteem the top three universities in the country. Companies normally perceive the professors and students from this university to be highly credible. This impression was reinforced by the assistants' good command of spoken English and their polite demeanor. Third, the interviewees were reassured that the research results would only be used for academic purposes and that the interviewees and their companies would not be identified in the study. Confidentiality was emphasized. Fourth, the interview proper began with a brief discussion between the interviewee and interviewer in order to set the respondent at ease. One way was to find common connections or interests with the interviewee, like finding out if they were from the same university or have common acquaintances. Another way to gain the confidence of the interviewee was for the interviewer to give first a short history of his personal and professional background. Patton (2002) clearly

described the relationship between the interviewer and the interviewee in the following words:

As an interviewer, I want to establish rapport with the person I am questioning, but that rapport must be established in such a way that it does not undermine my neutrality concerning what the person tells me. Neutrality means that the person being interviewed can tell me anything without engendering either my favor or disfavor with regard to the content of her or his response. I cannot be shocked; I cannot be angered; I cannot be embarrassed; I cannot be saddened. Nothing the person tells me will make me think more or less of the person (Patton 2002, p. 366).

In the actual interview, the interviewer emphasized that there was no right or wrong answer. What was important was to get objective answers from them as much as possible. The interviewer avoided asking leading questions, but empathized with the interviewee by showing a keen interest in what the interviewee was saying.

3.1.2. Research Instrument

In-depth interviews were used to gain a deeper understanding of the specific phenomenon called export memory. The use of in-depth interviews has been known to be an effective way of acquiring "deep" information and knowledge about the subject being studied (Mariampolski 2001; Johnson 2002).

Semi-structured interviews were employed. This method follows general guide questions defining areas of interest which allows more flexibility and responsiveness in exploring the answers given by the respondent (Arksey and Knight 1999). In a semi-structured format, the interviewer wants to know more specific information, and thus introduces the topic and then guides the discussion by asking specific questions (Rubin and Rubin 1995). These interviews followed a general script and covered a list of topics, but were also open ended (Bernard 2000). This method was chosen for several reasons. First, "key informants" were export decision-makers, busy managers in charge of the export operation. Having a semi-structured interview provided focus and direction to the interviews, allowing the use of time more efficiently. Furthermore, the interview guide in a semi-structured interview helps make interviewing a number of different people more systematic and comprehensive by delimiting in advance the issues to be explored. Second, an extensive literature review on the research topic had

already been undertaken (Miles and Huberman 1994). The semi-structured interview used can therefore build on the findings gained in the survey of the literature.

The initial interviews covered the conceptualization of export memory quality, antecedents to export memory quality, use of export memory, and effects of export memory use on export performance. An original set of questions was prepared containing 54 questions. Many of the questions were based on the literature. Upon further analysis of the questions, six basic questions were derived and became the backbone of the interviews (see Appendix 3.1).

The interviews started with a few guide questions. As the interviews progressed, additional questions were asked to either clarify their answers or to make them expound more on the issue. New questions were asked as the respondents fully covered the preceding questions. .

3.1.3. Sample Design and Data Collection

The sample of interviewees was chosen from the list of exporters compiled by the Department of Trade and Industry of the Philippines. Due to time and cost constraints, a convenience sample of respondents located within Metro Manila (the main commercial region of the Philippines) was selected (Table 3.1 below). According to Saunders et al. (1997), non-probability sampling techniques can be used when the objective and research question do not require statistical analysis of the population from which the sample is taken.

A sample size of 11 exporting organizations was chosen based on the following criteria: size, company age, export specificity, export dependence, and industry. It was deemed important to get the views of export managers across industries as well as have representatives from all sizes of companies. Efforts were made to have a sample of companies with diverse backgrounds and characteristics. Purposeful sampling using maximum variation strategy (Patton 1990) was used in choosing the companies. In purposeful sampling, cases are chosen for the richness of information which can be derived from them, and not for empirical generalization from a sample to a population.

Maximum variation (heterogeneity) sampling captures and describes the central themes that cut across a great deal of variation. When a small but diverse sample is used, "any common patterns that emerge from great variation are of particular interest and value in capturing the core experiences and central, shared dimensions of a setting or phenomenon" (Patton 2002, p.234). The varied backgrounds of the companies chosen allowed the examination of how different factors may be related to the topic of interest.

The basic unit of study was the export department or export function. The interviewees were briefed on the scope of the research. Although some common basic questions were asked to all respondents, questions varied and developed as the interviews progressed (see section above). As much as possible layman's words were used to simplify the interviews. Results from each interview helped shape the questions which were asked in the succeeding interviews. A substantial part of the original set of questions was based on the work of Procter et al. (2000).

3.1.4. Data Collection

Eleven export managers/owners were interviewed during the month of February 2003. The purpose of the interviews was primarily to help build the model of export memory quality and use: their antecedents and outcomes and the pool of items for their measurement. The respondents were notified about the request for an interview either through a faxed letter or a message sent via e-mail. After doing the pre-notification, research assistants made phone calls to elicit managers' commitment and set up appointments for the interviews. Eighty-five percent of those companies contacted willingly accepted the request.

As noted by Arksey and Knight (1999), an hour-long interview is sufficient but a leeway must be provided for possible distractions and interruptions. Taking such a suggestion, the average length of interviews was roughly an hour and a half, considering the range of topics for the conceptualization of quality export memory, antecedents to quality export memory, export memory use and the effects of quality export memory on export performance.

All interviews except one were taped and later transcribed.

Companies varied from small, medium, and large organizations based on number of employees. Industries represented included handicrafts, leather goods, food, appliances, furniture, and herbal medicine. Most companies have been exporting for over 25 years while a few others have had much less exporting experience (see Table 3.1).

Table 3.1 Profile of Sample Used in Exploratory Investigation

Company	Sector	Size	Export Dependence (%)	Length of Exporting as of 2003 (Years)
A	Handicrafts	Medium	90	30
B	Appliance	Medium	1	1
C	Electronics & Appliance	Large	20 – 40	20
D	Furniture	Medium	40	17
E	Food/Beverage	Large	5	5
F	Agribusiness	Large	100	21
G	Food	Large	< 15	15
H	Furniture	Medium	30 – 40	17
I	Bags, Shoes and Accessories	Medium	no data	27
J	Food	Medium	40	23
K	Herbal	Small	no data	12

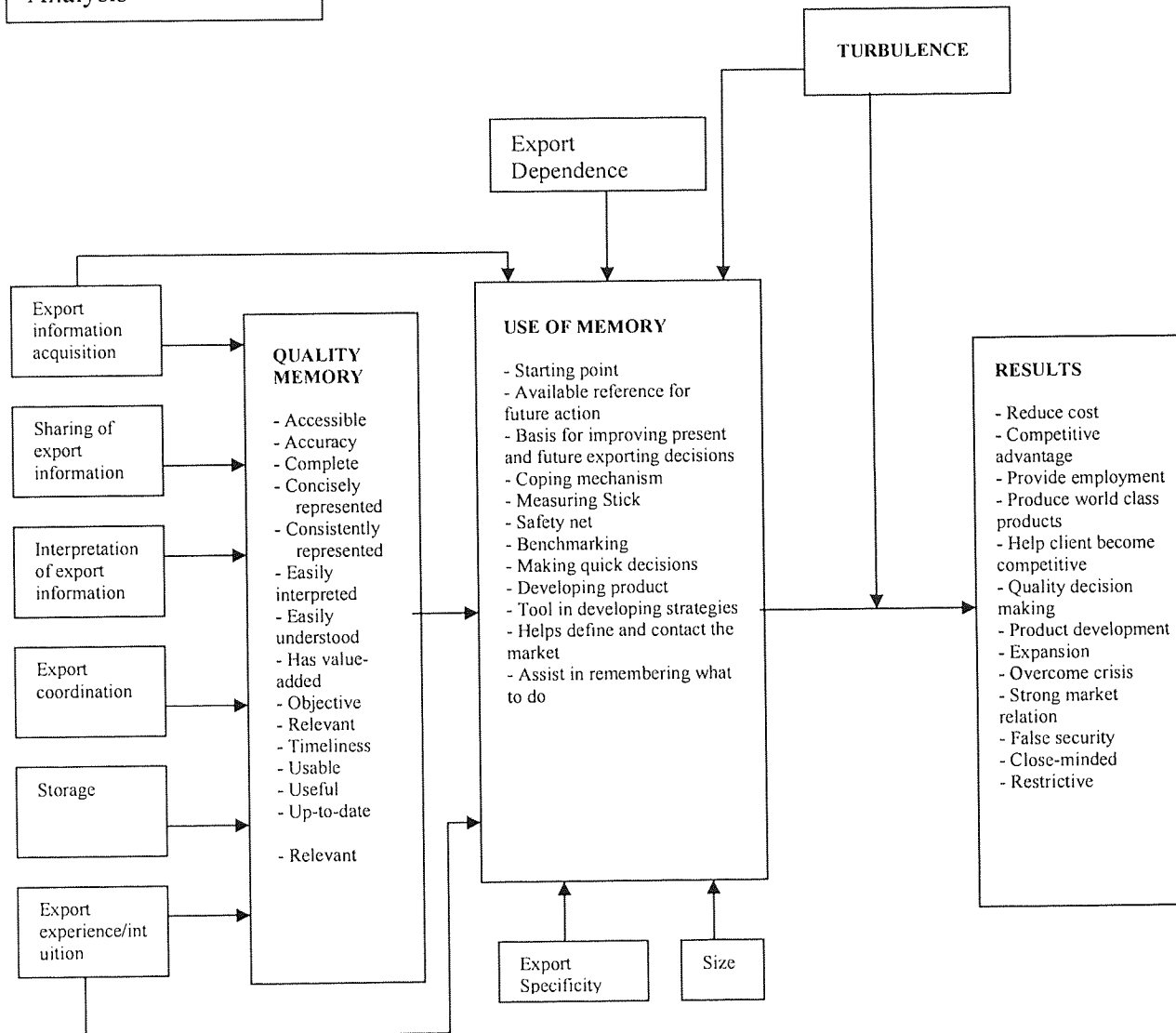
3.1.5. Analytical Procedure

A combination of within- and cross-case analysis was used to analyze the output of the interviews as advised by Miles and Huberman (1994). Using multiple cases, first, a detailed description of each case and themes within the case, called within-case analysis, were done. Furthermore, assertions and an interpretation of the meaning of the case were also made. The within-case analysis provided a deeper understanding on how organizations develop their export memory and how they use it in their operation. The cross-case analysis identified similarities and differences between exporting organizations and discerned the systematic associations between variables (Creswell 1998).

3.2 Findings

The cross-case displays are presented in Figure 3.1 below. Within case displays are presented in Appendix 3.2.

Figure Cross-Case Analysis



3.2.1. Export Memory Quality

In describing what export memory quality is the following adjectives were brought out by the respondents: accessible, accuracy, complete, concise, credible, understandable, adds value, objective, relevant, timely, usable, useful, and up-to-date. Please refer to Table 3.2 for a detailed presentation of quality attributes with the appropriate quotations from the interviews.

Table 3.2 Quality Attributes of Export Memory

1. ACCESSIBLE	
	* "So everybody should be able to access it." (Company D)
2. ACCURATE	
	* "The quality – the ability to retrieve information, the accuracy, comprehensiveness, that people would be able to understand." (Company F)
3. COMPLETE	
	* "Of course they have to be complete. As much as possible we want them complete." (Company H)
4. CONCISELY REPRESENTED	
	* "It should be clear and concise and concrete." (Company F)
5. CONSISTENTLY REPRESENTED	
	* "Yeah. The way its formatted should be...essentially can easily be digested by... from the director down to the account executive." (Company E)
6. CREDIBLE	
	<ul style="list-style-type: none"> * "Quality of source." (Company H) * "The information should be believable; I mean information that has basis." (Company D) * "Who published the information, are they responsible institutions, and are they government institutions?" (Company D) * "Well, it's [information] based on facts." (Company E)
7. EASILY INTERPRETED	
	* "I'm conscious about the data because I do trend analysis. I do a lot of spreadsheet analysis. I can tell stories based on numbers, that's me, that's basically my training." (Company E)

Table continues on next page.

8. EASILY UNDERSTOOD	
	<ul style="list-style-type: none"> * "Those who need it should be able to access it and be able to understand it. If not then it's useless, right?" (Company D) * "Let's say something concrete, something understandable, sometimes when I write things down when there is no computer and people don't understand what I write, then it's useless, right?" (Company D) * "Memory should be reliable, up-to-date, and simple." (Company E)
9. HAS VALUE ADDED	
	<ul style="list-style-type: none"> * "The information we store should be able to add value to our decision making process." (Company G)
10. OBJECTIVE	
	<ul style="list-style-type: none"> * "Memory should not be emotional...the effect of memory should not be emotional. It should provide information... (Objective) yes and information should never be positive or negative. It has to be used as a resource for positive things." (Company E) * "Well, it's [information] based on facts." (Company E)
11. RELEVANT	
	<ul style="list-style-type: none"> * "Addresses change so I guess what's important is its relevance." (Company H)
12. TIMELY	
	<ul style="list-style-type: none"> * "Our stored information should be timely which means that it should be able to address the problem we have on hand." (Company G)
13. USABLE	
	<ul style="list-style-type: none"> * "Because a memory which you cannot even use on a day-to-day operations of particular companies is a (trash)" (Company B)
14. USEFUL	
	<ul style="list-style-type: none"> * "It depends on the objective. If the objective is on the sales review and if you want to see the current growth. So it depends on how you use it. You can say good or bad when the objectives are clearly defined." (Company J) on the attributes of a good stored information. * "It has to be reliable and it has to be very objective. It has to serve the need of the director down to the account executive." (Company E)
15. UP-TO-DATE	
	<ul style="list-style-type: none"> * "And then prior to that of course what we try to do is to update that information." (Company H) * "Number 1 it's like a map...it's like a map that you regularly update that your new streets..." (Company E)

Accessibility of export memory is also important. Since making quick decisions is the norm in exporting, decision-makers interviewed found it necessary to have access to the stored information when needed. Delay in decisions may mean losing the export deal. However, export memory should only be accessed by those who have the right to know and to use it. Company H explained: "We distribute export information only to those directly involved. We do try to keep it confidential. It's very hard to get a list and we don't want our information getting to the wrong hands. It can be costly for us. It's only within those directly involved. Others have parts of the information. For example, the

manufacturing department may know who the buyer is although they don't have the complete data on the buyer."

Accuracy is another quality attribute that exporters valued. For example, when looking at the information on the addresses of prospective foreign customers, exporters were very concerned about getting the right or exact address of these foreign buyers. As company G mentioned, "We are very interested in having information about our present and prospective clients. We try to make sure we keep the right information with us." Importance of accuracy surfaced on product requirements. Since the export market is known to be more meticulous than the local ones, the exporters were concerned that they have the right specifications of the orders. For example, in the bags, shoes, and accessories business, Company I was particular about keeping with them in the office exact color hues of the leather goods for reference. This allowed them to deliver the products exactly in the required dimensions.

Completeness of information is also highly regarded by exporters. Company D said, "One important resource we have is the list of prospective buyers. I appreciate if the information we have is complete, for example the mailing address, phone numbers, and contact person."

Company F said, that "information presented to top management should be concise because top management does not have much time to go over the information."

Since information now comes in different forms, exporters appreciate information that they could easily grasp. The consistent representation of information helps achieve this goal. Company G for example mentioned "We appreciate that the documents and information we conserve are written in a language that everyone in our organization could understand and that would be in English." Consistent representation may also involve measurements and specifications. Company G continued, "Different countries may use different measuring standards, some use the metric system while others use the English system. We try to make sure we know what the specifications are for our products."

Credible information normally comes from credible sources. The exporters expect that the information they store are credible. One way to do so is to check the sources where

the information comes from. As Company D said, "Who published the information? Are these responsible institutions; are they government institutions?" Company D added, "It is easier to act on credible information than on one whose credibility is questionable."

Organizations would like that the information they store could allow them to interpret the meaning of the information easily. As Company E mentioned data sheets are a great source of trend analysis for him. For Company H, the information they acquire and later store should provide them clear indications on where the next big market for furniture would be. Company H said, we look for areas where there are strong hotel developments are and from there we get a feel on where to focus our attention."

It is important that what is stored is easily understandable. As Company D said, "Those who need it should be able to access it and be able to understand it. If not then it's useless, right?" The documents that the organization keeps should be easily understood by everyone who would use it. Company D manager stressed that she made sure she types her notes on the computer because some people might not be able to understand her handwriting.

Organizations expect that the information they store will add value to their operation if not these would not be worth keeping. Company D explained, "We keep information in our association's library because they are important. Information is important to ward off competition. Any member can go to our library and get hold of information about our markets." Company A said, "Before I commit to a business deal, I would first look at my company's situation to see if we have the capability to deliver." Company A further added, "I look at my experience when making a decision. This helps me assess for example the credibility of the client." Exporters are aware that information (and therefore memory) is not free. It costs. For them, export memory is of good quality if the cost of acquiring and storing it is deemed worthwhile vis-à-vis the value it adds in enhancing decisions.

Factual stored information is highly valued by organizations. Organizations are keen to distinguish facts from opinions.

Company H explained the importance of relevance and completeness: "Well, it's [information] based on facts. Addresses change so I guess what's important is its relevance. We check its relevance when we sent out e-mails. From those we find out how many will return because of wrong addresses or the clients have already changed their email address.

Company G spoke on the importance of having stored information that is timely. Company G said, "Trade regulations in countries change. We try to make sure that we have with us their present regulations. This facilitates our decision making."

Export memory must be usable. For example, Company B declared that "a memory which you cannot even use on day-to-day operations of particular companies is a (trash)."

For all the exporters interviewed, the export memory has to be useful. In short it has to serve the objectives of the organization. As Company G declared "We keep information because we know that it will be useful for us to do so. We base our decisions on what we know." Exporters consider usefulness of information as another criterion of quality. Achieving usefulness requires that information has been properly analyzed in the first place. Company J and E explain this point: "Well, I think any information if you analyze (it) very well is very helpful and important" (Company J) and "It [export memory] has to be processed to be relevant to the user" (Company E).

Information stored in an organization's export memory has to be up-to-date. Since most of the exporters interviewed gave a lot of importance on list of present and potential clients, they fully espoused the importance of having these lists up-dated on a regular basis. Nine out of the 11 respondents named relevance, usefulness, and being up-to-date as primarily important for them. Many of the respondents considered basic information such as names of contact people abroad and details of their contact information as very critical information which they need not only to obtain but also keep (and therefore enter into the memory bank). The content of this kind of information may change on occasions since people in charge of importing goods may change or their phone numbers and office address may also change. The exporters find it very useful if such information which they have in store is, for example, up-to-date and complete.

Following the above discussion, export memory quality can now be defined as the degree to which stored export information exhibits the attributes of accessibility, accuracy, completeness, concise representation, consistent representation, credibility, being easy interpreted, being easily understood, having value added, objective, relevance, timeliness, usability, usefulness, and being up-to-date, which export memory users consider to be important in achieving good quality export memory.

3.2.2. Antecedents to Export Memory Quality

3.2.2.1. Information Acquisition

For all the export managers, information is important. All of the 11 respondents believe that decisions they make are supposed to be based on well founded information, be it acquired for the purpose at hand, or stored information as export memory.

The way the exporters interviewed build export memory is through the acquisition of export information. The most popular source of information among the present sample is national and international trade fairs which are attended by four of the respondents. The following are the other sources of information indicated by the number of companies that use them: market encounters (3), the internet (2), embassies (1), client's office (1). The main purpose of acquiring information, according to two respondents, is to assess the level of competition in the international market and to update their export information knowledge.

In four out of the 11 companies interviewed, which are also the only respondents with large company size, acquisition of export information is done through a formal structured process, although unstructured and informal ways of acquiring information were common to all.

Frequency of acquisition as well as source of information varies. The bigger organizations are more conscientious in getting information regularly on a weekly, monthly and yearly basis. Due to financial constraints, attendance at foreign trade shows is limited. Instead, small to medium sized businesses rely on cheaper forms of

information sources such as Buyers' Guide from Chamber of Commerce and Industries (1), Buyers' Product Lines from the Philippine Exporters' Federation (1), news on market trends from the Department of Trade and Industry (1) and the outlook of the business community from newsletters (1).

Company J explained the importance of cooperation from customers in getting quality information by stating the following: "It depends on the cooperation of the customer abroad. The willingness to share and the company you are dealing with and of the type of the orientation of the customer." In this instance, customers are very rich source of market information. However, as a supplier, company J depends on the willingness and openness of their clients to share information.

For all the companies interviewed, a quality process of acquiring export information bodes well for a high quality export memory since the information acquired becomes the substance of what actually will be stored. For example, if the information comes from credible sources, then the stored information will most probably be an objective or accurate one. Company G said, "We check the sources of our information, since it's a good way of assessing the quality of the information we are getting. If it just comes from the internet, we sometimes need to double check the objectiveness of that information if we don't know who wrote that information."

3.2.2.2. Sharing of Information

All of the export managers interviewed rated information sharing within the organization as "very important". Most of the methods used for information dissemination are informal. Only two companies mainly use "categorized information dissemination" and training courses for sharing information while the rest rely mainly on informal meetings or on other informal methods like memorandums, emails, phone calls, visits and information conversations.

As noted by one respondent, casual talks along the hall way are effective. Another respondent mentioned that their export office does not have physical divisions to emphasize the point that information must be shared by everyone in that specific office.

Only two companies have formal structures for sharing information usually in the form of organized training programs.

However, there is limited access by lower managerial employees to high quality information, which is described by respondents as “confidential”. Company H explained: “Only the people directly involved because we do try to keep it confidential. It’s very hard to get a list and we don’t want our information getting to the wrong hands. It can be costly for us so it’s only within those directly involved. And we’re a slim organization so maybe we’re talking about three or four people. Others have parts of the information like the manufacturing may know who the buyer is although they may not have the complete list of information or data. Just the name of the client, name of the company and country. Only pockets of information. The only ones who have all the tip would be the manager directly involved and of course the head of the company.” Company C added, “Not even our business plans are available to everyone. Some of these information could only be accessed by VPs or top executives. We make sure though that no information is kept by just one person.” The value of the stored information is protected by making sure that it is only accessed by those who need and have a right to that information. There are different kinds of information which vary in terms of their confidentiality. Some information are widely distributed, but there are those, as mentioned earlier, whose accessibility is limited.

Only one respondent answered that its export market information is diffused throughout the entire organization. The rest answered that the export market information is either reposed in a small group within the organization – or with the president and the staff alone. Then, the rest of the organization only receives information which pertains to their respective responsibilities. However, it was indicated that no one has the monopoly of the information. Even within the top management, information must be shared among them.

Sharing information makes export memory more accessible: those who need it have it or know where to get it or have the means to get it. Company J mentioned that they make sure that information from different departments are known to members of other departments. One way by which they achieve this is through their weekly and monthly meetings. It allows the organization to get views from its different members regarding the export information which enriches the meaning of the information being stored.

Furthermore, sharing of information helps close any gap they have on the export market. Company F mentioned that other members of the organization may have the information that one department is lacking in coming up with a decision. Thus, in the process of sharing information, they are able to solve their problems without having to go outside of the organization. Sharing information will also make information more timely since those who need the information are able to access it when they need it and also already know the information even before using it. Company G related that “when someone goes abroad for market encounters, company policy dictates that he/she should submit a report which is circulated around the organization. This allows everyone to benefit from the lessons from such a trip and also updates everyone on the situation of the market.” Information may also become more understandable since within the process of sharing information, the meaning of this information is already clarified.

3.2.2.3. Interpretation of Information

One important concern that exporters brought up is their ability to interpret the information they already have. All the respondents have difficulty in determining what the information “tells them” about the market. In determining this message from the market, they focus on what are the important implications of the information that their competitors are not able to spot. After this assessment, the exporters interviewed then view their past information to check if they are still relevant to future conditions.

Company E stated that “It [export information before being stored] has to be processed to be relevant to the user. It’s like a raw material that you need to process to produce the product you want.” This echoes the importance of interpreting information before it is stored.

Interpretation allows the information to become more useful to what the organization needs. As explained by Company J, “Well, I think any information, if you analyze (it) very well is very helpful and important”. Export information will be interpreted in a way that would be more relevant to the organization. Interpretation also provides deeper insight into the future, e.g. demand forecast. When organizations are able to read the trends better than competitors, they have very valuable information. Since data

could easily be available to other organizations, it is the way the organizations read or interpret the information which adds important value to the information which will be stored.

3.2.2.4 Export Coordination

Companies interviewed seemed to put an effort in coordinating their local and foreign operations. As Company J commented, "We make sure that everyone gets to know what is happening in our organization. As I already said earlier, managers for our domestic sales and export sales have regular meetings. We don't have a conflict between the two operations." Company G reiterated, "We hold regular meetings with the other departments. In this way they get to know the plans we have here in the export department. They try to accommodate our request since we see the export market as our growth area.

3.2.2.5. Experience

Experience was mentioned many times as an important source of the organization's ability to understand the market. Experience is valued primarily because it serves as the main basis for decision-making, and for widening the business contacts and relationships of the organization. Younger exporting companies tend to need more support from institutional organizations in order to better capture the export market.

In terms of the effects of experience, mixed answers were received. A bad experience, for example in dealing with a particular country, may build within the organization a negative bias towards dealing with prospective clients from that country. It may make the organization over-cautious to its disadvantage.

There were abundant positive views on the effects of experience. Experience allows the organization to react quickly to the changing environment. The organization's rich export experience provides the tool to make fast decisions.

Experience also increases export memory quality. According to four respondents, the value of quality export memory quality relies on width of a company's picture of the

market, which in turn is widened by the accumulation of experience. Experience determines the field from which export memory quality may expand.

Experience adds to export memory quality because experience makes the information being stored more believable since it comes from their own experience; it is something the organization has witnessed. Company C related: "But actually, in my own experience we are preserving or we are storing all the information, records, or some special experience because we will use them in the future. For example our sales, if we don't hit the quota we will look at what happened, why. For example I have my experience in Malaysia, I will see if this is applicable to this situation. I know the lessons since it happened to me personally." The knowledge gained in experience is something tacit which many times would be more useful and relevant than the information gained from publications or reports for example, e.g., unique ways of dealing with certain foreign buyers. This experience is more difficult for others to copy which again makes it more valuable and unique. Experience validates or disproves what the organization knows to a certain extent.

3.2.2.6. Storage Capabilities of the Organization

All of the respondents rely on mind (i.e. memory of managers) and paper (i.e. memorandums and diaries of member) for storing their information. These receptacles are mainly filled with general information about the export market.

In addition, all of the respondents have computerized the storage of their export operations, albeit to different degrees. As expected, the bigger organizations in the sample as well as the more forward looking ones tend to build a more sophisticated management information system within their organizations, e.g. SAP an Entrepreneur Resource Planning Program. Company F explained, "Actually, there are documented information in the computer, in the minds of people and in the hard disk, but right now our track is really to integrate the business so we use SAP. It's a SAP, an ERP – Entrepreneur Resource Planning Program." As a trend, the smaller companies in the sample keep more of their information in the traditional manner such as writing down memos and keeping them in files.

Once again, procedures for keeping the records of organizations vary in terms of formality. Only two companies implement formal procedures in their policy for storing information by requiring their employees to make a written record of the market and their activities. But due to government regulations, both local and international, some organizations are obliged to keep a record of their transactions for at least 7 years. A new insight came out when one export manager, who also heads the Chamber of Furniture, explained that the Chamber of Commerce keeps a databank for its members. Information about markets are kept and stored in their library which is accessible to its members.

Storing information may make something tacit into something explicit. Tacit information is that information which is more abstract like skills, know-how and expertise (e.g. how to deal with certain foreign clients). Explicit information is that which is formulated in a public language, either in a natural language (e.g. English or French) or in a more technical language (e.g. computer programs, database). The storing of tacit knowledge allows more people access to this kind of information. It makes something abstract more concrete when they submit for example a report on the experience they encounter in certain export dealings. Storage also allows the export memory to become timely by making it easier for members of the organization to access whenever they need it. For example, information that has been computerized might be easier to access than before. Also if properly stored, information can more easily be updated making it more timely and relevant. Company A said, "We try to computerize the information we have on the market. If someone needs any information, he/she can just go and search for that information in our database. Company I related "We fully computerized our system here a few years ago. In that way, it is easy to update our information." Easy updating may be a function of the way the information is stored. This allows efficient use of information. People will not waste time looking for information. It makes them save time. Proper storage also allows the organization to have more complete information. Company A stated: "I bought a diary for everyone. So anywhere they are and when they think of something, they would write them down. They need to know the agenda for tomorrow. I write everything."

By storing the information properly, people in the organization will become aware of gaps in the information they have and will be moved to cover that gap. Company H

mentioned that their most important source of information is their list of present and prospective clients abroad. When they go over their list, they find out that many items are missing. It is a market challenge for them to find the missing client information. Quality storage also means storing only what is good for the organization. The process of storing information also involves the work of discerning what information is worthwhile to store. It could avoid export memory overload which could just confuse the organization. Company G said, “We are very open to the market. We use different avenues to access market information. We hold meetings regularly to see what new knowledge could help us improve our marketing policies.”

To achieve a high quality storage process, top management support is crucial. People will not store important information if they don't feel that top management actually appreciates it. As Company B stated on providing and storing information, “I think [management support is important]. Because otherwise if you feel the management is not really particular about what you can give or what information you can at least provide them, you're not going to provide them. If you're on your own, you feel you're not really very [appreciated in storing them]”.

3.2.3. Export Memory Use: Construct, Determinants, and Outcomes

3.2.3.1. Use of Export Memory (Construct)

All of the respondents stated that they use export memory when making decisions. Table 3.3 presents the different forms of uses of export memory as discussed by those interviewed. The respondents were unanimous in stating that the organizations must know how to apply the memory they have in order to get the real benefits from it. As Company B stated: “Memory also require a great sense for you to be able to make quality decisions, otherwise though you may have all the memory in your head if you don't know how to facilitate and apply that memory, then it's useless.” The biggest organization interviewed actually uses sophisticated models to help make decisions, such as forecasting models and an ERP Entrepreneur Resource Planning program. Models are nothing more than the past trying to predict the future. Another export manager uses export memory to evaluate prospective clients. Some of the other export decision-makers in the sample use their experience in one market in handling other

markets which they think to be similar to those they have already penetrated successfully.

One respondent mentioned that export memory is also the ability to know the names of other people as well as to know them personally. This builds into personal relationships with the client. Since many exporters actually follow a business-to-business model, developing personal rapport with the clients (and sometimes including the client's family), becomes an asset for the organization. This is especially true within the Asian context. Asian businessmen tend to prefer to do business with the people they already know (Backman 2004). In negotiations, they often make an effort to know the other partner, or even develop friendship first before they do business (Backman 2005). A certain degree of trust is often necessary before they establish a business relationship. This is what the Chinese call "guanxi" which simply means a network of relationships. Knowing more relevant information about the counterparts abroad allows exporters to create appropriate interactions with these counterparts that increase mutual trust and dependency. For example, Company A mentioned that she would try to know personally as many important people in the client's office. She would do this whenever she visits her client's office. This facilitates her dealings with the companies.

With the popularity of benchmarking, a process used to evaluate aspects of an organization's processes in relation to best practice, exporters interviewed use their memory to assess performance. This memory may contain information not only on their past performance but also the past performance of their competitors. In such cases, exporters feel well equipped in tracing their future course.

Export memory is also used to help the clients become more competitive. It's not just a matter of selling to them but also very much making sure that they are becoming competitive. If clients achieve competitiveness, it redounds to the benefit of the exporting organization. For example, export manager of Company D mentioned that they try to share their know-how with the clients; they package the products in the most efficient way one which saves on space so that more products can fit inside a container ship which reduces then the cost of shipping for their clients. Company D stated: "You don't think only of yourself. You think most on how your buyer would be more competitive so in return help them buy with a good price."

Table 3.3 Export memory use.

1. STARTING POINT	
	<ul style="list-style-type: none"> * Export memory provides the material “to work with initially.” (Company B) * “[Y]ou [exporters] cannot develop without previous [exporting] basis” (Company C) * Export memory provides the “basic knowledge, basic nature, basic design” needed for exporting success. (Company C)
2. AVAILABLE REFERENCE FOR FUTURE ACTION	
	<ul style="list-style-type: none"> * i.e. Drawing from past export knowledge stored in an Entrepreneur Resource Planning Program (Company F) * It’s important that we have production database because our long-term contracts normally with multinationals are based on previous actual costs.” (Company F) * “You make a short term target...based on memory.” ((Company E)
3. BASIS FOR IMPROVING PRESENT AND FUTURE EXPORTING DECISIONS	
	<ul style="list-style-type: none"> * “I always base my comparison from the past [exporting experiences].” (Company A) * Using export memory “to be better than the previous one [exporting decision]” (Company C)
4. COPING MECHANISM	
	<ul style="list-style-type: none"> * “[I]f the environment is changing very fast, for example, your memory can help you create solutions faster” (Company C) * “Experience is the best teacher. Experiences teach you to become more critical and analytical.” (Company B) * “I always base my comparison from the past. [learning from a mistake]” (Company A)
5. MAKING QUICK DECISION	
	<ul style="list-style-type: none"> * “My memory is very retentive when it comes to people. I know their names. I am quick to decide and I stand on my decision.” (Company A) * “So in that, memory allows you to even reduce the planning time and do it.” (Company C) * “Your memory can help you create faster.” (Company C)
6. DEVELOPING PRODUCT	
	<ul style="list-style-type: none"> * “Yes, even in developing new products, you cannot develop without your basis before. Just like in our model, we have our basic model and based on that old model, we have to develop a new one but is it not totally different but we need to improve to make something much better than before. You have to improve but you don’t have to change totally like for example the cover of the washing machine now is flat, [before it was not].” (Company C)
7. TOOL IN DEVELOPING STRATEGIES	
	<ul style="list-style-type: none"> * “Because you develop strategies based on information, past performance. It [memory] guides you.” (Company E)
8. HELPS DEFINE AND CONTACT THE MARKET	
	<ul style="list-style-type: none"> * “This [memory] will give us directions and we know what particular market we are going to penetrate.” (Company D) * “We have a list of buyers. It’s our list that we gathered outside from previous exhibits that we’ve joined. Every time there is a new activity, like exhibitions, we write to those in our database.” (Company H) * “Everything that is popular in the US eventually became popular also in other countries like Canada and then Europe and then later on it became very popular also in Japan.” (Company J)
9. ASSIST IN REMEMBERING WHAT TO DO	
	<ul style="list-style-type: none"> * “I put everything down because I might forget them.” (Company A) * “Everyone has a diary. If they think of anything, they write them down.” (Company A)

What follows are discussions of the points enumerated in Table 3.3.

Starting point – Export memory provides the initial knowledge which the organizations need in their export operations. As they gain experience and store this experience within their export memory, they are able to deal more efficiently with the export market. For some, attending seminars provided by the government is vital when they begin exporting. Company G said, “When we started exporting, we had to go and get all possible information on the foreign market. It was difficult since we did not have any experience. We kept whatever little knowledge we had on our foreign markets.”

Available reference for future action – Past performance or operation can become an input organizations use when they come up with technological support for their operation. For example, Company F used their past performance data and also data on operations and sales to help them develop their own Entrepreneur Resource Planning Program.

Basis for improving present and future exporting decisions– Two companies mentioned the important role that export memory plays in decision making, even to the point where one of them declared that she would not make any decision without looking at the past. This means that organizations may consider experiential knowledge as cumulative which improves one’s learning about the market.

Coping mechanism – One of the respondents mentioned export memory as a coping mechanism. To a certain extent, prior knowledge allows the exporting organization to find opportunities which others could not see or find solutions to problems that others would not be able to discover.

Measuring stick – Export memory could be a helpful tool for measuring the organization’s operation. Records of past performance allow the organization to analyze areas where it has performed well and areas where it performed poorly. As Company J said, “We use such information [export memory] as a measurement of performance.”

Safety net – Export memory could allow organizations to survive during tough times. When the organizations have a wide and rich pool of export memory (e.g., contacts

with people, product knowledge and use) organizations will be able to easily adapt their products to changing market trends. Their established network of contacts with important people in the industry, will allow them to get crucial information about the market. With regards to product, the wide knowledge of ways the product could be adapted for example to different market situations, will allow organizations to change the product to new demands.

Benchmarking – Export memory provides the basis for the company to assess its position vis-à-vis the other players in the market. It is an extension of its use as a measuring stick. In this case, records of past performance in different areas of the organization are compared with best practices in the industry.

Making quick decision – Because of the present knowledge or memory the organization has, it would be easier and faster for it to make a decision during turbulent times. As Company A explained, “When a customer ask me to quote a price for a product, I could quickly give a quotation because I know how much it cost us in previous production runs.” Company A continued “As you may know in exporting you have to be quick. Clients abroad would call me up and request us to send samples within short notice.” An exporting organization does not need to begin understanding its markets from scratch, thus saving a lot of precious time. For example, Company G said, “We document the experience we have with our clients in overseas markets. In this way, we improve our knowledge of our markets.”

Developing product – Since exporting organizations may need to offer new products to their international markets to stay competitive (Albaum et al. 2005), a solid knowledge of past products, for example, would allow the organization to innovate from what it already has. Since many of the innovations are not radical ones (Cohen and Levinthal 1990; Liyanage and Barnard 2002, 2003; Rogers 2003), memory provides an important basis for incremental improvements. Company C articulated the importance of using their stored information when producing new products. This is especially important when they make incremental changes in the products. They need to refer to the specifications of the core products. Company I said, “I keep the ideas I get from my travels abroad. Those ideas help me a lot when I design new products for the season. I combine and synergize the ideas I got from abroad.”

Tool in developing strategies – Export memory becomes a framework from which to base an exporting organization's strategy. Its accumulated knowledge about the export market helps the organization to assess better the best strategy for its export market. Company E explained that "the trends we see in the sales data we have help us set strategic plans for the future. We get to see which areas are more interesting or those that could bring us more growth."

Helps define and contact the market – Database on present and prospective buyers are very powerful source of developing the market. Many times exporters focus on such database since the list of contacts contained in those databases opens a lot more opportunity for the organization for example in terms of knowing which new potential client to approach. Furthermore, as the development of personal relationship is important in exporting, a good database on buyers' information would support this work.

Assist in remembering – The mere fact of recording appointments or things to do help facilitate their implementation. Ideas if recorded properly will not be forgotten but instead could be recalled easily and appropriately considered in decision making

3.2.3.2. Determinants of Export Memory Use

From the interviews, several factors came out to be possible antecedents to export memory use. Information acquisition, experience, export specificity, environmental turbulence, export dependence, export memory quality, and size of the organization.

Acquisition of Information - Those who put more effort in acquiring information may tend to use their export memory more extensively. Although all the organizations interviewed agreed on the importance of information and stored information, they seem not to have enough of it. They all tended to continuously acquire more information. As Company A stated: "The way to fight now is for you to go out! Information is vital."

Experience - For those who have more extensive experience in exporting, lessons gained from such experiences tend to be used more often by the organization. Company F said, "We export 100% of our products. We are the market leader in China. Whatever

lessons we gained from our extensive involvement in the export business, we tend to use them in order to improve our future performance.” Intuition as the accumulation of a rich experience, allows the organization to make more decisions based on this intuition. For example, Company I narrated that she was able to make decisions on the spot because she already has the feel of the market. Even in product decision, Company I would also be quick in making decisions. Company I said, “I just feel a material and I already know what it is and what we can do with it.”

Export Specificity - Company D mentioned: “We have an export department. They look for information, keep them and do the decoding process.” Those companies which have their own export department are keen in acquiring and also preserving export information for later use. They see the importance of both information and memory

Environmental Turbulence - To survive the highly competitive export market, Company D had this insight: “What’s important for the top executive is to spend say 80% of her time in the market place or in the battle field.” Company D added: “You know these things [use of newer raw materials]. You must be updated, even workers must be updated. You can’t go on using traditional things.” It seems then that as the environment becomes more turbulent, organizations will turn to newer information.

Export Memory Quality – When organizations perceive a good quality level in their export memory, they would use it more often. As Company C said, “We see the value of the experience we get from our meetings with our foreign clients. We make a report on every trip we make abroad. These reports help us in our future decisions.” Company I mentioned that she would ask her assistants to cut newspaper articles discussing her industry and her company. They file them properly for future use. Company H commented that they make sure that their database on clients is complete and accurate since they depend a lot on it as a source of business contacts. Company J explained that whenever they get leads from the government, they would normally keep and act on them.

Size - As a large organization, Company C had this to say: “[In making a proposal] more or less new information is only around 30%, yeah (70% experience and past information), we have to go back to the past. Like this model, we have this specification, so we have to see all previous information.” Company F said, “We are a

big and highly computerized organization. We make it a point to store data on our past operations and performance since we use them in planning for the future. Bigger organizations may seem to depend more on the accumulated information on the export market which they have stored.

3.2.2.3. Outcomes of Export Memory Use

Table 3.4 presents the outcomes of export memory use. The qualitative interviews revealed that export memory use is likely to lead to greater export performance levels. The general theme of the responses is summed up as: “[Export memory use is] not an end, it’s only a means in a way a resource [for improved export performance]” (Company E). The following table outlines outcomes of export memory use, as discussed by the respondents:

Table 3.4 Outcomes of export memory use

1. REDUCE COST	
	<ul style="list-style-type: none"> * "Export memory facilitates our effort in reducing cost. Knowledge gained in dealing with the same products for years, allows us the chance to find ways of improving the efficiency of producing the product." (Company G) * "We don't waste water. We only put the right amount of water. [due to software indication]" (Company F)
2. COMPETITIVE ADVANTAGE	
	<ul style="list-style-type: none"> * "And we believe, as according to Jack" The ability to learn information and translate their learning into action plans is the ultimate competitive advantage. That's why we have a databank on research on banana" (Company F) * Contents of export memory responds to the "special requirements for [exporting to] other countries" such as the voltage, the wattage, the specifications for products. (Company C) * "Your best bet is your trend [revealed by export memory]" (Company E)
3. PROVIDE EMPLOYMENT	
	<ul style="list-style-type: none"> * "To help Filipinos find job....I met the three objectives in putting up a business." (Company D)
4. PRODUCE WORLD CLASS QUALITY PRODUCT	
	<ul style="list-style-type: none"> * "To show the whole world the creativity and ingenuity of Filipino craftsmanship....I met the three objectives in putting up a business." (Company D)
5. HELP THE CLIENTS BECOME COMPETITIVE	
	<ul style="list-style-type: none"> * "You think most on how your buyer would become more competitive so in return, help them buy with a good price." (Company D)
6. QUALITY DECISION MAKING	
	<ul style="list-style-type: none"> * "Quality of memory would more likely result to quality decision-making." (Company J)
7. PRODUCT DEVELOPMENT	
	<ul style="list-style-type: none"> * "It [export memory] is also an indication of a product's potential." (Company J) * "Acquired exposures on how foreign competitors make the products induce us to learn of better and more competitive ways of producing the products." (Company G)
8. EXPANSION	
	<ul style="list-style-type: none"> * "We use the data to determine growth." (Company J) * "The need to change and the need to grow [purpose of memory]" (Company F)
9. OVERCOME CRISIS	
	<ul style="list-style-type: none"> * "During turbulent times, ...determine the right course of action" (Company H)
10. STRONG MARKET RELATION	
	<ul style="list-style-type: none"> * "That's what you build up over the years –export contacts and relationships." (Company H)
11. FALSE-SECURITY	
	<ul style="list-style-type: none"> * "Sometimes we are too dependent...it limits us." (Company C)
12. CLOSE-MINDED	
	<ul style="list-style-type: none"> * "Sometimes our mind is set on that, for example, we sometimes forget to see and entertain other ideas because we focus our mind [on our memory]" (Company C)
13. RESTRICTIVE	
	<ul style="list-style-type: none"> * "So I always base my comparison from the past....yes, sometimes [it can be negative]" (Company C)

Aid in quality decision making – As one exporter interviewed expressed her impression that exporting operation demands quick decisions, she mentioned that her stored export knowledge helps her assess the situation quickly and make the necessary decisions on time. She does not need to look for external information which may require more time. Of course this does not dismissed the fact that her organization also need to continuously acquire export information, but when quality export memory exist, it facilitates quick and quality decision making.

Comparative Advantage – A developed understanding of the product and the markets allow organizations to set right product that conforms to the idiosyncratic differences that exist in the different markets in the world. Accumulated knowledge on how certain markets operate provides the organization with the necessary tools to cater to that market. If an organization is able to forecast and interpret well the trend in his industry from past data, then that organization will be in a better position to proactively prepare for the future. An organization will be several steps ahead of the others. However, the ability to read and interpret data could be related to the kind of experience the organization has already had in the past.

For the more socially responsible exporters, the use of export memory helps provide jobs to people in the way that export memory improves company performance. Company D stated: “When I came back I said, to myself since I’m already here then I want to be involved in export business. So no product in mind. Just export for three things: first, to generate much needed dollars to the economy; second, to help Filipino find jobs; and third, to show the whole world the creativity and ingenuity of the Filipino craftsmanship. At this stage I must say that I met the three objectives for putting up the business.” This same company mentioned that “they store information to give them direction.” It also helps achieve customer satisfaction which is crucial to continued success. In the highly competitive export market where price is a key factor, export memory is seen to help reduce the price of the offer. Furthermore, export memory helps in the expansion of the export operation.

In terms of the effects of experience, mixed answers were received. A bad experience, for example in dealing with a particular country, may build within the organization a negative bias towards dealing with prospective clients from that country. It may make the organization over-cautious to its disadvantage.

There were abundant positive views on the effects of experience. Experience allows the organization to react quickly to the changing environment. The organization's rich export experience provides the tool to make fast decisions.

3.2.4. Environmental Turbulence

This part is mentioned since environmental turbulence has been known to affect the relationship between the use of information and outcome. Thus, the interviews included questions that probed how environmental turbulence affects this relationship. All of the exporters except one mentioned that they are facing a very turbulent environment. Specifically, they mentioned the stiff competition which they are facing from the emerging economies, more specifically Mainland China. Due to the size of China, they cannot compete in terms of price. China has the advantage of economies of scale. Company H stated that: "How can you match the price in China, even if you increase your productivity? Yes, it's subsidized that's one thing. But you cannot get your own subsidy. So you need to find other ways to compete by giving good designs for example. But now China and Vietnam are also coming up with better designs."

Company I stated: "As I asked my executives, are we being copied anywhere? Even China copied our products. If you give US\$ 5, China can offer it for US\$ 3."

Company D company mentioned: "Do you think they will be able to keep up with what you know in terms of quality. You have your own designers, your own... they just pirate them. In fact we have a lot of designers who went to China or went abroad. And that's part of life."

The trend toward globalization has been a big challenge for these exporters. They know that they must continually learn and innovate in order to stay competitive in the market. For some of them, the turbulent environment calls for greater coordination and cooperation within their specific industries.

From the interviews it was discovered that environmental turbulence could be both an antecedent to export memory use and also a moderator between the use of export memory and export performance.

As an antecedent to export memory use, the following comments illustrate the relation between environmental turbulence and the use of export memory. With the background of a turbulent environment, Company D mentioned that “managers should spend 80% of their time in the marketplace, in the battlefield. You must go out and see what’s really happening and make plans for the situation. In this case, export memory appears to play a limited role. It may mean that the use of export memory in this case may be detrimental to the organization since newer information would be more useful and relevant to the organization than historical ones. Thus, managers are asked to actively acquire newer information by being closer to the market. Company H stated within a background of environmental turbulence that “it’s [export memory] is always useful but I guess at turbulent times you have to find new ways of doing things, new markets, new types of products, if not you will end up with poor results.” This company again explains the possible negative impact when organizations limit themselves to the use of export memory during turbulent times. Thus, they may have a tendency to focus more on getting newer information than merely rely on their export memory.

The following quotations illustrate the possible moderating role of environmental turbulence on the relationship between export memory use and export performance. In terms of the usefulness of export memory during turbulent times, answers again vary. For Company A, turbulent times demand quick decision making ability. Precisely because of this, her past knowledge of the market and the industry allows her to make that quick decision required by the specific situation. In this instance, the relationship between export memory use and performance may seem to be stronger when the environmental condition is turbulent since the greater speed in making decision demanded by a turbulent environment is delivered by the use of export memory. Company H gave congruent explanation as Company A by saying: “We always have to look into something new. But the past information is very important because you make a new product but you offer it to your buyers who already exist because they’re in a better position to pay attention to you. New buyers, you have to some sort of develop them, they have to trust you. You know in export, there is a lot of trust involved. It’s like can you ship on time, do you ship good products? There’s a lot more relationship involved than someone you sell off the shelf.” However, Company C had another view by saying: “Sometimes we are too dependent ... on this memory. It has limited us. We forget to see or entertain other ideas because we focus our mind [to our export

memory]”. In this instance, turbulent times may decrease the positive relation between the use of memory and export performance. Organizations may still stick to their old ways of doing things when the high degree of environmental turbulence already calls for a new set of looking at the market.

3.3. Conclusions

This piece of research has presented an initial framework of export memory quality, its determinants, the uses of export memory and their impact on export performance. Six main factors were identified as determinants of export memory quality, namely: (1) export information acquisition, (2) sharing of export information, (3) interpretation of export information, (4) export coordination, (5) storage, and (6) export experience/intuition.

Fifteen quality attributes of export memory were also uncovered as follows: (1) accessible, (2) accuracy, (3) complete, (4) concisely represented, (5) consistently represented, (6) credible, (7) easily interpreted, (8) easily understood, (9) has value added, (10) objective, (11) relevant, (12) timeliness, (13) usable, (14) useful, and (15) up-to-date. From the study, the importance of export memory has been well articulated by all those interviewed. In general, the use of export memory is seen as positively contributing to the enhancement of export performance.

Seven possible antecedents to the use of export memory were identified: information acquisition, experience, export specificity, environmental turbulence, export dependence, export memory quality, and size of the organization.

The possible moderating effects of environmental turbulence were mentioned and considered in the model.

The above results have some important implications to exporting organizations. The unanimous belief that export memory has a positive effect on export performance should trigger greater efforts among exporting organizations to manage their memory well. However, despite being positive about export memory, the respondents also raised the possible negative effects of export memory. It is not just a matter of having a

memory; what is important is that the memory is of high quality in order for it to be a contributor to export success.

Export decision makers should be aware about the environmental conditions under which the use of export memory is most. At very high levels of turbulence it may not be advisable to depend so much on export memory since what the memory holds may no longer be true due to environmental change. In those instances, it may be advisable for exporting organizations to invest more in the acquisition of new export information.

After this extensive exploratory study, it is now time to present the main constructs and hypotheses of this research. The next chapter, Chapter Four, will do these tasks.

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Chapter Four: CONCEPTUALIZATION AND HYPOTHESES

This chapter conceptualizes the main constructs of the research, consisting of export memory quality, export memory use and export performance, while describing the likely interactions between them. The various antecedents to these variables are identified. Each of these antecedents are then discussed vis-à-vis the construct that they are likely to be related to. These discussions are culminated by hypotheses, based on the framework for analysis presented in chapters two and three.

This chapter is divided into two parts. Part I contains preliminary discussions regarding the scope of the investigation, conceptual definitions of export memory quality, export memory use and export performance. It also includes a presentation of the variables being considered as antecedents to export memory quality and export memory use. Part II presents the 22 hypotheses of the research organized around the three main constructs – export memory quality, export memory use and export performance.

Part I: Preliminary Discussions

4.1. Scope of Investigation

As already explained in the introduction and literature review, organizational memory is a construct that has been found to affect certain specific functional areas of an organization such as product development (e.g., Moorman and Miner 1998). Using the same arguments (see Chapters Two and Three), export memory quality is likely to be related to the way in which export decisions are made, as well as the decisions' effectiveness. As such, it is necessary to understand the antecedents to export memory quality. This will later be explored in Part II.

The extent and ways in which export information is used have also been shown to affect export performance (e.g., Souchon and Durden 2003). Thus, it is likely that export memory use would complement export information use, and equally be a factor in enhancing export performance. Going a step back, memory quality may be an antecedent to the use of export memory. This will also be another main theme that will be developed in Part II. In order to contribute to the theoretical understanding of export memory and provide export decision-makers with practical tools for enhancing the quality and use of their export memory, likely drivers of export memory quality and use are also examined (refer to Table 4.3., discussed in Part II, 4.2. Export Memory Use). Finally, the moderating effects of environmental turbulence (Glazer and Weiss 1993; Jaworski and Kohli 1993) and export information overload (Souchon and Diamantopoulos 1997) on the relationship between export information processing and export performance are also well documented (e.g., Cadogan et al. 2003). As a result, interactive effects of environmental turbulence and export memory overload on the relationships between export memory use and export performance are examined.

4.2. Conceptual Definitions of Export Memory Quality, Export Memory Use and Export Performance

The main central construct of the study is export memory (Chapter One). Two key aspects of this construct are emphasized in this study: export memory quality and export memory use, as well as their direct and indirect relationship to export performance. Conceptual definitions of these two aspects and export performance are discussed in this section.

4.2.1. Conceptual Definition of Export Memory Quality

Toften and Rustad (2005, p. 677) assert that “quality is a complex (Gronroos 1982), multidimensional (Carman 1990) and multilevel (Dabholkar et al. 2000) construct, as well as a general construct (Zeithaml 1988), making it difficult to agree on a single definition (Reeves and Bednar 1994).” Reeves and Bednar (1994, p.435) articulated this same point more than a decade ago in their review of quality definitions existing at that time stating that “each quality definition has strengths and weaknesses in relation

to measurement and generalizability, managerial usefulness, and consumer relevance.” Therefore, in defining export memory quality, emphasis should be placed upon perceived quality held by export memory users because it has been suggested that it is the user’s perception of information quality which explains how that information is used (Menon and Varadarjan 1992; Souchon and Diamantopoulos 1996; Low and Mohr 2001; Toften and Rustad 2005). Given the lack of past research on export memory quality, an extensive survey of studies on information quality within the marketing and exporting areas as well as the exploratory study undertaken were used to develop a conceptual definition and identify dimensions of this construct. Considering that “perception of quality is claimed to be industry and context-specific” (Toften and Rustad 2005, p. 677) the exploratory study (see Chapter Three) provided an essential medium for the selection of export memory quality attributes. Export memory quality is therefore defined as the degree to which stored export information exhibits the attributes (see Table 4.1) which export memory users consider to be important in achieving good quality export memory. This definition takes into account the perspective of the memory user (e.g., Toften and Rustad 2005).

Table 4.1. Dimensions of export memory quality.

Quality Dimensions	Illustrative Sources
Accessible	<i>Wang and Strong (1996), Welch et al. (1998), Toften and Rustad (2005) and Qualitative Study</i>
Accurate/Factual	<i>Katsikeas and Morgan (1994), Wang and Strong (1996), Low and Mohr (2001), and Qualitative Study</i>
Complete	<i>Wang and Strong (1996), Toften and Rustad (2005) and Qualitative Study</i>
Concisely Represented	<i>Wang and Strong (1996), Qualitative Study</i>
Consistently Represented/Reliable	<i>Wang and Strong (1996), Low and Mohr (2001), Toften and Rustad (2005), and Qualitative Study</i>
Credible	<i>Toften and Rustad 2005, and Qualitative Study</i>
Easily interpreted	<i>Wang and Strong (1996), Jack and Vassiliou (1997), and Qualitative Study</i>
Easily Understood/Simple	<i>Wang and Strong (1996), Qualitative Study</i>
Having Value-added/Cost-Effective	<i>Wang and Strong (1996), and Qualitative Study</i>
Relevant	<i>Deshpandé and Zaltman (1981), Katsikeas and Morgan (1994), Wang and Strong (1996), Low and Mohr (2001, Qualitative Study</i>
Timely/Saving Time	<i>Katsikeas and Morgan (1994), Wang and Strong (1996), Qualitative Study</i>
Up-to-date	<i>Toften and Rustad (2005), Qualitative Study</i>
Usable	<i>Juran (1974, 1988), Wang and Strong (1996), and Toften and Rustad (2005)</i>
Useful	<i>Low and Mohr (2001), Toften and Rustad (2005), and Qualitative Study</i>
Valuable	<i>Abbott (1955), Feigenbaum (1951), Toften and Rustad (2005), and Qualitative Study</i>

4.2.2. Conceptual Definition of Export Memory Use

The conceptual definition of export memory use was adapted from Diamantopoulos and Souchon's (1999) conceptual definition of information use, which included stored export information, and is therefore appropriate as a platform. Export memory use refers to "taking [stored export information] into account when making export decisions" (c.f., Diamantopoulos and Souchon 1999). Just as for information use, export memory use can be categorized into three key use dimensions: instrumental, conceptual and symbolic use (see Chapter Two) (cf. Diamantopoulos and Souchon 1999, p.2).

4.2.3. Conceptual Definition of Export Performance

Despite being one of the most researched construct in international marketing, export performance is difficult to conceptualize, operationalize, and measure (Axinn 1994; Walters and Samiee 1990; Shoham 1998; Zou and Stan 1998; Katsikeas et al. 2000; Sousa 2004). It is a multidimensional construct which has recently been mostly measured using multiple items (e.g., Cavusgil and Zhou 1994; Souchon and Diamantopoulos 1997; Madsen 1998; Shoham 1998; Styles 1998; Zou et al. 1998; Robertson and Chetty 2000; Cadogan et al. 2002; Cadogan et al. 2003). Following established export marketing theory (e.g., Souchon and Diamantopoulos 1997; Cadogan et al. 2002; Toften and Olsen 2003; Cadogan and Cui 2004), and in a bid to “making findings comparable and help eliminate the inconsistencies in the literature” (Zou et al. 1997, p. 38), export performance is conceptualized as export sales, export profitability, export market share, export growth, and satisfying customers’ needs (Shoham 1998).

4.3. Identifying Key Antecedents to Export Memory Quality and Use

In this section, key antecedents to export memory quality and use are identified, based both on the literature (see Chapter Two) and the exploratory study (see Chapter Three).

4.3.1. Key Antecedents to Export Memory Quality

The development of the conceptual model is presented below, including literature- and qualitative study-based identification of all relevant constructs to the study of export memory and its relationship to export performance, their conceptual definitions, and arguments leading to the development of all hypotheses. The development of organizational memory occurs as a result of the processing (i.e., generation, dissemination, interpretation, storage, etc) of information (e.g., Day 1994). The preliminary qualitative study also highlighted the importance of information processing variables to the development of export-specific memory (see Chapter Three). The conceptual framework is therefore firmly underpinned by information processing theory (e.g., Huber 1991), in that drivers of export memory quality and use, as well as

moderating factors on the relationship between export memory and performance, are identified from information processing theory perspective. More specifically, and based upon both the literature (see Chapter Two), and the qualitative study (see Chapter Three), the following information processing theory variables as presented in Table 4.2 are included in the model:

Table 4.2. Antecedents to export memory quality.

Antecedents to Export Memory Quality	Source
Export Coordination	<i>Narver and Slater (1990), Samiee and Walters (1990), Day (1991), Baker and Sinkula (1999), Hermaan (1999, Cadogan et al. (1999), and Cadogan et al. (2002)</i>
Export Experience	<i>Sinkula (1994)</i>
Export Information Dissemination Quality	<i>Narver and Slater (1991), Kohli and Jaworski (1993) Belich and Dubinsky (1999)</i>
Information summarisation	<i>Huber (1982)</i>
Quantity of information dissemination	<i>Moenart and Souder (1990)</i>
Regularity of dissemination	<i>Jaworski and Kohli (1999)</i>
Formalization of dissemination	<i>Noble (1999)</i>
Information modification	<i>Procter et al. (2000)</i>
Organization-wide dissemination	<i>Procter et al. (2000)</i>
Speed of dissemination	<i>Procter et al. (2000)</i>
Number of internal sources providing information	<i>Qualitative Study (2006)</i>
Export Learning Orientation	<i>Sinkula et al. (1997), Cadogan et al. (1999)</i>
Information Acquisition Quality	<i>Sinkula (1994), Sinkula et al. (1997)</i>
Formalization of generation	<i>Zmud (1978)</i>
Regularity of generation	<i>Hambrick (1982)</i>
Quantity of information generated	<i>Huber and Daft (1987)</i>
Number of sources	<i>Goldstein and Zack (1989)</i>
Organization-wide generation	<i>Cadogan et al. (1999)</i>
Scope of information collected	<i>Cadogan et al. (1999)</i>
Speed of generation	<i>Cadogan et al. (1999)</i>
Information Interpretation Quality	<i>White et al. (2003), and Qualitative Study (2006)</i>
Integration into the Organization System Quality	<i>Qualitative Study (2006)</i>
Response to Export Information Quality	<i>Jaworski and Kohli (1993)</i>

4.3.2. Key Antecedents to Export Memory Use

After presenting the key antecedents to export memory quality, those of export memory use are presented in this section. These antecedents were taken from information use literature supplemented by the qualitative study (see Chapter 3). It was considered appropriate that factors that were considered relevant in past students on the use of information would also be critical factors to the use of export memory. Table 4.3 presents these antecedents and their sources.

Table 4.3. Antecedents to export memory use.

Constructs		Source
Information Quality	Acquisition	<i>Seringhaus (1988), Souchon and Diamantopoulos (1996), Cadogan et al. (1999), Diamantopoulos and Souchon (1999), Dienes and Perner (1999), Athanassiou and Nigh (2000), Yli-Renko et al. (2002), and Leonidou and Theodosiou (2004)</i>
Environmental Turbulence		<i>Glazer (1991), Rashi and Weis (1993), Cavusgil et al. (1993), Rashi and Weiss (1993), Yeoh (1994), Yeoh (1994), Zahra (1996), Souchon and Diamantopoulos (1996), Teece et al. (1997), Morgan (1999), Zahra and Bogner (1999), Ashwin and Sharma (1999), Morgan (1999), Griffith and Harvey (2001), O'Cass et al. (2003), Ottesen and Grønhaug (2004), Kuivalainen et al. (2004), and Qualitative Study (2006)</i>
Export Experience		<i>Katsikeas and Morgan (1994), and Qualitative Study (2006)</i>
Export Dependence		<i>Westhead et al. (2001), Cadogan et al. (2002), and Qualitative Study (2006)</i>
Export Memory Overload		<i>Cavusgil (1985), Wood and Goolsby (1987), Souchon and Diamantopoulos (1997), and Williams (2003)</i>
Export Memory Quality		<i>Abell and Oxbrow (2001), Lee et al. (2002), Shuzheng (2003), and Qualitative Study (2006)</i>
Export Specificity		<i>Samiee and Walters (1990), and Qualitative Study (2006)</i>
Inter-Functional Use		<i>Qualitative Study (2006)</i>
Product/Service Complexity		<i>Qualitative Study (2006)</i>
Size		<i>Hirsh and Adar (1974), Bilkey and Tesar (1977), Rothwell and Zegveld (1982), Reid (1984), Joynt and Welch (1985), Burton and Schlegelmich (1987), Cavusgil and Naor (1987), Samiee and Walters (1990), Hart et al. (1994), Katsikeas and Morgan (1994), Peng et al. (1998), Peng (2000), and Williams (2003)</i>

The next part will have three sections. The first section presents the hypotheses relating the different variables presented in Table 4.2 with the quality of export memory. The second section presents the set of hypotheses relating the antecedent factors presented in Table 4.3 to the use of export memory. Lastly, the third section presents the set of hypotheses relating the use of export memory to export performance, and also considering the possible moderating effects of export memory overload and environmental turbulence on relationship between export memory use and export performance.

Part II: Presentation of Hypotheses

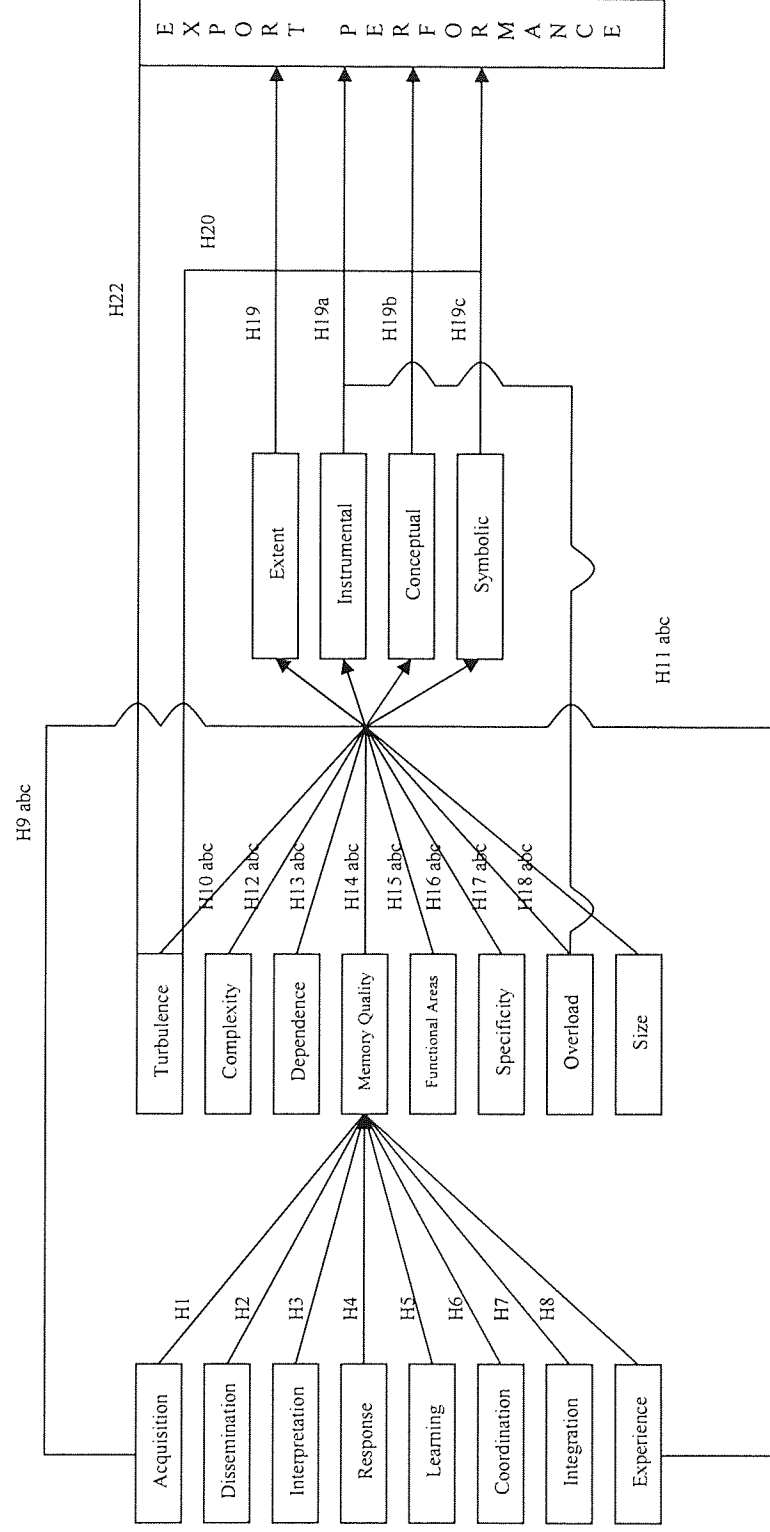
Information processing is an integral component of the knowledge base development of an organization (Griffith and Harvey 2001). Furthermore, the principle that organizations which learned to process their information have better insights on their markets (Day and Glazer 1994; Diamantopoulos and Souchon 1999) also applies to exporting organizations (Seringhaus 1988; Diamantopoulos and Souchon 1999).

Table 4.4 presents an overview of the framework of the study. The hypotheses are grouped according to the three major constructs of the study, namely, export memory quality, export memory use and export performance. The first group deals with the relationships between export memory quality and its antecedents (Hypotheses 1 – 8). The second group is on the interactions between the extent of export memory use and its antecedents, and between the different dimensions of use and their antecedents (i.e. instrumental, conceptual and symbolic use) presented in Hypotheses 9 – 18. The third group involves export performance and its antecedents as well as the possible moderating effects of export memory overload and environmental turbulence on the relationship between export memory use and export performance (Hypotheses 19 – 22). The discussions in this chapter follow these groupings.

Table 4.4. Overview of the framework of the study.

Export Memory Quality	<i>Export Information Acquisition Quality</i> <i>Export Information Dissemination Quality</i> <i>Export Information Interpretation Quality</i> <i>Response to Export Information Quality</i> <i>Export Learning Orientation</i> <i>Export Coordination</i> <i>Integration into the Organization System Quality</i> <i>Export Experience</i>
Extent of Export Memory Instrumental Use Conceptual Use Symbolic Use	<i>Acquisition of Information Quality</i> <i>Environmental Turbulence</i> <i>Experience</i> <i>Export Complexity</i> <i>Export Dependence</i> <i>Export Memory Quality</i> <i>Export Memory Use by Different Functional Areas</i> <i>Export Specificity</i> <i>Memory Overload</i> <i>Size of Organization</i>
Export Performance	<i>Extent of Use</i> <i>Instrumental Use of Export Memory</i> <i>Conceptual Use of Export Memory</i> <i>Symbolic Use of Export Memory</i> <i>Memory Overload</i> <i>Environmental Turbulence</i>

Figure4.1



Export Memory Quality and Export Memory Use: Antecedents and Consequences

4.1. Export Memory Quality

The study covers the interaction between export memory quality and its antecedents which are presented below (Table 4.5) with their corresponding hypothesis. The antecedents are presented in a logical conceptual order, then discussed individually in relation to export memory quality.

Table 4.5. Relationship between export memory quality and its antecedents.

Variable	Antecedent	Hypothesis
Export Memory Quality	<i>Export Information Acquisition Quality</i>	H1 (+)
	<i>Export Information Dissemination Quality</i>	H2 (+)
	<i>Export Information Interpretation Quality</i>	H3 (+)
	<i>Quality of Response to Export Information</i>	H4 (+)
	<i>Export Learning Orientation</i>	H5 (+)
	<i>Export Coordination</i>	H6 (+)
	<i>Quality of Integration into the Organization System</i>	H7 (+)
	<i>Export Experience</i>	H8 (+)

4.1.1. Information Acquisition Quality

Export memory quality (EMQ) greatly depends on the organization's effort in generating export market information, as part of the over-all theme of information processing to reduce uncertainty in the export market (Belich and Dubinsky 1999).

Precise updated information is a must for success in exporting (Belich et al. 1999). In general, all firms must improve their capability for acquiring information because "having unique access to valuable resources is one way to create competitive advantage" (Zack 1999, p.128). As explained by Jaworski and Kohli (1996), the quality of marketing information-processing behavior such as market information generation and dissemination, and responsiveness to market formation is most likely to benefit marketing decision-makers (refer to 4.2.1. Information Acquisition under 4.2. Export Memory Use).

In studying the quality of export information acquisition, Procter et al. (2000) suggest the existence of seven dimensions. These dimensions include the scope of information collected, number of sources, quantity of information generated, regularity of generation, speed of generation, formalization of generation, and organization-wide generation. These dimensions of quality of information generation greatly affect the level of EMQ because the resulting export information acquired through this process will eventually become its export memory when stored. Effective information acquisition translates into greater information about target markets which enables a company to capitalize on unexpected exporting opportunities and chances for export growth (Reid 1981). And in case the company fails to realize its objectives in exporting, the acquired information aids the company in getting back on its toes (McAuley 1993). The act of information acquisition itself “provides a ritualistic assurance that appropriate attitudes about decision making exist”; where the “[c]ommand of information and information sources enhances perceived competence and inspires confidence” (Feldman and March 1981, p. 178).

Literature on learning organization or acquisition of export learning orientation warns about the possible pitfalls of mere generation of information about the market (Sinkula 1994; Slater and Narver, 1995; Sinkula et al. 1997), such as “false confidence in the strength and ability of the firm to weather adversity” (Wexler 2002, p. 400). But these studies do not exclude information acquisition and dissemination as the principal cultural foundation of a learning organization. Active information acquisition preserves the value of a company’s knowledge base by keeping it “up-to-date” (Silverberg and White 1999).

Similar to human and computer memories where inputs or stimuli must be received in order for memory to function (Klatzky 1980), export memory quality greatly depends on information received by an organization. Acquired information forms the content of an organization’s memory upon being retained in memory repositories. Thus, the quality of acquiring information will have an effect on the eventual quality of export memory since export memory uses the information acquired to form part of its export memory’s content as stated earlier. What is crucial is not the mere act of acquiring information but the quality of doing so because it affects the quality of acquired information which will eventually become part of the organization’s export memory.

This becomes clearer from the discussion below on the seven dimensions of the quality of market information generation (Procter et al. 2000) which include the following: wide variety of export information acquired, wide sources of information, quantity of information acquired, regularity of acquisition, quick response to market changes through acquisition of information, formality in the acquisition of information, and information acquisition as an organization-wide concern.

First, literature suggests that exporting organizations have a wide range of information needs about the macro environment (physical, demographic, socio-cultural, economic, political-legal, technological), microenvironment (company, suppliers, marketing intermediaries, competitors, customers, publics), market characteristics (size/growth, structure, entry conditions, preferences, potential, position/share), marketing mix (product, pricing, distribution, logistics, promotion), and other miscellaneous items (Leonidou and Adams-Florou 1999). Studies show that detailed or situation-specific information are more useful for export development than general facts (Dennis and Depelteau 1985). Such findings reinforce the theory that an organization needs to acquire a wide scope of information (Daft et al. 1988; Day and Wensley; 1988 Slater and Narver 1994; Mohan-Neill 1995), which are focused and targeted, in order to achieve a more comprehensive and objective picture of the market.

Second, besides the acquisition of broad information, information must be taken from many sources in order to improve EMQ. Specifically, increasing the number of available sources of data helps marketers to have better market insights from relevant marketing variables (van Bruggen et al. 2001). Having many sources of information gives its users a certain level of confidence in decision-making (Yeoh 2000) because they would have been assured of possessing whatever relevant information is available.

Organizations could either passively receive information from external sources or actively search for it (Belich and Dubinsky 1999; Yeoh 2000). A proactive mode of acquiring information provides the organization with more chances of widening the scope and the depth of its knowledge about the export market (Kaish and Gilad 1991; McAuley 1993; Hamill 1997). In order to acquire export information which is complete, relevant, timely, accurate, useful, and credible, the organization must use different methods of obtaining foreign market information and assistance (Reid 1984). In short, acquiring information from different sources makes the information acquired

more credible and objective because different sources of information will for example confirm or disconfirm the validity of the information which is being acquired. Thus, organizations are able to have more objective and credible information for its export memory.

Third, the quantity of information generated is another dimension of quality of information acquisition that affects EMQ. Too little information does not help an organization predict occurrences with high accuracy (Daft et al. 1988); on the other hand, too much information may result in overload (Huber and Daft 1987). Information overload when stored becomes memory overload. Eventually when an organization stores more information than it needs or could process, confusion may result since it may be more difficult for the users of export memory to digest the available memory due to its size.

Fourth, collection of information must be regular and frequent. Content of export memory needs to have timely updates since information in storage decay (Wexler 2002). More frequent information generation helps an organization in having a clearer and more current view of its environment (Fahey and King 1977; Procter et al. 2000). It is essential that export information be replaced or updated with more recent information.

Fifth, because of the continuous changes in the export environment, such as the increasing competitiveness and shortening of life cycle of markets (e.g., Ryan and Riggs 1996), organizations should generate export market information more quickly than occurring changes (e.g., Botsch 1996) for information to be relevant (Procter et al. 2000). This situation requires faster market information generation. When the information that will be stored are more up-to-date, the quality of the content of export memory also becomes more up-to-date.

Sixth, a certain degree of formalization in the acquisition of information brings with it greater perceived accuracy and reliability (Aguilar 1967; Pelham and Wilson 1996; Zigmund 1997; Procter et al. 2000). When organizations make acquisition of information a standard operation in the organization, people concerned may tend to take this process more seriously, ending up with the acquisition of information that are more useful to the organization.

Seventh, when information acquisition is a concern shared by everyone in the organization, export memory becomes more objective and complete. The export memory is further enhanced by collecting information, not merely because of their accessibility and availability, but because of their relevance and value to the organization (Glazer et al. 1992; Bruggen et al. 2001). As mentioned earlier, all of the seven items above are dimensions of information acquisition quality. In sum, the higher the information acquisition quality, the better the firm is at generating information and as a result, the better the quality of the export memory.

It is hypothesized that:

H1: Export market acquisition quality is likely to be positively related to export memory quality.

4.1.2. Export Information Dissemination Quality

Information dissemination is the “process by which information is shared” (Baker and Sinkula 1999, p. 412) involving “export information which are focused towards export customers, competitors, or the environment changes affecting the firm, its customers and its competitors” (Cadogan et al. 1999, p. 691). This information comes from different sources and the process “leads to new information or understanding” (Sinkula 1994, p. 37). The importance of dissemination lies in the fact that it makes it possible for information to be considered within the light of different viewpoints which would eventually enrich the information which could later become part of the organization’s export memory.

Information dissemination quality has been said to be eight-dimensional, including number of internal sources providing information, regularity of dissemination, formalization of dissemination, quantity of information disseminated, organization-wide dissemination, and speed of dissemination, information summarisation, and information modification (Procter et al. 2000). More specifically, regularity of dissemination, quantity of information disseminated, speed of dissemination, and information summarization procedures were all perceived to have a positive relation to the quality of market information dissemination (MID). On the other hand,

formalization of dissemination was thought to have a quadratic (inverted u-shaped) relationship with the quality of the MID process. Also, unpredictability in the dissemination mechanism was seen to be negatively related to MID. The quality of export information dissemination may well be related to the quality of export information that would eventually become a part of the organization's export memory. For example, the degree of regularity in the dissemination of export information, may determine the timeliness of the information that organizational members are able to consider or analyze. More timely information being considered provides the organization the opportunity to store more timely information. Another example is quantity of information disseminated. When organizations disseminate more information, there may be a higher probability that organizations will be able to consider relevant and valuable information among the volumes of information being shared around. When the quality of information dissemination is high, the higher will be the quality of the resulting information that becomes part of the organization's export memory and thus increasing the organization's EMQ.

Thus, it could be expected that:

H2: Export information dissemination quality is likely to be positively related to the quality of export memory.

4.1.3. Information Interpretation Quality

Information interpretation refers to the "conversion of information into knowledge and understanding" (White et al. 2003, p. 64), which if stored, becomes part of export memory (Stein 1989). One way of conceptualizing information interpretation is the two-step process involving a managers' "perceived control" or the "decision maker's sense of ability to manage a market situation" (White et al. 2003, p. 64-65) and "appraisal" or the "extent to which decision makers perceive a situation as an opportunity and the extent to which they perceive it as a threat" (White et al. 2003, p. 64-65).

The results of export information acquisition provide the materials to be disseminated and interpreted to maximize opportunities presented by export market environments (Souchon and Diamantopoulos 1996; Cadogan et al. 2002).

It is therefore important that export market information is properly interpreted and commonly understood by everyone concerned in the organization (Gioia and Sims 1986). Consistent with the principle of cognitive consensuality, interpretation is seen both as a product of individual work, and more importantly, as the interaction and sharing of information among the members of the organization (Gioia 1986).

When organizations acquire knowledge mainly through symbolic processes, knowledge is retained in schematic form via scripts. These symbols consist of “signs or representations that signify some wider concepts or meaning” while “scripts are dynamic event-sequence-oriented webs of structured knowledge held in memory” (Gioia 1986 p. 49). The scripts serve as a basis for action to facilitate meaning construction and sensemaking processes. Symbols and scripts also act as the primary organizational sensemaking device of an organization (Gioia 1986; Lord and Forti 1986).

One of the basic strategic skills used by organizations in interpreting information is managerial judgment. In fact, expertise and analytical capabilities of managers are treated as tools for interpretation and are valuable assets for marketing. The abilities to judge both formal and informal information, to analyze data and to be creative in transforming information into effective marketing programs are traits of successful marketers (Bruggen et al. 2001).

The process of interpretation at the top management is similar to that in the general membership of an organization, except for the aids to interpretation available to the former. For excellent marketers, they have powerful mental models of the market which they use for interpretation of events in the actual market. They have extensive and up-to-date knowledge, highly developed perceptual abilities, capacity to know what is relevant in making decisions, skill to simplify problems and talent to communicate their expertise to others (Shanteau 1988; Bruggen 2001).

Among members of the organization, interpretation involves the continuous attempt to make sense of what is happening in the organization. Within the context of EMQ, they try to make sense of what the export market is telling them. Sensemaking, which refers to the act of deriving meaning from events and their experience, may be conscious and automatic (Lord and Foti 1986). Sensemaking is essentially meaning-construction. This process entails intricate (and often unconscious) processes of attending, comparing, attributing, relating, reflecting, retaining, and so on. Much of it happens through self-reflection (Gioia 1986).

The common theme of the interpretation processes of rank-and-file members of an organization and its top level managers is the social construction of reality through sensemaking, where information sharing within organizations involves emotional bonds among its members (cf. Krackhardt 1992; cf. Rindfleisch and Moorman 2001). Top decision makers can interpret effectively only by using collective organizational understanding (Gioia and Sims Jr. 1986).

From the vantage point of these managerial and rank-and-file members, high quality export information interpretation is a product of how well they interpret or make sense of the experience and information they have on the export market. This is achieved when the organization gains a deep and unique understanding of the market which is not available to its competitors. For example, through the export information acquired by the organization, they could discern the latent needs of the consumers. Thus, when information goes through a quality interpretation, it gains more value, relevance and usefulness. It could be said therefore that the higher the information interpretation quality, the higher becomes its value as information. These quality interpretations and the information can then become part of the organization's export memory, eventually resulting in higher export memory quality.

H3: The export market information interpretation quality is likely to be positively related to export memory quality.

4.1.4. Quality of Response to Export Information

Information responsiveness is the organization's use of market information to develop and implement plans (Kohli and Jaworski 1990). Conceptualization of information responsiveness would cover the "design and implementation of all to the intelligence that has been generated and disseminated" in relation to "export customers, competitors, or the environmental changes affecting the firm, its customers and its competitors" (Cadogan et al. 1999, p. 691). Information responsiveness is conceptualized as action tendency (Lazarus 1991).

The quality of responsiveness has several dimensions (Procter et al. 2000): formalization of response design and implementation, scope of responses designed, organization-wide response design and implementation, speed of response design and implementation, and information utilization. First, formalization achieves organizational efficiency and ensures that certain types of behaviors occur. Second, increasing the scope of responses to cover not only its customers but other groups is advantageous to an organization (Diamantopoulos and Cadogan 1996; Laczniak and Lusch 1997). It enriches the knowledge that results from the response. Third, an organization that has a response design for cross-functional participation in its development and implementation can respond better to market information (Camillus 1975; Eisenhardt 1989). This design provides the holistic basis for decision-making and implementation resulting in a more comprehensive understanding of the market. Fourth, due to the fast changes in the export market, the speed of response design and implementation becomes essential (Bourgeois and Eisenhardt 1988), making the resulting knowledge up-to-date. Fifth, the extent of using available information has an effect on the quality of decisions made (Emshoff and Mitroff 1978).

Since the use of export information is a key factor for export business success (Leonidou and Kasikeas 1996), organizations rely on export memory to store the lessons from past export information use (Walsh and Ungson 1991; Berthon et al. 2001). Information responsiveness determines the degree of information use (Kohli and Jaworski 1990) which provides the firm the opportunity to assess which information is worthy of being stored. Eventually, this increases the EMQ. It is very likely that:

H4: The responsiveness to export information quality is likely to be positively related to export memory quality.

4.1.5. Export Learning Orientation

Learning orientation is the “degree to which firms proactively question themselves whether their existing beliefs and practices actually maximize organizational performance” (Baker and Sinkula 2002, p.8). Learning orientation serves as one of the “key sources of innovation and firm performance” (Weerawardena 2003, p. 410) There are three values that are associated with learning orientation: “Commitment to learning”, “open-mindedness”, and “shared vision” (Baker and Sinkula 1999, p. 413). Organizations that imbibe these values examine their assumptions about the market environment, particularly those about the nature of the market and the competition. These organizations not only discern what the market wants, but also lead the market to want their product offerings which the market may not even be aware of. A learning-oriented organization takes note of emerging markets and competitors, including non-traditional competitors which their exclusively market-oriented counterparts tend to ignore or overlook (Slater and Narver 1995; Farrell 2000). Learning-oriented organizations are more capable of discerning and responding to the various needs of their customers (Slater and Narver 1995; Farrel and Oczkowski 2002).

When an organization has a strong learning orientation, it tends to “encourage, or even require, employees to constantly question the organizational norms that guide their market information processing (MIP) activities and organizational actions” (Baker and Sinkula 1999, p. 413). Companies that do so examine their stored knowledge more often (Sinkula 1997). Learning orientation enriches an organization’s sustainable “knowledge-based competitive advantage” which in turn strengthens its capacity to learn (Zack 1999, p. 128; Cohen and Leventhal 1990). In contrast, lack of learning orientation can “lead decision makers to collect information that cannot be used.” (Feldman and March 1981, p. 175).

It is therefore advantageous for exporting firms to be learning organizations (Peng 2000) that are “skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insight” (Garvin 1993 p. 80). The

results of the qualitative interviews add that “continuous development and learning is the advantage” in an exporting environment where product concepts are easily imitated (Company D). A sustainable exporter’s competitive edge is its ability and commitment to continuous learning about emerging exporting trends.

Export learning orientation determines a company’s eventual involvement in the internationalization process (cf. Samiee and Walters 1990), which in turn provides a richer exporting experience to enable a company to comprehend the export market and reduce foreign market uncertainty (Erramilli 1991). Competitive exporters are distinguished from other companies by their knowledge from their past experience that helps them better analyze and evaluate present market conditions (Aguilar 1967; Berthon et al. 2001).

Following the above discussions, it follows that learning oriented export organizations are able to produce more valuable, timely, useful, and relevant export market knowledge, which enable them to better discern latent needs of the market. This knowledge of the export market is very valuable and useful for a company selling its products to a foreign market. This useful and valuable knowledge becomes the content of the organization’s export memory when it is stored. From this:

H5: Export learning orientation is likely to be positively related to export memory quality.

4.1.6. Export Coordination

Export coordination refers to a web of four overlapping concepts of “communication and common understanding; organizational culture emphasizing responsibility, cooperation, and assistance; a lack of dysfunctional conflict; and common work oriented goals” (Cadogan et al. 1999, p. 691). There is ample empirical evidence that interfunctional coordination (i.e., the coordination between the export function and other functions within the firm) drives information processing factors (Diamantopoulos and Cadogan 1996).

Export coordination has been seen as an invigorating company trait for learning more effectively and efficiently about markets, new technologies, and business strategies

(Hermaan 1999). Coordination promotes cohesiveness in an environment with diverse organizational goals, functional units, and individuals. It harmonizes the different specific goals and purposes unique to each department and functional area of an organization (Samiee and Walters 1990). Coordination empowers an organization by “unifying the firm’s capabilities into a cohesive whole, driving its learning processes and directing organizational activities” (Cadogan et al. 2002, p. 618).

Another way of conceptualizing coordination is to consider the drawbacks the organization suffers in its absence. Thus, some authors argue that without coordination within an organization, “individuals are less likely to share dominant logics (e.g., business mission) or desired outcomes (e.g., sales, market share, return on investment, rate of new product introduction, customer satisfaction)” (Baker and Sinkula 1999, p. 414; Dougherty 1989). As a result, “[d]ivergent or conflicting assumptions undermine the ability of the management team to agree on the interpretation of market information and, thus, their ability to respond quickly to emerging trends or problems” (Baker and Sinkula 1999). Coordination within an organization is required “to assure the coherency and timeliness of strategies that anticipate rather than react to the market” (Day 1991, p. 2).

Nevertheless, these various ways of conceptualizing coordination do not contradict the view that it is basically a source of strong norms, shared values and beliefs, and an orientation towards a common organizational task outcome (cf. Hurley and Hult 1998). These conceptualizations fit into Narver and Slater’s (1990, p. 22) view that coordination is “interfunctional” since it involves the “coordinated utilization of company resources in creating superior value for target customers” (Narver and Slater 1990, p. 22).

Coordination makes a firm learn more effectively and efficiently about markets, new technologies, and business strategies (Hermaan 1999). It also provides strong norms, shared values and beliefs, and an orientation towards a common organizational task outcome (cf., Hurley and Hult 1988).

It follows that without some reasonable “level of consensus between top managers and organizational members” (Fiegenbaum et al. 1996, p. 220), known as cognitive consensuality, organizational memory is fragmented. Cognitive consensuality is

extremely important for organizational systems, because concerted action frequently depends on cooperation and a certain degree of shared values and understanding of “how things are done.”

The foregoing literature suggests that when a firm’s export coordination efforts are characterized by high levels of inter- and intra- functional coordination, the organization gains insights into new realities of the market and achieves richer export information which becomes the potential substance of its export memory when stored. This raises the possibility that:

H6: Export coordination is likely to be positively related to export memory quality.

4.1.7. Quality of Integration into the Organizational System

The organization’s ability to learn and apply new knowledge requires the capability to develop and embed knowledge acquired from different sources (Lei et al. 1997; Reisenberger 1998). Organizations seeking to preserve lessons and knowledge gained from the past are challenged to create repositories for export memory. They need to integrate the export information they have acquired into the organizational system, or absorb the knowledge from the different sources (Lei et al. 1997; Reisenberger 1998) into memory receptacles (cf. Levitt and March 1988) of the organization. These receptacles include the human mind, human relations, and “cultural artifacts” (Levitt and March 1988).

The primacy of the human mind as a receptacle for export knowledge is demonstrated by the fact that when people leave organizations, parts of export memory of these organizations are lost. According to Stein (1995b, p. 18): “When people depart, they leave spaces in existing networks of social interaction and take with them important knowledge and experience accumulated over many years.” Clearly, the knowledge of an organization is stored in its individual members who serve as basic repositories for export memory.

The second form, human relations, is a consequence of the formation of strategic relationships as part of the organization's intellectual capital (Stewart 1997; Imparato 1999; Davis and Harrison 2001; Wexler 2002). These relationships are developed among people from different organizations and they are kept in the network developed through interactions. The importance of relations and networks in enhancing organizational knowledge of the international market has been increasingly recognized (e.g., Nohria and Eccles 1992; Kanter 1994; Lacobbi 1996; Welch and Welch 1996; Piercy et. 1997; Welch et al. 1997; Leonidou 2003). Welch et al. (1998, p. 67) mentioned that "by working more closely with other firms, organizations would be able to access, combine, and share expertise, resources and knowledge and co-produce additional knowledge in ways that would be impossible by acting independently." For export intensive organizations, sustaining successful international relationships is a critical element in achieving export success (Evangelista 1996).

The third form, cultural artifacts, encompasses all other means by which an organization retains knowledge or information gained. It includes specific receptacles such as procedures, scripts, physical artifacts, behavioral routines, values, and norms (Walsh and Ungson 1991; Day 1994; Slater and Narver 1995). Lessons that are incorporated into rules acquire the character of stored knowledge or export memory. The capacity of these cultural artifacts to retain knowledge or information for export functions are greatly determined by the attitude of top management and export decision makers. How an organization values the storage of these cultural artifacts is reflected in how it rewards its members when their knowledge or information is formalized, institutionalized, and documented (Walsh and Ungson 1991; Day 1994; Slater and Narver 1995). Positive encouragement from top management to store valuable information would most probably result in everyone working to store such information. In doing so, the organization will find itself with an export memory that is complete and relevant.

To overcome the limitations of human memory and cultural artefacts in storing export knowledge or information, organizations make use of information technology (IT). IT supports export memory through various ways such as providing databases, knowledge bases (Stein and Zwass 1995), electronic meeting systems (Morrison 1993; Nunamaker et al. 1991), hyper-text based systems (Conklin and Begelman 1988) and object-

oriented tools (Minch 1990). IT preserves and retrieves export memory, assist in intelligence analysis, and decision making (Day 1994; Conklin 1996; Stein and Zwass 1995; Walsh and Ungson 1991). Experiences and knowledge of present members of an organization are captured by IT then incorporated into an automated information system which can prove to be invaluable to organizations (Croasdell 2001).

IT products such as the internet, local area networks, and distributed databases are used to develop integrated learning. Distribution, storage, and retrieval of information are facilitated by these products (Huber 1991). Organization-wide information systems, for example, enhance inter-departmental information sharing (Brugen et al. 2001). Data from different sources can be combined in data warehouses making data easily available and accessible for decision making. IT reduces the difficulty of retrieving specific vital information (Huber 1991) which is a major objective of knowledge management (Johansen 1988). Increased accessibility to relevant information contained in memory, as observed in consumer behaviour research, affects the subsequent patterns of information processing (Fazio et al. 1989).

The discussions above showed that the way information is integrated into the organization affects the quality of the resulting export memory. For example, the proper use of information technology can make the export memory more accessible and easily understandable when it is stored in a manner suitable to the future user of that stored information.

Previous studies suggest that mechanisms for information integration are increasingly becoming indispensable components for developing export memory (cf. Lei et al. 1997), especially with the advent of IT (Croasdell 2001). Furthermore, the quality of integration will have an effect on the quality of the resulting export memory as seen from earlier discussions. Thus,

H7: The quality of export information's integration into the organizational system is likely to be positively related to export memory quality.

4.1.8. Export Experience

Export experience refers to the lessons learned (Piercy et al. 1998) by an organization as it interacts with foreign markets (Penrose 1959; Yli-Renko et al. 2002). Export experience can be classified into “three kinds of experiential knowledge” developed by Erikson et al. (1997) as used by Yli-Renko et al. (2002 p. 309) consisting of (1) “business knowledge” (e.g., “local customers and their surrounding business context of competitors, other suppliers, and other market conditions”), (2) “institutional knowledge” (e.g., “institutions, norms, culture, values and language in the foreign setting”), and (3) “internationalization knowledge” (“antecedent to lack of business and institutional knowledge”). Internationalization knowledge is emphasized because it includes a firm’s stored routines on what it must do and what it must avoid as the firm continues its incremental commitments to foreign markets (Chetty and Eriksson 2002).

Experience includes “knowledge about the dynamics shaping that export market” (Katsikeas and Morgan 1994, p. 21) that enables a company to cope with the problems encountered in exporting to a specific market. In general, export experience reduces perceptions of uncertainty in exporting activities (Madsen 1989). Its effect is broad enough to influence acquisition, dissemination and interpretation of export information (cf. Souchon and Diamantopoulos 1996).

Several theoretical and empirical studies suggest that foreign firms with experience in a host country usually have more information about the local environment than first-time foreign entrants (Johanson and Vahlne 1977; Shaver et al. 1997). Exporters with more export experience have more sources of information that enable them to respond better to clientele demands (Cadogan et al. 2002).

Export experience is positively related to the amount of organizational knowledge about the export market (e.g., Johanson and Vahlne 1977), which in turn, determines business success (Beirly et al. 2000). Since advantages of organizational knowledge (Autio et al. 2000) are kept in organizational memory (Lesser and Prusak 2001), export experience serves as the raw material for export memory (Erramilli 1991). With this:

H8: Export experience is likely to be positively related to export memory quality.

4.2. Export Memory Use

Export memory refers to knowledge about foreign markets (Peng 2000) stored in various receptacles within an organization (refer to Chapter One I). The following discussions present the hypotheses of the study on the relationships between the extent of export memory use and its various antecedents (information acquisition quality, environmental turbulence, experience, export complexity, export dependence, export memory quality, export memory use by different functional areas, export specificity, memory overload, and size of organization) and the sub-hypotheses regarding the relationship between the extent of export memory use and the instrumental, conceptual and symbolic use of its antecedents (Table 6).

Table 4. 6. Relationship between export memory use and its antecedents

E X P O R T M E M O R Y U S E	Information Acquisition Quality	H9 (+)
	Information Acquisition Quality and Instrumental Use of Export Memory	H9(a) (+)
	Information Acquisition Quality and Conceptual Use of Export Memory	H9(b) (+)
	Information Acquisition Quality and Symbolic Use of Export Memory	H9(c) (-)
	Environmental Turbulence	H10 (-)
	Environmental Turbulence and Instrumental Use of Export Memory	H10(a) (+)
	Environmental Turbulence and Conceptual Use of Export Memory	H10(b) (+)
	Environmental Turbulence and Symbolic Use of Export Memory	H10(c) (+)
	Experience	H11 (+)
	Experience and Instrumental Use of Export Memory	H11(a) (+)
	Experience and Conceptual Use of Export Memory	H11(b) (+)
	Experience and Symbolic Use of Export Memory	H11(c) (-)
	Export Complexity	H12(+)
	Export Complexity and Instrumental Use of Export Memory	H12(a) (+)
	Export Complexity and Conceptual Use of Export Memory	H12(b) (+)
	Export Complexity and Symbolic Use of Export Memory	H12(c) (-)
	Export Dependence	H13 (+)
	Export Dependence and Instrumental Use of Export Memory	H13(a) (+)
	Export Dependence and Conceptual Use of Export Memory	H13(b) (+)
	Export Dependence and Symbolic Use of Export Memory	H13(c) (-)
	Export Memory Quality	H14 (+)
	Export Memory Quality and Instrumental Use of Export Memory	H14(a) (+)
	Export Memory Quality and Conceptual Use of Export Memory	H14(b) (-)
	Export Memory Quality and Symbolic Use of Export Memory	H14(c) (-)

The extent, intra-organizational application and types of export memory use are derived from export information use literature (Souchon and Diamantopoulos 1996, 1997, 1999). The three types of export memory use follow the traditional classification into instrumental use, conceptual use, and symbolic use (e.g., Menon and Varadarajan 1992; Souchon and Diamantopoulos 1996, 1997, 1999). Although Souchon and Diamantopoulos (1996) considered instrumental and conceptual use as two opposite poles of the same construct, it is well to consider the two as separate constructs within the context of this study on export memory since their conclusion came from their data. The study used these dimensions found in export information use studies to export memory use for exploratory purposes since literature on the latter has not been fully developed.

Both the exploratory phase of the study as well as the literature on export information use (e.g., Souchon et al. 2003) are used to identify a set of key antecedents to export memory use. Export-specific factors, organizational factors, and environmental factors are considered possible antecedents to export memory use. Some of the factors for export memory use are derived from export information use. For instance, the export-specific factors such as export complexity (i.e., the number of countries and regions exported to), export dependence (i.e., the ratio of export to total sales or the share of profits derived from the export operation), export experience (i.e. the number of years the company has been exporting), and the presence of separate export departments which influence the use of export information (e.g., Hart et al. 1994; Diamantopoulos and Horncastle 1996) were also seen in this study as factors for export memory use .

After tackling export memory use, the succeeding discussions will focus on the antecedents.

4.2.1. Information Acquisition Quality

Information acquisition refers to the process of obtaining information about markets, including competitions, for decision making (Yli-Renko et al. 2002). The outcomes of this process are interpreted and disseminated to maximize opportunities presented by

market environments (Souchon and Diamantopoulos 1996; Cadogan et al. 2002). These observations about information acquisition apply to exporting environments (cf. Seringhaus 1988; Diamantopoulos and Souchon 1999).

As part of information processing, the acquisition of information, (Dienes and Perner 1999; Athanassiou and Nigh 2000; Leonidou and Theodosiou 2004) affects the quality of export memory (Leonidou and Theodosiou 2004). The preceding section covered the development of quality information acquisition.

Information acquisition for decision making is highly valued (Yli-Renko et al. 2002) because it is proven to reduce market and environmental uncertainties (Cavusgil 1984) and other problems associated with the lack of export information (Guynes et al. 1990). Information acquisition plays an important role in the information processing theories proposed by Stoner (1978), Kast and Rozenzweig (1979), and Deshpande and Zaltman (1982), where “objective information is a prerequisite basis on which to found management decisions which will reduce risk and uncertainty” (Hart et al. 1994). Remarkable, even the mere possession of information improves an organization’s business reputation because of the belief that “a person or organization with more information is better than a person or organization with less” (Feldman and March 1981, p. 178).

Exporting knowledge, the content of which is generated by the process of information acquisition, is the measure of the company’s capacity to store information and its familiarity with the exporting environment (Yli-Renko et al. 2002). Storing this knowledge enables a company to capitalize on emerging opportunities and maximize its resources (Yli-Renko et al. 2002). Due to the increased in the quality of export memory that will be brought about by the increased in the quality of acquiring export information, exporters may put more value on the resulting export memory being developed in their organization. Thus:

H9: Information acquisition quality is likely to be positively related to the extent of export memory use.

4.2.1.(a) Information Acquisition Quality and Instrumental and Conceptual Uses of Export Memory

Organizations invest large amounts of their resources for the acquisition of export information “to reduce the perceived risks in foreign markets and create greater feeling of security” (Leonidou and Katsikeas 1997, p. 65). The information acquired is used for decision making in situations where “the verification of intelligence is heavily procedural and normative.” (Feldman and March 1981, p. 178). This applies to large firms and even to SMEs, because for as long as the latter are “aware of the role of information in decision-making, they may be more likely to use such information in a positive way, even when this makes decision making difficult” (Williams 2003, p. 55). In this situation, organizations consider deviations from instrumental use of information as anathema to information acquisition. Storing information acquired could be a strategy for continuously benefiting past acquired information.

High quality export information acquisition reflects an organization’s investment in information acquisition and an organization’s perception of the value of export information (Procter et al. 2000). A high quality information acquisition system serves as the motivation and means for using export memory for export functions. Information acquired through this system when stored in the form of building models, assumptions and frameworks of the export market would remain valuable to an organization (cf. Walsh and Ungson 1991). Organizations would use these information “not only to reduce risk and uncertainty, but also to monitor changes in demand patterns, supply sources, competitive activities and a host of other factors that impinge on decisions of all kinds” (Hart et al. 1994, p. 4).

With this:

9(a): Acquisition of export information quality is likely to be positively related to the instrumental use of export memory.

H9(b): Acquisition of export information quality is likely to be positively related to the conceptual use of export memory.

4.2.1.(b) Information Acquisition Quality and Symbolic Use of Export Memory

Investments made by organizations to gain high quality export information acquisition capabilities (Procter et al. 2000) would also allow them to make their export information more reliable. Having this kind of export information would favor the “rational” use (cf. Weber 1947; Feldman and March 1981,) which means that:

H9(c): Acquisition of export information quality is likely to be negatively related to the symbolic use of information.

4.2.2. Environmental Turbulence

Environmental turbulence are “discrete, salient and unpredictable events in the environment” (Ottesen and Grønhaug 2004, p. 958) characterized by high disparity between past and present environmental conditions, and uncertainty about future environmental conditions (Rashi and Weiss 1993). Environmental turbulence is classified according to the domain of occurrence such as “regulatory environment”, “technology environment“, “competitive environment“ and “customer environment“ (Kuivalainen et al. 2004, p. 40) with an interface with the dimensions of the external environment which include “heterogeneity” (“diversity of market segments”), “dynamism” (“rate and unpredictability of change”), and “hostility” (“unfavorable business climate, high level of competitive intensity”) (Zahra 1996; Zahra and Bogner 1999; Kuivalainen et al. 2004).

Today’s business climate is considered “extremely turbulent” (Ashwin and Sharma 1999) with marked differences between domestic and international markets in terms of uncertainty, psychological distance and access to information (Souchon and Diamantopoulos 1996). The exporting environment is more turbulent than local ones (Souchon and Diamantopoulos 1996), with higher levels of competition in new markets (Teece et al. 1997; Griffith and Harvey 2001) that pressure exporters to maintain superior “product and promotion adaptation” (Cavusgil et al. 1993; O’Cass et al. 2003). When the environment is turbulent, foreign markets could either imperil or promote export performance (O’Cass et al. 2003). Turbulent environments are “information intensive” since there are numerous shifts in the contents of knowledge bases among

exporters (Glazer 1991; Rashi and Weiss 1993) without following any trend (Rashi and Weiss 1993).

In turbulent environments, efficient management comes at the cost of having a more “organized, comprehensive, accurate and timely” information about the environment (Karake 1997). The level of uncertainty for exporting in turbulent environments encourages information processing as a coping mechanism for market uncertainty (Daft and Macintosh 1981; Belich et al. 1999); and as a source of competitive advantage by producing “difficult-to-imitate combinations of resources on a global basis” (Griffith and Harvey 2001, p. 597). Under turbulent environments, the use of export memory yields to acquisition of new information (Davenport and Beer 1995; Bhatt 2000).

However, during rapid changes in regulation, technology and competition in the market, organizations may (Bhatt 2000) or may not (Eisenhardt 1989; Davenport and Beer 1995; Bhatt 2000) find it reasonable to depend on their export memory. In a fluid exporting environment, it is more convincing that the perceived temporal nature of export memory dissuades organizations from using their organizational memory (Bhatt 2000) especially when there is radical rate of environmental change (Moorman and Miner 1998; Branch 2000). Export managers will tend to acquire and use new information since technological, political, social, regulatory and other types of changes provide organizations with new information on how to better use its resources within new environments (Shane and Venkataraman 2000). Organizations have also been advised that when the environment is turbulent, organizations should continually generate, process, and distribute information about their products, processes, and customers (Leonard-Barton 1995; Bhatt 2000). Therefore:

H10: Environmental turbulence is likely to be negatively related to the extent of export memory use.

4.2.2.(a) Environmental Turbulence and Instrumental and Conceptual Uses of Export Memory

In a fast changing environment, the perceived utility of export memory decreases due to continual projections of different forecasts regarding the environment (Weitzel 1987).

As a consequence, an organization that adopts this perception would rely less on their export memory. It is likely that this organization would demand more export information for more immediate, practical purposes, as the company may need to react immediately to sudden changes in the environment (Souchon et al. 2003). However, export memory may still remain as one of the sources of information because even if managers would attempt to maximize environmental data, they simply do not have ample time and cognitive capacity to perform in turbulent environments (Ottesen and Grønhaug 2004). In addition, increasing environmental turbulence favors immediate access and use of available information for the original purpose for which information is gathered (i.e., the “rational” use by Weber (1947), and Feldman and March (1981)).

Decision-making is clouded by tremendous uncertainty when done in a turbulent environment. But when the environment changes without effecting radical changes in the market, organizations use their available data on the export market (Leblebici and Salancik 1981) which comes from their export memory. Export memory is the source of the general framework for survival in a turbulent environment.

When the environment is turbulent, decision-makers need to make more decision, and need to be more responsive to the changes occurring. To make decision, they need information. Thus, one would see the use of export memory in a rational way (instrumentally and conceptually).

H10(a): Environmental turbulence is likely to be positively related to the instrumental use of export memory.

H10(b): Environmental turbulence is likely to be positively related to the conceptual use of export memory.

4.2.2.(b) Environmental Turbulence and Symbolic Use of Export Memory

In a turbulent environment, organizations tend to ignore the relevance of the contents of export memory and simply proceed to use them (cf. Glazer et al. 1992; Vyas and Souchon 2003); usually for giving credence to decisions made on a different basis such as instinct (Weitzel 1987). Weitzel (1987) explains that this symbolic use is based on belief that stored information is already outdated and may not any more be relevant.

Therefore, stored information is used when the decision that it suggests is similar to that already made by decision makers. It is thought that:

H10(c): Environmental turbulence is likely to be positively related to the symbolic use of export memory.

4.2.3. Export Experience

Experience in export operation increases an organization's appreciation for the value of export memory. Export experience helps an organization to discern whether their export memory is of high quality or not. Generally, export memory is more highly prized by an organization that has more experience in exporting.

Greater experience in exporting may even mean less information acquisition (Moorman and Miner 1997). As organizations gain more export experience, they tend to depend more on their accumulated experience than probe for new information from their environment (cf. Daft and Weick 1984). When these organizations perceive lesser threats from the environment, they further decrease their search for new information and rely more on their export memory (cf. Berthon et al. 2001). Furthermore, when an organization has rich experience in export operations, its managers gain rich intuition (Vyas and Souchon 2003) which they may be inclined to use more often (Shoemaker and Russo 1993). It is suggested that:

H11: Export experience is likely to be positively related to the extent of export memory use.

4.2.3.(a) Export Experience and Instrumental and Conceptual Uses of Export Memory

Experiential knowledge accumulated by experienced exporters (Katsikeas 1994), becomes part of a highly credible information system used in decision making for export operations. Since organizational memory originates from exporters' own common experiences (cf. Miyashiro 1996), these exporters have deep knowledge of the contents of this system and high appreciation for maintaining high quality export memory. With this credible data, they tend to use information as it was originally

intended for. Moreover, a more developed export memory brought about by greater experience provides a better sorting device for identifying successful practices (cf. Berthon et al. 2001).

Exporting organizations which acquired much experience in export operations are also disposed to the conceptual use of export memory. An organization can evaluate the value of its memory if most of its contents come from the organization's own experiences. It would be likely that an organization's own experience will guide an organization in making the best use of its export memory in comprehending its export operations. With a more developed export memory, export market information becomes less equivocal (Sinkula 1994) which allows export managers to use its export memory with more ease. Export memory itself also provides the organization with a more holistic way of perceiving issues (Berthon et al. 2001). It is suggested that:

H11(a): Export experience is more likely to be positively related to the instrumental use of export memory.

H11(b): Export experience is likely to be positively related to the conceptual use of export memory.

4.2.3.(b) Export experience and Symbolic Use of Export Memory

Organizations that have long experiences in export operations have a higher appreciation for the value of export memory and will use it more in a rational manner. In a way, their experience would validate the usefulness of export memory. The importance of the export information gained from their export experience will be considered as an asset of the organization which will be seen as wasted if not used rationally. These organizations may rely more directly on their export memory in making decisions since they have stored much of their experiences in the organization's memory (cf. Souchon et al. 2003). These observations suggest that:

H11(c): Experience is likely to be negatively related to the symbolic use of export memory.

4.2.4. Export Complexity

Export complexity refers to the increased number and level of variables in the market such as number of alternatives, number of attributes, variability of information on the attributes and similarity of the alternatives (Helgeson et al. 1993) that affect decision making. When dealing with a complex market with different qualities from that of the domestic market (Czinkota and Ronkanen 1995), an organization tends to maintain their routines even if learning becomes necessary (cf. Moorman and Miner 1998) or even if there a “tendency to agree that export decisions would not be taken without market research” (Hart et al., p. 1994). Because of the system of exporting is complex (Leonidou and Adams-Florou 1999), companies that export would rely more on routines embedded in their export memory (cf. Churchman 1981). Thus:

H12: Market complexity is likely to be positively related to the extent of export memory use.

4.2.4.(a) Export Complexity and Instrumental and Conceptual Uses of Export Memory

Corporate management would invest more on export memory when faced with a complicated and diversified foreign market to satisfy the knowledge requirement of internationalization (cf. Craig and Douglas 1996). Under these circumstances, it is more difficult to make a lucid idea of different market situations. In responding to these situations, organizations tend to acquire more information from different sources (Diamantopoulos et al. 1990). The process of information acquisition is guided by the frameworks and guidelines provided by export memory. Furthermore, export memory provides the needed order (Hunt 2003) for a confused or complex situation.

Organizations use their records on complex groupings of products and services from their organizational memory to facilitate management (Johnson and Paper 1998). The use of these mass of information about diverse products and services could easily be identified because of the particularity of the objects these refers to. Export memory provides the “mental model that imposes order on multidimensional, fine-grained, or volatile competitive markets” (Day and Nedungadi 1994, p. 31). These mental models

enable managers to “select, interpret, and act on information their past experience has told them has the greatest leverage.” (op. cit., p. 40-41). Thus, export memory provides a clearer understanding on how the export market operates. It puts order into what seemingly is chaotic. Thus:

With these principles, it follows that:

H12(a): Export complexity is likely to be positively related to the instrumental use of export memory.

H12(b): Export complexity is likely to be positively related to the conceptual use of export memory.

4.2.4.(b) Export Complexity and Symbolic Use of Export Memory

Management literature provides that good decision making is one done by a decision maker that gains “legitimacy by their use of information” (Feldman and March, p. 178). This assumes that “managers are rational and well-informed information processors using their conceptual framework to help decide how to find and pursue opportunities, parry threats, and overcome constraints” (Day and Nedungadi 1994, p. 31). Applying this framework to export memory, it follows that since there are more risks and threats in managing international operations (Craig and Douglas 1996), managers would conform to an increasingly rational way of identifying “competitive advantage or deficiency” (Day and Nedungadi, p. 31) when faced with a more complex market. Managers will tend less to manipulate export memory or simply use it to justify decisions based on other things in a more complex export market due to the importance of information specially in those situations. Therefore:

H12(c): Complexity is likely to be negatively related to the symbolic use of export memory.

4.2.5. Export Dependence

Export dependence refers to the proportion of a company's profit that comes from foreign markets (cf. Westhead et al. 2001; Cadogan et al. 2002). Although increasing export dependence could be argued to be an indicator of competitive advantage (O'Farrell et al. 1996; Westhead et al. 2001) and to be an essential ingredient for the success of new and small companies, there is the countervailing greater risk of loss to organizations whose profits and sales depend on export operations more than on local markets (Young et al. 1989; Hansen et al. 1994; Leonidou and Adams-Florou 1999; Albaum 2005). To address such risk, organizations that are highly export dependent would use their accumulated export information and experience which functions as strategic advantages over their competitors (Walsh and Ungson 1991; Berthon et al. 2001). Considering these findings, with the principle that the benefits of memory are maximized in its use (cf. Moorman and Miner), it is argued that:

H13: Export dependence is likely to be positively related to the extent of export memory use.

4.2.5.(a) Export Dependence and Instrumental and Conceptual Uses of Export Memory

Higher levels of export dependence will result to higher "perceived importance of the export market intelligence generated and disseminated" (Cadogan et al. 2002, p. 618). Having higher esteem for market information reinforces an organization's practice of rational decision making which consists of the "systematic application of information to decisions" (Feldman and March 1981, p. 177).

When the survival and success of the firm depend on exporting, it is more likely that managers would tend to deviate less from the rational way of decision making as they "must reduce or absorb environmental uncertainty to make decisions" (Day and Nedungadi 1994, p. 31). They base their decisions on objective information with the goal of reducing the high risk involved in export operations (Cavusgil 1984; Sood and Adams 1984; Diamantopoulos and Horncastle 1996). This mode of decision making is

itself a risk-management strategy. To operationalize the process, managers would use export information in an instrumental way (Souchon and Diamantopoulos 1996). This may also be the case in the use of export memory since stored export information provides a strong foundation to base their decisions on. A more rational way of deducing decisions from export memory is favored by organizations engaged in export operations.

Organizations whose primary source of profit comes from export operations would exert more effort in collecting information about the market (Diamantopoulos and Cadogan 1996) and will also conserve them for future use. Export dependent organizations “can justify greater investment and expenditure on information gathering and dissemination mechanisms.” (Cadogan et al. 2002, p. 618)

Although the primary objective of these organizations is to collect information responsive to certain needs, the entire bulk of all kinds of information collected become a basis for export operations. Stored information continually helps an organization reduce uncertainty by providing the assumptions and theories that an organization perceives will ensure its success (cf. Walsh and Ungson 1991).

It is suggested that:

H13(a): Export dependence is likely to be positively related to the instrumental use of export memory.

H13(b): Export dependence is likely to be positively related to the conceptual use of export memory.

4.2.5.(b) Export Dependence and Symbolic Use of Export Memory

When companies become more dependent on exporting, export information for decision making increasingly becomes critical to them. A wrong exporting decision has grave repercussions on the capability of a company to operate (Axinn 1988). Export memory will be used as it was initially generated – avoiding any sort of manipulation. They would equate this rational process of decision making with ultimate business and marketing success. Symbolic use will not be favored even if there are opportunities to use export memory for increasing management power or at least maintain the status quo

(cf. Wexler 2002). When export dependence is low, there is more chance of game playing – non-export specific managers objecting to the allocation of resources to export operations (Cadogan et al. 2005). When dependence is higher, more managers understand the imperative to have high export success-so there is less chance that they will manipulate export information (in memory) nor simply use it to back up their hunches. Thus:

H13(c): Export dependence is likely to be negatively related to symbolic use of export memory.

4.2.6. Export Memory Quality

Drawing from information use literature, the effective use of export memory is dictated by an organization's perceptions of the quality of their export memory (cf. Abell and Oxbrow 2001). Quality of export memory corresponds to the subjective value judgments that an organization has on the contents of their export memory (Lee et al. 2002; cf. Shuzheng 2003). Therefore, when perceived high quality export memory is easily available to organizations, they would be more inclined to use them (cf. Low and Mohr 2001). It is possible that organizations have higher confidence (cf. Souchon and Diamantopoulos 1997) in applying this stored information in their export activities when it is of higher quality. Furthermore, quality export memory will be seen as an asset of the organization whose contribution to organizational success happens through its application. Thus:

H14: Export memory quality is likely to positively related to the extent of export memory use.

4.2.6.(a) Export Memory Quality and Instrumental and Conceptual Uses of Export Memory

When an organization perceives its export memory to be of good quality, it would be more inclined to use this memory. Export memory that is maintained at great costs is a big disappointment to organizations when they are not able to use them (Wexler 2002). Export memory is seen as a potent asset of a company (e.g., Day 1994; Berthon et al.

2001; Johnson et al. 2004) which facilitates a decision making process. Since export memory facilitates the absorptive capacity of an organization (cf. Cohen and Levinthal 1990), organizations tend to use their export memory specially when it is of high quality. Since the possession of prior information is a prerequisite in identifying opportunities, having high quality export memory aids an organization in identifying market opportunities. High quality export memory is more likely to be used for the purpose for which it was stored in the first place.

Having properly selected and developed contents of export memory is more important than the mere volume of export memory (Bierly et al. 2000). Quality export memory propels an organization to have a more holistic picture of the market. When organizations have high quality export memory, they will be more inclined to use it in understanding the market. Thus, export memory will be used as a guide in developing a framework on how the export market works.

Thus, it is to be expected that:

H14(a): Export memory quality is more likely to be positively related to the instrumental use of export memory.

H14(b): Export memory quality is likely to be positively related to conceptual use of export memory.

4.2.6.(b) Export Memory Quality and Symbolic Use of Export Memory

When information in memory is recognized as being poor quality, it provides more opportunity for managers to use information in a symbolic way. For instance, even though they know that information stored is not reliable, managers may still use it to back up a decision which was based on some other reasons, e.g., from a hunch. Also, managers may also feel more comfortable to manipulate their export memory in order to serve their own agenda. They will feel less hesitant to manipulate a poor quality export memory than if it is of good quality because they will think that manipulating an export memory of good quality will be a waste of resources, while it will not be in the case of a poor quality export memory. Thus:

H14(c): Export memory quality is more likely to be negatively related to the symbolic use of export memory.

4.2.7. Export Memory Use by Different Functional Areas

Export memory use by different functional areas refers to the taking into account” (cf. Diamantopoulos and Souchon 1999, p. 2) stored export information for making marketing plans or strategies in diverse organizational departments (cf. Souchon et al. 2004, p. 233). Process of export memory use in this context involves the “explicit understanding that inter-functional co-operation is essential along with the concomitant organizational and managerial antecedents” (Tadepalli and Avila 1999, p. 69)

When export memory is highly used by different functional areas in the organization, chances are export memory will be more extensively used because extensive use by one department will eventually be a positive reinforcement for the others to use them as well. If for example, research and development personnel use export memory extensively, other departments that directly deal with research and development will also be inclined to use export memory, part of the reason would be to synchronize the decision making process. Thus,

H15: The interfuctional use of export memory is likely to be positively related to the extent of export memory use.

4.2.7.(a) Effect of Inter-Functional Use on the Instrumental and Conceptual Uses of Export Memory

In this study, views on inter-functional use were based on the available literature on interfunctional coordination which involves export/international departments, and between these and other stakeholders (Cadogan and Diamantopoulos 1995, p. 55). Interfunctional use in this study refers to the application by different functional areas (e.g., finance, production, human resource, etc.) in an organization of export memory for addressing specific marketing problems. Each of the functional areas as a stakeholder would be concerned in knowing more about the contents of their export memory. Furthermore, when the different departments of the organization use export

memory, it would be difficult for any department to use it in any other way than for the purpose for which the memory has been developed since other departments would be very aware of what the export memory contains.

The inter-functional use of export memory may also mean its conceptual use since each of the different functional areas will understand the need to grasp their role in the export operations of the organization. Use by different functional areas will develop assumptions, theories, and frameworks on how the export market operates.

H15(a): The use of export memory by the different functional areas is likely to be positively related to the instrumental use of export memory.

H15(b): The use of export memory by the different functional areas is likely to be positively related to the conceptual use of export memory.

4.2.7.(b) Effect of Inter-Functional Use on the Symbolic Use of Export Memory

When export information is used by top management it is expected that they use it for the purpose for which those information were acquired. They normally would like to act in a rationale manner, taking the information stored as objectively as possible. This would be true also for other functional areas, except for the export and marketing department which are directly responsible for export operations. The people in those functional areas may use export memory in a symbolic way in order to further their own interest (cf. Wexler 2002). Thus:

H15(c)(i): The use of export memory by marketing and export personnel is likely to be positively related to the symbolic use of export memory.

H15(c)(ii): The use of export memory by finance/accounting, production, research and development, and top management people is likely to be negatively related to the symbolic use of export memory.

4.2.8. Export Specificity

Export specificity would refer to the establishment of organizational structures for exporting activities, which could either be an “export nonspecific structure” (“using outside middlemen as export management firms or ETCs, or using firm’s own marketing or sales departments”) or an “export specific structure” (“specialized division such as an export department or international division handling exporting tasks”) (Samiee and Walters 1990 p. 239). Since export specificity indicates the level of export infrastructure and level of commitment to exporting (Samiee and Walters 1990), export specificity could reinforce an organization’s initial favorable value judgments on their export memory previously used for exporting as export information. Furthermore, the more export specific an organization is the more chances it would have in accumulating valuable export information due to its specialized nature. Therefore:

H16: Export specificity is likely to be positively related to the extent of export memory use.

4.2.8.(a) Export Specificity and Instrumental and Conceptual Uses of Export Memory

Having a separate export department within an organization establishes and reinforces a company’s commitment to its exporting operations (Samiee and Walters 1990). This appendage directs the organization in the use of stored information for the initial purpose for which these were acquired. Export-specific organizations (i.e., firms with a formal structure handling export activities [Samiee and Walters 1990]) are more likely to be aware of the value of stored information. The presence of export department personnel increases the capability of organizations to focus on export issues and store export information that will be useful to the organization. They have more at stake and thus will feel the pressure to perform. In such instances, they will be more inclined to use export memory for the purpose for which it was developed.

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H16(a): Export specificity is likely to be positively related to the instrumental use of export memory.

H16(b): Export specificity is likely to be positively related to the conceptual use of export memory.

4.2.8.(b) Export Specificity and Symbolic Use of Export Memory

Departments are designed to protect the interest of the organization allocated to them. However, each department also protects their own vested interest. Following this line of thought, the exporting function may resort to the manipulation of its own export memory in order to promote its own interest. As export memory is not static but open to being reinterpreted (Wexler 2002), those in the export department may find it useful to direct its reinterpretation to serve its own agenda. Moreover, those in the export function may use its export memory on a selective basis in so far as it justifies the status quo (cf. Wexler 2002). In a way, export memory may be used to obtain, maintain, or enhance the power of the export function (Beyer and Trice 1982). Furthermore, those in the export department may tend to make decisions to serve their own purpose and just use their export memory to justify what they have decided which was based on other reasons.

H16(c): Export specificity is likely to be positively related to symbolic use of export memory.

4.2.9. Memory Overload

Overload occurs when decision makers are flooded with stored international market information which makes it difficult for them to select the information that would help solve a particular problem at hand (cf. Cavusgil 1985; Wood and Goolsby 1987).

Memory overload, which is as detrimental as lack of information (Deshpandé 2000), possibly contributes to the “breakdown in processing capabilities” (Feldman and March 1981, p. 175). Relying on literature from information use to prevent further overload, an organization prevents the inflow of additional information (cf. Souchon and Diamantopoulos 1997) and instead relies on routines (cf. Moorman and Miner 1998) which forms part of export memory (cf. Churchman 1981).

H17: Overload is likely to be positively related to the extent of export memory use.

4.2.9(a) Memory Overload and Instrumental and Conceptual Uses of Export Memory

An organization tends to be more confused when it has more information that it could process for their operations. In fact, an overload of stored information creates confusion in the decision maker’s mind that results to the inability to access needed information efficiently (cf. Goodman 1993). Export memory overload rather becomes an obstacle to decision-making (Chisnall 1977; Feldman and March 1981; Albaum et al. 1989; Saunders and Jones 1990). Under these circumstances, it would be difficult to identify relevant information within export memory – decision makers then base their decisions on other considerations.

As already laid down in previous discussions, when an organization has more export memory as it can handle, the organization may become more confused rather than being enlightened. When overload occurs, avoidance of information may result since the organization would be rendering decisions based on more comprehensible bases. Therefore:

H17(a): Overload is likely to be negatively related to instrumental use of export memory.

H17(b): Overload is more likely to be negatively related to the conceptual use of export memory.

4.2.9(b) Memory Overload and Symbolic Use of Export Memory

When organizations have more stored information than it could actually handle, managers' may be more confused on how to use the information (Cavusgil 1985), leaving them with the option of making decisions based on other reasons. After making such decisions, managers will use export memory to support the decisions they have made.

When organizations experience having more information than they could actually handle, it makes them become less confident in using the information. Organizations which have a tendency to acquire more information than they use, run the risk of confusing decision makers with redundant information or information that is not needed (Souchon et al. 2003). This results into export memory's ambivalence. In such situation, an organization may simply use the export memory they have to support their confused understanding of the market situation. It is also possible that the organization will use the export memory in a haphazard way. This means that export memory is used just because it is available or accessible rather than for its relevance (cf. Glazer et al. 1992). Furthermore, since an overload of export memory may lead to confusion, some members of the organization may end up taking advantage of the situation as a chance to manipulate the export memory to serve their own agenda. It is suggested that:

H17(c): An overload of export memory is likely to be positively related to symbolic use of export memory.

4.2.10. Size of Organization

Size of an organization is conceptualized as the “managerial and financial resources as well as production capacity” that a company can devote to export activities (Katsikeas and Morgan 1994, p. 20). Organization size is also seen as a major factor in a company’s “propensity to export” (Katsikeas and Morgan 1994, p. 17).

The size of an organization has a significant impact on export behavior particularly in the areas of “export planning activity, organizational and attitudinal variables, and information-gathering activity” (Samiee and Walters 1990). For example, “key decisions in smaller, internationally inexperienced companies tend to be more subjective in nature, often concentrated in one person, frequently the owner-manager” (Williams 2003, p. 49). Williams (2003, p. 58) notes that: “In contrast to the situation in larger organizations, it may be the under-supply of useful and relevant export marketing information that creates problems for SMEs, rather than its over-supply.” As a result, SMEs usually refrain from exporting because of their limited resources and export knowledge (Peng 2000) and instead rely on “intermediaries” as a means of internationalizing (Peng et al. 1998; Peng 2000). However, size is not a significant factor in risk perception (Samiee and Walters 1990).

Aside from its significance to exporting behavior, the size of an organization still determines the source of information used by a company (Yeoh’s 2000) even if there are dissents (Walters 1983; Hart et al. 1994; Leonidou 1997; Yeoh 2000) to the positive correlation between company size and information gathering (Culpan 1989; Samiee and Walters 1990; Benito et al. 1993). Larger firms rely more on their stored information (Poiton 1978; Diamantopoulos et al. 1990; Crick et al. 1994) and their exclusive sources (Yeoh 2000) while smaller ones rely on their own experiences and on general available information sources (Yeoh 2000). Since the quality of export memory depends on the quality of information (cf. Czinkota and Ronkainen 2001), the effect of company size on the nature of information sources would have an impact on export memory. With the higher confidence in the information (cf. Souchon and Diamantopoulos 1997) contained in export memory, it would be a strong case to say that:

H18: Size is likely to be positively related to the extent of export memory use.

4.2.10.(a) Size of an Organization and Instrumental and Conceptual Uses of Export Memory

A large organization would have difficulties in coordinating its operations. These difficulties, coming from various segments of the organization, demand a multitude of quick decisions from management. The export culture of an organization which is part of its export memory facilitates collective action taking (cf. Hofstede 1980; Schein 1985; Weick 1994; Berthon et al. 2001). It will also have the potential of enhancing efficiency and quickness in decision making (cf. Berthon et al. 2001). Thus, bigger organizations will rely on its export memory to propel coordinated efforts from all relevant functional areas of the organization. As they rely on their export memory as source in making decisions, management would have to seek information that directly responds to the multitude of issues at hand. Since a bigger organization may have a bigger export memory, its developed memory will provide criteria on what information to take as well as specifies the value of information. As Diamantopoulos and Horncastle (1996) suggest, management will try to use the information for the purpose for which they were first acquired when their decision greatly affects the welfare of the organization.

An organization growing in size has a greater need for coordination among its different functional areas (O'Dwyer and O'Toole 1998). These areas are grouped into themes on "communication and common understanding; organizational culture emphasizing responsibility, cooperation, and assistance; a lack of dysfunctional conflict; and common work-oriented goals." (Cadogan et al. 1999, p. 692). To solve coordination problems, this study proposes that export memory becomes the source of the common notions on export operations imparting coherence among members of the organization. Therefore:

H18(a): Size is likely to be positively related to the instrumental use of export memory.

H18(b): Size is likely to be positively related to the conceptual use of export memory.

4.2.2.10.(b) Size of an Organization and Symbolic Use of Export Memory

When organizations are big, they are more prone to political factions. Each division or functional area may have its own political agenda to play in the organization (cf. Wexler 2002). For example, domestic sales might be in competition with export sales for resources. Thus, members of the organization may tend to manipulate export memory or use export memory to rationalize their decisions based on other reasons in order to protect their own interest. Thus,

H18(c): Size is likely to be positively related to the symbolic use of export memory.

4.3. Export Performance

Stored knowledge and capabilities as forms of memory may positively influence the general decision making process in an exporting organization (cf. Winter 2000). In general, when used as a basis for export decision making, they become sources of competitive advantage for the organization (cf. Leonard and Barton 1992; Eisenhardt and Martin 2000; Wexler 2002) since those resources allow for the creation of value (Liyanage and Barnard 2003) which resists the duplicative efforts of competitors (Barney 1991). Specifically, they provide a sound foundation for analyzing problems and issues, supply criteria for making decisions, indicate the right questions to ask while suggesting strategic sources of information and directing information scanning (e.g., Brown and Starkey 1994), allow for quick decisions (cf. Handy 1978), give a push on export market discovery, capitalize on past and present relationships, and guide as well as support the organization's internationalization process.

Following classical decision making theory and applying it to export marketing decision, the use of memory influences the choice of criteria used in making decisions about the export operation, and the importance given to each criterion (Robertson and Wood 2001). Stored export knowledge from experience, for example, would indicate what factors are crucial indicators of a wise market choice. It will also help out in short listing attractive foreign clients by eliminating those who do not pass the set criteria.

For instance, by looking most to information about the foreign buyer's payment record, than to information about the customer's background, business potential, financial strength, and political and economic risks in the buyer's country (Pike and Ross 1997); the organization is able to avoid delinquent importers.

The use of stored knowledge from experience may suggest a specific course of action (Shane 2000). Information use also supports that particular action by providing evidence of causality or correlation and unequivocal evidence to support goals of managers and the way of attaining them. Furthermore, information use may also allow decision makers to consider the impact of the decision to the whole system (Churchman 1981).

Knowledge of the past export experiences also allows the organization to ask the right questions and source answers from strategic suppliers of information. Lack of awareness of information sources was found to be an important barrier to the non-exporting and passive-exporting firms (Bannock and Partners 1987). It has been shown by Cadogan et al. (2002) that experience and existing knowledge influence the exporting organization's ability to locate better sources of information crucial to the organization's performance.

Besides allowing for quick decisions, by reducing search and focusing attention, routines and standard approached help improve the firm's financial performance (Walsh and Ungson 1991). It does so by reducing the transaction cost related to new decisions. The "whats" and "hows" stored in the storage bins of the organization reduces the cost of monitoring desired behavior.

In export market operation, which is part of the international process (Johanson and Vahlne 1977), decision makers "respond strategically to signals from markets and competitors" (Lim et al. 1996, pp. 65; Anderson 1993). Their ability to respond is enhanced by their use of stored information by supplying lessons learned as well as to comprehend, extrapolate, interpret, and apply new information in unique ways that those without access to their stored information cannot copy (Roberts 1991). Needless to say, readily available information speeds up decision making process. It provides the organization the ability to seize opportunities when they appear more quickly than competitors, especially in export marketing where quick response is of the essence

(Dougherty 1992). For instance, in some export setting, organizations may be asked to bid for a contract within a short time frame. Availability of past information allows the organization the ability to make a well founded bid.

A specific kind of memory, intuition is a “subjective experience of a mostly nonconscious process that is fast, a-logical, and inaccessible to consciousness that, dependent on exposure to the domain or problem space, is capable of accurately extracting probabilistic contingencies.” (Lieberman 2000, p.113). Intuition is a resource used by many decision makers including those in export marketing (op. cit.). Many senior executives have admitted that many of their most successful decisions were based significantly on gut feelings rather than intellectually rigorous evidence. More recent scientific research, strongly suggests that far from being irrational or illogical, intuitions can provide powerful new insights and ideas – fresh perspectives that would probably never have emerged by adopting a rational, logical and analytical approach. Operating below the normal level of consciousness, intuition employs holistic rules of association and parallel processes of synthesis that are no less valid and worthwhile as those arising within the conscious mind. Far from being metaphysical and mysterious, intuition represents a perfectly natural facility for putting to work things that we already know, without actually “knowing” that we know them (Lewis and Leyser 2002).

As a particular kind of experience, relationships with past and present foreign partners and clients become sources of learning for the organization (Johnson et al. 2004). The knowledge developed within a relationship with a counterpart is unique, because it is shaped by information transferred through connected relationships. The knowledge gained from such relationships is transferred to and used as leverage in new partnerships (Chetty and Eriksson 2002).

The use of prior knowledge plays a critical role in export market discovery. In particular, three major dimensions of prior knowledge are important in entrepreneurial discovery: individual’s prior knowledge of markets, knowledge of ways of serving the markets, and knowledge of customer problems that enable entrepreneurs to see opportunities (Shane and Venkataraman 2000; Shane 2000; Liyanage and Barnard 2003). Individuals unfamiliar with customers’ problems will find it difficult to recognize possible solutions. The discovery process can be triggered by knowledge already possessed rather than by a search for knowledge needed (Shane 2000). In the

area of product development for example, Hargadon and Sutton (1997) observed that product designers use analogy between past solutions and current problems to come out with solutions that make use of the strengths of past solutions and ignore those aspects which are not applicable. The use of accumulated knowledge makes it possible for firms to discover productive opportunities in its environment (Liebeskind 1996). Likewise, opportunity discernment in the export market is also supported by familiarity with the market (Johanson and Vahlne 1977; Gatignon and Andersson 1988; Kogut and Singh 1988; Barkema et al. 1996; Eriksson et al. 1997; Madhok 1997; Autio et al. 2000).

Yli-Renko et al. (2002) and Chetty and Erikson (2002) demonstrated the crucial importance of a firm's use of experiential knowledge to its subsequent actions in the foreign market. Specific to export marketing, the classical theory on internationalization process espoused by Johanson and Vahlne (1977) supports the idea that an organization tends to expand its export operation based on its past experience and familiarity with the foreign market which is a stocked knowledge. Experience brings forth business opportunities which is a driving force in the internationalization process (Johanson and Vahlne 1990). A deeper understanding of their present situation as regard to the export market, achieved through a profound knowledge of its history, enables organizations to judiciously assess its prospects in the market and articulate its future directions (Andersen, 1993; Hadjikhani 1997; Oviatt and McDougall 1997; Autio et al. 2000). The relationship between export performance and its antecedents are summarized in Table 4.7.

Table 4.7. Relationship between export performance and its antecedents.

Export Performance	<i>Extent of Use</i>	H19 (+)
	<i>Symbolic Use of Export Memory</i>	H19(c) (+)
	<i>Instrumental Use of Export Memory</i>	H19(a) (+)
	<i>Conceptual Use of Export Memory</i>	H19(b) (+)
	<i>Memory Overload</i>	H21 (-)
	<i>Environmental Turbulence*</i>	H22 (-)

*The moderating effect of market turbulence on the relationship between the different export memory uses and export performance was also measured and given positive relationship in hypothesis no. 20.

4.3.1. Extent of Use

The mere collection of information does not influence the organization's performance; it is its effective use by decision makers that will bring the impact to the organization (Hart and Diamantopoulos 1993). With greater use of information, companies gain "superior knowledge" that enables them to "coordinate and combine their traditional resources and capabilities in new and distinctive ways, providing more value for their customers than can their competitors" (Zack 1999, p. 128).

Use of information can assist in the identification of opportunities and threats (e.g., Moorman 1995) and thus help to resolve marketing problems (e.g., Barabba and Zaltman 1991). Export information, however, does not exclusively concern the marketing functional area of companies; it may, for instance, also concern R&D personnel for the potential development of exclusive export products or the adaptation of existing products. As a result, it is expected that the more people have access and use this export memory, the better the export decisions (and as a direct result, the export performance) will be. Furthermore, it also facilitates collective action making (cf. Schein 1985; Weick 1994)

In like manner, the stored export information, no matter what quality it has, would not have a positive impact on the organization if it is not used. Therefore, organizational success is not based upon the firm's ability to collect relevant information and storing them in the organization, but on its willingness and competence in using that

information (e.g., Daft and Lengel 1984). Studies have illustrated the greater use of export information brings with it improved export performance (Cavusgil 1983; Daft and Lengel 1984; Cavusgil and Zou 1994; Hart and Tzokas 1999; Yeoh 2000; Rose and Shoham 2002). In like manner, it is more likely that the proper and extensive use of export memory will provide positive influence on the export operation. It has also been argued that “organizations which can effectively manage knowledge in and from the OM (organizational memory) are capable of enhanced or accelerated learning, the development of innovative products and/or services, greater stability in the midst of whitewater change, lower transaction costs, and reduce time, effort and capital in socializing new members and/or reorienting those who are changing positions or moving from project to project” (Wexler 2002, p. 394). Thus:

H19: Extent of use is likely to be positively related to export performance.

4.3.2. Instrumental Use and Conceptual Use of Export Memory

Export memory is knowledge on the export market that has been stored in the organization (cf. Auramaki and Kovalainen 1998; Anand et al. 1998; Sparrow 1999; Wexler 2002). With information seen to be an indispensable tool in gaining success in the international market (Souchon and Diamantopoulos 1997; Katsikeas et al. 2000; Toften and Olsen 2003), the use of the knowledge gained in the past to directly address exporting issues will be an advantage to an exporting organization. When societal norms favor methodological approaches, “requests for information and the gathering of information will generally be rewarded by observers; less systematic procedures are common, but they tend to be less reliably rewarded” (Feldman and March, p. 180).

Prior knowledge will provide the organization with the capability of recognizing an opportunity when it sees one (Shane and Venkataraman 2000). In a way, lessons of the past will become handy to an organization that has been able to preserve them. It will enable them to select, interpret, and act on information their past experience has told them has the greatest leverage (Day and Nedungadi 1994) Furthermore, it will also be able to avoid pitfalls which have already been identified and realized in the past.

Export knowledge stored will have the potential of providing the export decision makers with lessons gained from past export experience as well as inputs from export information acquired before. All this stored export knowledge provide the export decision makers with a holistic comprehension of the export operation (cf. Berthon et al. 2001). Furthermore, through the export memory, the export environment becomes less uncertain and more structured (cf. Berthon et al. 2001) and market information less equivocal (Sinkula 1994). Thus:

H19(a): The instrumental use of export memory is likely to be positively related to export performance.

H19(b): The conceptual use of export memory is likely to be positively related to export performance.

4.3.3. Symbolic Use of Export Memory

Symbolic use of export memory “encourages distortion, oversimplifying, and ignoring of relevant information” (cf., Toften and Olsen 2003, p. 103). Distorted export memory could have negative influence on decision-making (cf., Feldman and March 1981.) Symbolic use may entail making decisions based upon instinct or some other reasons and simply using export memory to merely legitimize these decisions based on other factors (cf., Menon and Varadarajan 1992). Decisions based on instinct are likely to be very risky and error-prone (Schoemaker and Russo 1993). Indeed, in an export setting, Crick et al. (1994) found that companies which used export information to back up hunches tended to be lower performing firms, than companies using information in a more instrumental manner. In this same way, the symbolic use of export memory may result to under performance since it may only serve the ends of some factions within an organization (cf. Wexler 2002).

In addition, knowledge about international markets and operations combined by the efficiency by which such knowledge is learned is seen as an important determinant of international sales growth (Autio et al. 2000). Symbolic use of export memory is seen to be a “bad” use of information (Souchon and Diamantopoulos 1996) and thus could lead to the organization’s poor performance. It follows that:

H19(c): Symbolic use of export memory is likely to be negatively related to export performance.

4.3.4. Moderating Effects of Environmental Turbulence on the Relationship between the Different Export Memory Uses and Export Performance

When the export environment becomes very turbulent, it may mean that any of the aspects of the export environment (i.e. technological, market, competitive, or regulatory) may be radically changing. In such cases, it may imply that basic frameworks of doing exporting may be in the process of undergoing fundamental changes which demand a change in the way companies conduct their business. At such a time of constant state of disequilibrium, the environment factors that are changing offer a continuous supply of new information about different ways of using the company's resources to enhance its wealth (Shane and Venkataramna 2000). However, export memory will constrain the needed search for and creation of future possibilities (cf. March 1991). Furthermore, environmental turbulence may shift the advantages and disadvantages of tested knowledge versus new information. For example, in stable environment, export memory can efficiently and effectively provide guidance in forecasting export sales. However, in less stable environment, export memory may become an obstacle in acquiring a clearer picture of the future. Export memory, with its implication of being "knowledge from the past" may no longer be as relevant as it would be during stable environmental conditions. It may perpetuate a single-loop learning style (Berthon et al. 2001), which perpetuates the status quo, when what is needed is a double-loop learning one. This is especially true for companies which have been successful since it is more difficult for them to look for unrelated and new knowledge perspectives when such is needed (Miller 1993; Liyanage and Barnard 2003). Moreover, investment and use of well developed export memory "may create a false confidence in the strength and ability of the firm to weather adversity" (Wexler 2002, p. 397), especially when the use of memory helped it to overcome challenges in the past. In such cases it is proposed:

H20: Environmental turbulence will moderate the relationship between the different uses of export memory and their effects on export performance.

4.3.5. Memory Overload

Confusion and impaired decision making results from high degree of information overload (Sivaramakrishnan and Perkins 1992). This happens because extraneous information “seduce” to consider only the aspects of the decision that can fit with these information. The process of decision making is centered on the available information and not on the demands of the decision to be made. If the considerations made exclude aspects of the decision which are critical to export success, then the performance of the organization would be downgraded (Glazer et al. 1992).

To overcome confusion, an organization can specifically identify its capabilities and advantages (Belich and Dubinsky 1995). An organization should have clear criteria for segregating useful information from the worthless ones. Such criteria should be grounded on export goals of the organization defined by variants of acceptable success. Such measures would avoid problems associated by misleading information and their haphazard use. For example, such a sorting standard would prevent organizations from ignoring details that are usually associated with exporting in a foreign country (Usunier 2000). Furthermore, it has been viewed that when there is an information overload, the quality of decision making decreases (Speir et al. 1999). It also increases the time required in making decisions and increases confusion regarding the decision (Cohen 1980; Malhotra et al. 1982; Speir et al. 1999). This may logically be applied also to an overload in export memory.

H21: Overload is likely to be negatively related to export performance.

4.3.6. Environmental Turbulence

Heterogeneity, dynamism, and hostility are important dimensions of the external environment (Zahra et al. 1997; Zahra and Bogner 1999). Dynamic changes in the areas of competitors, market, technology, and regulations can be discerned and measured (Cadogan and Paul 1999). When the environment (technological, competitive, market, regulatory) changes quickly, exporting organizations will find it more difficult to adjust and respond to the changes. The environment is known to affect decisions and

performance (e.g., Albaum et al. 1989; Young et al. 1989; Jain 1993). It would take more effort on the part of the organization to respond properly to dynamic changes in the environment. What is true in the past may no longer be relevant in the present, much less in the future.

Drawing a line between negative and positive outcomes is hard, as international markets are generally described as hostile (Hitt 1997). Eisenhardt (1989) notes that high velocity (i.e. turbulent) environments are particularly challenging because information is poor, mistakes are costly, and recovery from missed opportunities is difficult. Thus:

H22: Environmental turbulence is likely to be negatively related to export performance

4.4. Conclusion

After providing the conceptual framework of this research and presenting the different hypotheses being examined in this work, the next chapter will discuss the quantitative method adapted for this research.

Overview of Chapter Five: QUANTITATIVE METHODOLOGY

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5.7. Summary

Chapter Five: QUANTITATIVE METHODOLOGY

Having presented the conceptualization and hypotheses in Chapter Four, this Chapter explains the quantitative method that was used to achieve the objectives set in this research (see Chapter One). More specifically, the research design, including data collection and analysis, is outlined (Hessler 1992; Yates 2004).

5.1. Overview of Research Design

This overview provides the basic outline of the quantitative methodology employed in the study. What follows is a discussion of the various stages of quantitative data collection and analysis needed to address the specific needs of this study. An assessment of the underlying principles of alternative quantitative research methodologies is also presented. Thus, this section serves as what Kinnear and Taylor (1991) refer to as explication of the framework upon which the kind, source, and procedure for treating data is done.

As was mentioned in Chapter One, this study aims to conceptualize export memory quality, develop psychometrically sound measures of this construct, determine key factors likely to influence the level of export memory quality, examine outcomes of export memory quality paying particular attention to export memory use and the latter's conceptual definition, measurement, antecedents and outcomes.

5.1.1. Cross-Sectional vs. Longitudinal Design

Two possible approaches are available in terms of research design: a cross-sectional or longitudinal design. A cross-sectional study takes place at a single point in time while a longitudinal study takes place over time with at least two points of observation taken (Balnaves and Caputi 2001). Longitudinal study has several advantages over cross-

sectional research in terms of analysis that could be performed as well as the degree of data accuracy. Because of repeated observation, longitudinal study has more power than cross-sectional study. However, the cross-sectional survey fits the more basic objectives of the study (Chapter One). This descriptive design “rel[ies] on a sample of elements from the population of interest that are measured at a single point in time” (Churchill 1995, p. 181), in contrast to a longitudinal design that gives “information about changes over time” (Jones 1996, p. 197). The cross-sectional design’s strength in measure development from a representative sample (Spector 1992) is useful in developing measures of export memory quality and export memory use as compared to a longitudinal design whose primary purpose would not usually be a measure development one (Kinnear and Taylor 1991). A longitudinal study would have been useful in addressing some of the research objectives (e.g. degree of association between the hypothesized antecedent factors and export memory quality or the possible causal relations between export memory use and export performance). However, considering the infancy stage of the constructs being developed and measured in this study and the benefits of cross-sectional study, a cross-sectional design was instead chosen over the longitudinal design (that would have also involved longer time and higher financial cost).

5.1.2. Data Collection Method

The choice of the data collection method used in the study was based on reduction of risk of bias, amount of data needed to be gathered and the economy and practicality of the method.

A mail survey was selected as the optimum data collection method because of its main advantages, such as preempting “interviewer bias” caused by the physical presence of the interviewer (e.g., Kinnear and Taylor 1991) and reducing “distribution bias”. It helps gather data from a “wider distribution” of survey forms, making for “better likelihood of thoughtful reply”, and being time and cost efficient (Erdos 1974, pp. 2-90 – 2-91). Compared to a personal interview, mail survey shows no favoritism for certain types of respondents. Mailed survey can gather more data relative to other methods because it has a “wider geographical contact”, it “reaches people who are difficult to

locate and interview” and it is “more effective in situations in which the respondent has to check information” (Wallace 1954 cited by Miller and Salkind 2002, p. 301). This is important because the study requires much information from respondents to satisfy for five major objectives of the study covering 22 hypotheses (Chapter Four). Respondents in a mail survey where anonymity is assured will feel more comfortable in answering sensitive questions. They could answer the questionnaire at their most convenient time and at their own pace.

A mail survey was chosen because is it cheaper than other data collection methods such as face-to-face interviews (Dillman 1978; Jones 1996) and telephone interviews (Jones 1996). Also, mailed surveys do not involve specialized equipment and high operations costs (e.g., computer interviews). There is “wide coverage for minimum expenditure of both money and effort” (Wallace 1954 cited by Miller and Salkind 2002, p. 301). Mail surveys save more time, relative to other methods, because data can be gathered from many respondents simultaneously. Using other methods than mail surveys would consume unreasonable costs and time in collecting data from a sample size of companies that is sufficiently large as to allow for satisfactory statistical power in the testing of hypotheses.

Although data collection method by mail has been criticized because of the potentially low response rates that can be associated with it (Wallace 1954; Groves and Lyberg 1988; Jobber and O'Reilly 1995; Miller and Salkind 2002) and potential non-response bias, these problems equally apply to other data collection methods (Jones 1996). They can also be remedied by diligent contacts with respondents, such as using follow-up letters (Jobber 1986; Miller and Salkind 2002) to increase the response rate and using a non-response analysis (Armstrong and Overton 1977).

5.1.3. Data Collection Form

The basic structure of the questionnaire was patterned after the objectives of the study (Chapter One). The questionnaire was prefaced with instructions and/or definitions to help the respondents in intelligently answering the questionnaire. The first ten parts of the questionnaire deal with the constructs of the study (information acquisition, export information dissemination, information interpretation, response to export information, export learning orientation and coordination, integration into the organizational system,

content of export memory, export memory use, external environment, and regulatory features). The last two parts of the questionnaire deal with export involvement and firm characteristics that were used in verifying responses. The items under each part of the questionnaire were based on the objectives of the study (Chapter One), literature (Chapters Two and Four) and results of the Qualitative Study.

To ensure the adequacy of the questionnaire, five protocols were conducted followed by three pilot studies (see Section 5.3 Pretesting). These studies were conducted to see if the items in the questionnaire would elicit from the respondents the kind of data useful for the research (cf. Aaker and Day 1990). The response rate, and amount and quality of data collected from the pretests were used for revising the questionnaire (5.3. Pre-testing).

5.2. Questionnaire Design

This section presents the different parts of the questionnaire and the frameworks used for their construction. The discussion is divided into five parts. First, the information sought by the different parts of questionnaire is presented together with the rationale for their inclusion. Second, the content of the questions and how these are worded are explained. Third, the form of response is discussed. Fourth, the reasons for the sequence of the questions are explained. Fifth, the physical characteristics of the questionnaire that are designed to aid in eliciting more and better responses are discussed.

5.2.1. Information Sought/Question Wording/Content

The information sought by the questionnaire was based on the objectives of the study (Chapter One) and presented in Table 5.1. The questionnaire used in the main survey was divided into twelve parts. The first ten parts dealt with the different constructs of the study while the last two parts contained questions that pertain to organizational characteristics. These parts corresponded to the constructs used in the study which are discussed in greater detail in Chapter Four.

Table 5.1 Information sought in the questionnaire

Antecedents to Export Memory Quality	
•	Information Acquisition Quality
•	Export Information Dissemination Quality
•	Information Interpretation Quality
•	Response to Export Information Quality
•	Export Learning Orientation
•	Export Coordination
•	Integration into the Organizational System Quality
Export Memory Quality	
Export Memory Use	
•	Extent of Use
•	Instrumental Use of Export Memory
•	Conceptual Use of Export Memory
•	Symbolic Use of Export Memory
Export Memory Overload	
Environmental Turbulence	
•	Market Turbulence
•	Technological Turbulence
•	Competitive Turbulence
•	Regulatory Turbulence
Export-Related Factors	
•	Export Profit Dependence
•	Export Sales Dependence
•	Export Specificity
•	Market Complexity
•	Product/Service Complexity
•	Export Experience
Firm Characteristics	
•	Firm Size
Export Performance	

Some of the constructs used already had well established measures (e.g., environmental turbulence). Measures for newer constructs (e.g., integration into the organizational system) had to be established and developed. Exploratory factor analysis was used to refine the instruments while the initial purification procedures by Churchill (1999), DeVellis (1991), and Spector (1992) were utilized and presented in the succeeding chapters. Where the development and measurement of a new construct was needed, two scales had been developed: first, the main scales of the construct and second, the validation scales which was also measuring the same construct using other items. This was done in order to test the criterion related validity of the main scales. The final measures are in some ways different from what were initially proposed. The rationale and a detailed discussion for gathering information for each construct are discussed in the following sub-sections.

5.2.1.1. Information Acquisition Quality

In order to test hypotheses 1 and those pertaining to use of export memory, information acquisition quality had to be developed and measured.

The importance of information acquisition in exporting operations has been observed (Dennis and Depelteau 1985; Leonidou and Adams-Florou 1999) especially in the creation of competitive advantages (Feldman and March 1981; Reid 1981; Daft et al. 1988; Day and Wensley 1988; McAuley 1993; Slater and Narver 1994; Mohan-Neill 1995; Jaworski and Kohli 1996; Silverberg and White 1999; Zack 1999). Furthermore, information acquisition has been found to directly affect export performance (Belich et al. 1999; Williams 2001, 2003). Thus, data on information acquisition is gathered to know if it affects export memory quality and export memory use first before affecting export performance. Data about information acquisition is gathered since the latter has been linked to export memory quality (cf. Belich and Dubinsky 1999)

Information acquisition is important in information processing according to information use literature (Jaworski and Kholi 1996; Souchon and Diamantopoulos 1996; Belich et al. 1999; Procter et al. 2000). Data on information acquisition is also sought to determine if information acquisition plays the same role in regard to export memory quality and use.

Part One of the questionnaire is concerned with information acquisition and is divided into three main groups of items. The first group is composed of six export information acquisition indicators adapted from Goldstein and Zack (1989), Humbrick (1982), Cadogan et al. (1999), Zmud (1978) and Huber and Daft (1987). Responses were measured on a five-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree”. The second group consists of five items used for validating the measure of information acquisition and was adapted from Procter et al.’s (2000) work on different quality dimensions of market orientation behavior. These validating items are measured on a seven-point scale. The third group consists of an additional item on medium of communication with customers that was identified after the second pilot study. It is expected that richer medium of communication facilitates better acquisition of information. However, this item is envisaged to be used in future research beyond the present scope of the present one.

The five-point and seven-point scales used in the study are discussed in detail in 5.2.3. Form of Response and in 5.3.7 Further Questionnaire Revision.

Table 5.2 summarizes the items for information acquisition and the sources from which these were adapted.

Table 5.2. Questions on export information acquisition quality.

Questions	Adapted from	
	(Illustrative Articles)	
<i>Items (5-point scale)</i>		
In this firm, we collect export market information from a wide variety of export information sources	Goldstein and Zack	1989
In this firm, we collect export information regularly to update our knowledge of the export market	Humbrick	1982
In this firm, we collect export market information about a wide variety of export market facts (e.g., customer needs, competitor actions, technological trends, political environment, etc.)	Cadogan et al.	1999
In this firm, we collect export market information very quickly in response to changes in the export environment	Cadogan et al.	1999
In this firm, we collect export market information in a formalized manner	Zmud	1978
In this firm, we collect export market information in high quantities	Huber and Daft	1987
<i>Validation Items (7-point scale)</i>		
In this company, we collect export market information efficiently	Procter et al.	2000
The quality of our export market information generation is outstanding	Procter et al.	2000
We are very satisfied with our export market information generation efforts	Procter et al.	2000
There is no room for improvement in the way we collect export information	Procter et al.	2000
We are very effective in our export market information generation activities	Cadogan et al.	1999
<i>Additional Item (percentage)</i>		
Medium of communication with customers	Procter et al.	2000

5.2.1.2. Export Information Dissemination Quality

To test hypothesis 2, a measure of export information dissemination quality is needed.

Due to lack of literature that specifically shows the link between export information dissemination, and export memory quality and use, data regarding this relationship is gathered pursuant to the objectives of the study (Chapter One). The data could show whether the direct relationship between information dissemination and organizational knowledge in information use literature (Baker and Sinkula 1999; Dienes and Perner 1999; Athanassiou and Nigh 2000; Procter et al. 2000; Leonidou and Theodosiou 2004) holds true for the relationship between information dissemination, and export memory quality and use.

The main items on information dissemination were adapted mainly from Jaworski and Kohli (1993), Procter et al. (2000), Cadogan et al. (1999), Moenart and Souder (1990), and Huber (1982). An additional item for sensitivity of export information was also added to the questionnaire based on the Qualitative Study because the respondents thought that exclusive access by appropriate members of their organization to information preserves its value. The validating items were adapted from Procter et al. (2000). A five-point Likert scale ranging from Strongly Disagree to Strongly Agree was used for the items measuring the dissemination of information while a seven-point Likert scale ranging from Strongly Disagree to Strongly Disagree was used for the validating items.

Table 5.3 shows the main items and validating items for information dissemination quality.

Table 5.3. Questions on export information dissemination quality.

Questions	Adapted from	
	(Illustrative Articles)	
<i>Items (5-point scale)</i>		
In this firm, export market information is regularly disseminated to different departments	Jaworski and Kohli	1993
In this firm, export market information is speedily distributed across functional areas	Procter et al.	2000
In this firm, export market information never tends to get lost in the system	Cadogan et al.	1999
In this firm, export market information gets disseminated across departments in high quantities	Moenart and Souder	1990
In this firm, export market information is often summarized as it gets distributed	Huber	1982
In this firm, export market information rarely get distorted in the dissemination process	Procter et al.	2000
In this firm, export market information often disseminated in a formal manner	Noble	1999
In this firm, we treat export information as sensitive; only those who need to know receive them	Qualitative Study	2003
<i>Validation Items (7-point scale)</i>		
In this company, we distribute export market information efficiently	Procter et al.	2000
The quality of our export market information dissemination is outstanding	Procter et al.	2000
We are very satisfied with export market information distribution efforts	Procter et al.	2000
There is no room for improvement in the way we distribute export information	Procter et al.	2000
We are very effective in our export market information distribution activities	Procter et al.	2000

5.2.1.3. Information Interpretation Quality

In order to test hypothesis 3, development and measurement of information interpretation quality construct is needed.

Information interpretation is a valuable tool for exporting organizations (Seringhaus 1988; Diamantopoulos and Souchon 1999) that may have a positive direct relationship with export memory (cf. Stein 1989). Since what the organization stores come from the information the organization has interpreted, it will be useful to see if the quality of interpretation the organization undertakes actually has a positive relationship with the quality of export memory.

The measurement of information interpretation warranted the development of a new scale, owing to the dearth of past research in this area. The Qualitative Study was the starting point for conceptualizing export information interpretation. The results of the Qualitative Study suggest that the value of the information interpretation process lies in the enhancement of available information. A summary of the main items used in measuring information interpretation is presented in Table 5.4. A five-point Likert Scale was used (1=Strong Disagree to 5=Strong Agree)

Table 5.4. Questions on information interpretation quality.

Questions	Adapted from (Illustrative Articles)	
<i>Items (5-point scale)</i>		
The interpretation we make on the export market information we acquire reflects well what is happening in the export market	Qualitative Study	2003
The interpretation of export market information provides us with a deep and unique understanding of the market which is not available to competitors	Xu and Kaye	1995
Our organization gains so much value in the way we interpret the export information we have	The Economist	1995
	Krepapa and Berthon	2003
It is very easy for us to figure out the meaning of export market information	The Economist	1995
We discover so much in the way we make sense of the export market information available to us	Brandweek	1997
We are very good in reading between lines especially with the raw export information we have	Krepapa and Berthon	2003
<i>Validation Items (7-point scale)</i>		
In this company, we interpret export market information efficiently	Procter et al.	2000
The quality of our export market interpretation is outstanding	Procter et al.	2000
We are very satisfied with our export market information interpretation efforts	Procter et al.	2000
There is no room for improvement in the way we interpret market information	Procter et al.	2000
We are very effective in our export market information interpretation activities	Procter et al.	2000

5.2.1.4. *Quality of Response to Export Information*

To test hypothesis 4, a measure of response to export information is warranted.

Low and Mohr (2001) associated information responsiveness with high quality export information. In addition, the former has been observed to improve organizational knowledge (Kohli and Jaworski 1990; Diamantopoulos and Cadogan 1996; Procter et al. 2000). Response to export information allows the organization to assess the value of the information which will later be important if and when the organization decides to store it in its own memory. It is expected then that response to export information will have a positive relation with export memory quality.

The main items for response to export information were adapted from Jaworski and Kohli (1993) and Cadogan et al. (1999). These two studies were chosen for their focus on market orientation and export market orientation, respectively. The responses were captured using a five-point Likert scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree

Table 5.5. Questions on quality of response to export information.

Questions	Adapted from	
	(Illustrative Articles)	
<i>Items (5-point scale)</i>		
If a major competitor were to launch an intensive campaign targeted at our export customers, we would implement a response immediately	Jaworski and Kohli	1993
We are quick to respond to significant changes in our competitors' price structures in foreign markets	Jaworski and Kohli	1993
We rapidly respond to competitive actions that threaten us in our export markets	Cadogan et al.	1999
<i>Validation Items (7-point scale)</i>		
In this company, we respond to export market information efficiently	Procter et al.	2000
The quality of our responses to export market information is outstanding	Procter et al.	2000
We are very satisfied with the way in which we respond to export market information	Procter et al.	2000
There is no room for improvement in the way we respond to export market information	Procter et al.	2000
We are very effective in the way we respond to export market information	Procter et al.	2000

5.2.1.5. Export Learning Orientation

Testing hypothesis 5 needed a measurement of export learning orientation.

There are scholars who claim that learning orientation enriches an organization's memory (e.g., Sinkula 1997), but others note that learning orientation is a balancing act (Bontis et al. 2002) between adherence to contents of memory and acquisition of new information (De Geus 1988). Thus, information on export learning orientation is gathered to know if increased learning orientation would lead to the enrichment of export memory use or to its abandonment. Since learning orientation assumes openness

to new information and discarding of outdated information, it will be expected for learning orientation to have a positive relation with export memory quality. The main items on export learning orientation and coordination were adapted from Sinkula (1994) and Sinkula et al. (1997). An item on the existence of real “esprit-de-corps” (Jaworski and Kohli 1993) was added after the third pilot study (see section 5.3.3.3). Items were rated on a five-point scale ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

A list of the main items for export learning is presented in Table 5.6.

Table 5.6. Questions on export learning orientation.

Questions	Adapted from	
	(Illustrative Articles)	
<i>Items (5-point scale)</i>		
Managers basically agree that our export function's ability to learn is the key to our competitive advantage in the export market	Sinkula	1994
The basic values of this export function include learning as key to improvement	Sinkula et al.	1997
The sense around here is that export employee learning is an investment, not an expense	Sinkula et al.	1997
Learning in our export operation is seen as a key commodity necessary to guarantee organizational survival	Sinkula et al.	1997
We are not afraid to reflect critically on shared assumptions about export customers	Sinkula et al.	1997
Personnel in this enterprise realize that the very way they perceive the export marketplace must be continually questioned	Sinkula et al.	1997
<i>Validation Items (7-point scale)</i>		
Our organization has a very strong commitment to export learning and to activities that enhance it	Procter et al.	2000

5.2.1.6 Export Coordination

Hypothesis 6 called for a measure of export coordination.

Previous studies suggest that inter-functional coordination enhances the information processing factors (Diamantopoulos and Cadogan 1996). Coordination between the

export function and the other functional areas promote better understanding of export information and also promotes better learning (Cadogan et al. 2002). It would be seen in this research if export coordination will also have a positive relation to the quality of export memory.

Table 5.7 Questions on export coordination

Questions	Adapted from	
Item (5-point scale)		
There is a commonality of purpose in my export operation	Sinkula	1994
There is total agreement on our export vision across all levels, functions and divisions	Sinkula	1994
All export employees are committed to the goals of the organization	Sinkula	1994
Export employees view themselves as partners in charting the direction of the organization	Sinkula	1994
There is a real 'esprit-de-corps' within our export function	Jaworski and Kohli	1993

5.2.1.7. *Quality of Integration into the Organizational System*

Testing hypothesis 7 needed the development and measurement of the construct quality of integration into the organizational system

Several studies have shown the importance of integration in organizational learning (Walsh and Ungson 1991; Day 1994; Stein 1995; Lei et al. 1997; Stewart 1997; Reisenberger 1998). Integration affects export memory because it defines the contents of memory (cf. Sinkula 1994) which means that only what is stored becomes part of the export memory of the organization.

The main items for integration into the organizational system were taken from the Qualitative Study. Other items were also taken from the literature (Hansens 1996; Brooking et al. 1998; Teare and Rayner 2002). All the items for integration into the organization system are presented in Table 5.8. They were rated using a five-point Likert Scale (1 = Strong Disagree to 5 = Strongly Agree).

Table 5.8. Questions on quality of integration into the organizational system.

Questions	Adapted from (Illustrative Articles)	
Items (5-point scale)		
Our organization encourages everyone to keep a written record of all export market information and transactions	Brooking et al.	1998
People in the organization spend the necessary time to keep an updated record of export market information and transactions	Qualitative Study	2003
Our organization spends enough money on making export record keeping both efficient and effective (e.g. investing on information technology)	Teare and Rayner	2002
There are lots of documentation occurring in our export market operation	Hanssens	1996
People in the organization never have a difficult time recalling important information about the export market	Qualitative Study	2003
We have a formal procedure for documenting export market information	Qualitative Study	2003
Everyone has time to write down things they learn about the export market	Qualitative Study	2003
We organize training sessions to transfer export knowledge	Teare and Rayner	2002
Validation Items (7- scale)		
In this company, we store export market information efficiently	Procter et al.	2000
The quality of our export market information store is outstanding	Procter et al.	2000
We are very satisfied with export market information storage efforts	Procter et al.	2000
There is no room for improvement in the way we store export information	Procter et al.	2000
We are very effective in our export information storage activities	Procter et al.	2000

5.2.1.8. Export memory quality

As the main focus of the study, the construct of export memory quality had to be developed and measured by assessing the different memory repositories as proposed by Walsh and Ungson (1990). In order to capture the quality of the export memory, each of the repositories were assessed using several quality attributes that were developed using the literature (Chapter Two) and through the qualitative study (Chapter Three). This construct had to be measured in order to test hypotheses 1-8, and hypotheses 14, 14(a), 14(b), 14(c).

The content of export memory has been associated with assumptions and beliefs, export culture, written documents, files and databases, know-how and skills, formal and informal relationships with export personnel and business partners, physical structure, and intuition that all personnel may have about the export business that could be brought on present export-specific decisions (c.f. Huber 1990, 1991; Walsh and Ungson 1991) (Chapter One). As a result, information about the quality attributes of the content of export memory (refer to Table 5.9) is required in a bid to determine a) how export memory quality can be captured, b) what influences export memory quality, and c) what the consequences of high and low export memory quality are (cf. Handy 1978; cf. Leonard and Barton 1992; Brown and Starkey 1994; Eisenhardt and Martin 2000; Wexler 2002; cf. Winter 2000).

The constructs pertaining to the different uses of export memory had to be developed and measured in order to test hypotheses 9 to 22.

The items for export memory quality were adapted from Walsh and Ungson (1991) who ran an extensive study on organizational memory, as well as from Albaum (1967), Krum (1978), Deshpande and Zaltman (1981), Kilmann et al. (1983), John and Martin (1984), Van Mesdag (1984), Glazer (1991), Walters (1991), Glazer et al. 1992, Wang and Strong (1996), Jack and Vassiliou (1997), and the Qualitative Study. (Table 5.7). A seven point Likert Scale (1 = Strongly Disagree to 7 = Very Strongly Agree) was used.

Table 5.9. Questions on export memory quality.

Questions		Adapted from (Illustrative Articles)	
Quality Attributes			
Accurate	Albaum	1967	
	Qualitative Study	2003	
Complete	Van Mesdag	1984	
	Qualitative Study	2003	
Concisely represented	Wang and Strong	1996	
Consistently represented	Krum	1978	
Easily understood	Wang and Strong	1996	
	Qualitative Study	2003	
Easily interpreted	Jark and Vassiliou	1997	
Objective	Wang and Strong	1996	
	Qualitative Study	2003	
Relevant	Deshpandé and Zaltman	1981	
	Qualitative Study	2003	
Timely	Deshpandé and Jeffries	1981	
	Qualitative Study	2003	
Having value-added	Glazer	1991	
Useful	Walters	1991	
	Qualitative Study	2003	
Usable	Kilmann et al.	1983	
Credible	John and Martin	1984	
	Qualitative Study	2003	
Accessible	Glazer et al.	1992	
	Qualitative Study	2003	
Good quality	Qualitative Study	2003	
Up-to-date	Souchon	1995	
	Qualitative Study	2003	

Table continues on next page.

<i>Items (7-point scale)</i>		
Assumptions and beliefs of people in the organization about the export market	Walsh and Ungson	1991
Export culture normally retained in language, shared framework, stories, and the grapevine, about the export market	Walsh and Ungson	1991
Standard operating procedures, rules, routines as regard export marketing operation	Walsh and Ungson	1991
Written documents, files and database on export operation	Walsh and Ungson	1991
Export information obtained through formal relationships among export people in the organization	Walsh and Ungson	1991
Export information obtained through informal relationships among export people in the organization	Walsh and Ungson	1991
Physical structure of office/s dealing with export market operations	Walsh and Ungson	1991
Intuition about the export market among the people in the organization	Walsh and Ungson	1991
Export information obtained through the formal relationships with external export-specific groups developed in the organization	Walsh and Ungson	1991
Export information obtained through informal relationships with external export-specific groups developed in the organization	Walsh and Ungson	1991
Know-how and skills on export operation	Walsh and Ungson	1991
Export market information store outside the organization	Walsh and Ungson	1991
Newly acquired export market information which have not yet been stored	Walsh and Ungson	1991

5.2.1.9. *Export Memory Use*

The constructs pertaining to the different uses of export memory had to be developed and measured in order to test hypotheses 9 to 22.

The literature suggests a positive relationship between export memory use and information acquisition (Yli-Renko et al. 2002), experience (cf. Daft and Weick 1984; Shoemaker and Russo 1993; cf. Berthon et al. 2001; Vyas and Souchon 2003), export complexity (cf. Churchman 1981; cf. Moorman and Miner 1998; Hart et al. 1994), export dependence (Walsh and Ungson 1991; Berthon et al. 2001), export memory quality (cf. Abell and Oxbrow 2001; cf. Low and Mohr 2001), export memory use by different functional areas (Qualitative study), export specificity (Samiee and Walters 1990), memory overload (cf. Churchman 1981; cf. Souchon and Diamantopoulos 1997; cf. Moorman and Miner 1998) and size of organization (Poiton 1978; Diamantopoulos et al. 1990; Crick et al. 1994) (Table 4.6). On the other hand, a negative relationship is suggested between export memory use and environmental turbulence (Davenport and Beer 1995; Leonard-Barton 1995; Moorman and Miner 1998; Bhatt 2000; Branch 2000). Thus, items were included in the questionnaire to capture export memory use and test the relevant hypotheses presented in Chapter Four.

Most of the items for export memory use were adapted from Diamantopoulos and Souchon's (1999) work on export information use since their study is the closest model for export memory use. These items were presented to the respondents during the Qualitative Study. From the results of the qualitative study, other items for export memory use were integrated into Diamantopoulos and Souchon's (1999) work. An additional item on the organizational personnel who use export memory was included to determine inter-functional use of export memory (4.2.7. Export Memory Use by Different Functional Areas). The validation items used were all taken from the results of the Qualitative Study. Table 5.8 provides a complete list of the main items for export memory use. A five-point Likert scale ranging from Strongly Disagree to Strongly Agree was used to capture the responses to the items.

Table 5.10. Questions on using export memory.

Questions	Adapted from	
	(Illustrative Articles)	
<i>Items (5-point scale)</i>		
Majority of export memory is not used	Diamantopoulos and Souchon	1999
Conscious effort to use most of export memory	Qualitative Study	2003
Utilize most of the export memory	Qualitative Study	2003
Export memory gathered is often not considered in making decisions for which these were initially acquired	Diamantopoulos and Souchon	1999
Export memory is generally used to provide concepts about the export market	Qualitative Study	2003
Decision-making can become difficult because of too much export memory	Sivaramakrishnan and Perkins	1992
Normally have more export memory than what we actually need	Souchon and Diamantopoulos	1997
Confidence in making decisions is normally increased by export memory use	Lee et al.	1987
Export memory is often used to justify decisions really made on the basis of personal instinct	Diamantopoulos and Souchon	1999
Export memory is generally used to provide theories about the export market	Qualitative Study	2003
Never overloaded with export memory	Qualitative Study	2003
Same export memory is usually used for more than one decision	Diamantopoulos and Souchon	1999
Export memory is preserved specifically so that it can be used	Sinkula	1994
Feel overwhelmed by the amount of export memory	Qualitative Study	2003
Export memory is generally used to make a particular decision	Feldman and March	1981
Export memory often exceeds the capacity of systems to process them into usable information	Qualitative Study	2003
Export memory is commonly used to reinforce expectations	Piercy	1983
Export memory is generally used to provide assumptions about the export market	Qualitative Study	2003
Export memory is often used to justify decisions already made	Goodman	1993
More export memory than could be efficiently handled	Qualitative Study	2003

. Table continues on next page.

Difficulties in planning adequately due to overload of export memory	Qualitative Study	2003
Export memory is often used to back up hunches, prior to the implementation of an export decision	Hart et al.	1994
Export memory is generally used to provide a model about the export market	Qualitative Study	2003
If export memory is difficult to retrieve, guesses are made instead	Shoemaker and Russo	1993
Without export memory, decisions made would be very different	Deshpandé and Zaltman	1982
So much export memory, encounter problems in dealing with it all	Qualitative Study	2003
Export memory is actively sought out in response to a specific decision at hand	Souchon	1996
Amount of export memory is more than what could actually be used	Qualitative Study	2003
Export memory is usually taken into account to justify the cost and/or effort of having acquired it	Diamantopoulos and Souchon	1996
Often through our export memory that key priorities are set	Qualitative Study	2003
Find it easy to handle all the export memory	Qualitative Study	2003
Export memory often supports decisions made on other grounds	Deshpandé and Jeffries	1981
Often use export memory to formulate problems about the export market	Qualitative Study	2003
No decision would be made without relevant export memory	Deshpandé and Zaltman	1982
Often turn to export memory after decisions have been made	Feldman and March	1981
Generally use export memory to come up with a range of solutions for problems	Qualitative Study	2003
Too much export memory that hamper quick decisions and cause numerous organizational problems	Procter et al.	2000
Export memory is often distorted in decision-making	Percy	1983
Export memory is usually translated into significant practical action	Knorr	1977
Export memory often helps to set criteria in choosing a solution to a problem	Qualitative Study	2003
Decisions based on export memory are generally more accurate than instinctive ones	Qualitative Study	2003
Export memory commonly has little decision relevance	Feldman and March	1981

Table continues on next page.

Usually have just the right amount of export memory in organization	Qualitative Study	2003
Key executives often distort export memory in passing it on	Kotler	1966
Export memory generally broadens managerial knowledge base without serving any one particular project	Qualitative Study	2000
Instinct is often combined with export memory when making decisions	Louter et al.	1991
Uncertainty associated with the export market environment is greatly reduced by export memory use	Cavusgil	1984
Often with less export memory than actually need	Qualitative Study	2003
Always rely on export memory when making export decisions	Qualitative Study	2003
Plan response to export memory formally	Qualitative Study	2003
Additional Item (5-point with an option for non-applicability)		
<p>Export memory is used frequently by:</p> <ul style="list-style-type: none"> a. Export personnel b. Marketing personnel c. Finance/Accounting personnel d. Production personnel e. Research and Development personnel f. Top management personnel 		
Validation Items (7-point scale)		
Export memory is often used for company politics	Qualitative Study	2003
Overload of export memory is a problem in the firm	Qualitative Study	2003
Use export memory directly in making specific decisions	Qualitative Study	2003
Export memory is used generally to broaden understanding of the export market	Qualitative Study	2003
Very effective in export memory use activities	Qualitative Study	2003

5.2.1.10. The Environmental Turbulence

A measure of environmental turbulence is needed in order to test hypotheses 10, 10(a), 10(b), and 10(c) as well as hypotheses 20 and 22.

Environmental turbulence has been argued to affect export performance (Young et al. 1989; Stein 1993). Within the current turbulent business climate (Cavusgil et al. 1993; Souchon and Diamantopoulos 1996; Teece et al. 1997; Ashwin and Sharma 1999; Griffith and Harvey 2001; O'Cass et al. 2003), information on the external environment was collected because of its possible moderating effects on the interactions between export memory quality, export memory use and export performance. Such information would also help settle the debate on whether high environmental turbulence encourages (Bhatt 2000) or dampens (Eisenhardt 1989; Davenport and Beer 1995; Leonard-Barton 1995) export memory use. Environmental turbulence is expected to have a negative relation with export memory quality and export performance.

Several studies confirm the relationship between regulation and export performance. For example, government regulations could alter the composition of joint ventures (Contractor 1990); foreign policies could affect the perception of business communities of their managerial decision making processes (Huszagh 1981); and government restriction of company size could affect the performance of retail industries (Maguire 2001). Thus, information on government regulation is collected for possible effects of government regulation on export memory quality, export memory use and export performance.

The main items for the external environment were adapted from Jaworski and Kohli's (1993) work on market orientation. Their findings have since been extensively used in information studies (e.g., Farrell and Oczkowski 2002). Three other items were adapted from Procter et al. (2000), namely: (1) buyers can always negotiate lower prices from sellers; (2) customers are in strong negotiating position in price; and (3) buyers face high costs if they want to switch to competitors. This addition allows inclusion of all possible relevant items available within the construct of environmental turbulence. The items were captured using a five-point Likert scale ranging from Strongly Disagree to Strongly Agree.

Table 5.11. Questions on the external environment.

Questions	Adapted from	
	(Illustrative Articles)	
Items (5-point scale)		
Technology in the industry is changing rapidly	Jaworski and Kohli	1993
Technology changes provide big opportunities in our industry	Jaworski and Kohli	1993
Difficult to forecast where technology in the industry will be in the next 2 or 3 years	Jaworski and Kohli	1993
Technological developments in the industry are rather minor	Jaworski and Kohli	1993
Large number of new product ideas have been possible through technological breakthrough in the industry	Jaworski and Kohli	1993
Cut-throat competition in the industry	Jaworski and Kohli	1993
Many “promotion” wars in the industry	Jaworski and Kohli	1993
Anything that one competitor can offer, others can match rapidly	Jaworski and Kohli	1993
Price competition is a hallmark of the industry	Jaworski and Kohli	1993
Hears on a new competitor almost everyday	Jaworski and Kohli	1993
Competitors are relatively weak	Jaworski and Kohli	1993
Aggressive selling is the norm in the industry		
Customers’ product preferences change quite a bit over time	Jaworski and Kohli	1993
Customers tend to look for new products all the time	Jaworski and Kohli	1993
Cater to many of the same customers in the past	Jaworski and Kohli	1993
Demand for products and services from customers who never bought before from the company	Jaworski and Kohli	1993
New customers tend to have product-related needs different from those of existing customers	Jaworski and Kohli	1993
Customers are very price sensitive	Jaworski and Kohli	1993
Buyers can always negotiate lower prices from sellers	Procter et al.	2000
Customers are in a strong negotiating position in price	Procter et al.	2000
Buyers face high costs if they want to switch to competitors	Procter et al.	2000

5.2.1.10. Regulatory Features

All the main items on regulatory features were adapted from Dwyer and Welsh (1985). A five point Likert Scale was used (from 1 = Very Negative Impact to 5 = Very Positive Impact) to capture the responses to the items.

Table 5.12. Questions on regulatory features.

Questions	Adapted from	
	(Illustrative Articles)	
<i>Items (5-point Likert scale)</i>		
Government product standards	Dwyer and Welsh	1985
Restrictions on seller concentration	Dwyer and Welsh	1985
Transportation and handling regulations	Dwyer and Welsh	1985
Government pricing regulations	Dwyer and Welsh	1985
Environmental protection laws	Dwyer and Welsh	1985
Governmental regulation of advertising	Dwyer and Welsh	1985
Regulations relating to product resale	Dwyer and Welsh	1985
Trade association regulations of business practices	Dwyer and Welsh	1985

5.2.1.12. Export Involvement

There is no literature that specifically describes the relationship between export memory quality and export memory use, and export involvement. However, available literature on exporting suggests that higher export involvement is favorable to an organization (O'Farrell et al. 1996; Westhead et al. 2001), while other studies emphasize the countervailing risks involved in exporting (Young et al. 1989; Hansen et al. 1994; Leonidou and Adams-Florou 1999; Albaum 2005). Gathering data on export involvement would verify whether export memory provides strategic advantages in exporting (Walsh and Ungson 1991; Berthon et al. 2001) while describing the relationships between export memory quality and export memory use, and export involvement.

The main items for export involvement were adapted from past studies, as seen in Table 5.13.

Table 5.13. Questions on export involvement.

Questions	Adapted from (Illustrative Articles)	
How long has your firm been exporting? _____ years	Bodur	1994
How many people in your firm deal specifically with export marketing matters (only consider those employees on your Philippine payroll)? Full Time _____ Part Time _____	Tse	1991
Does your firm have a separate export department? <input type="checkbox"/> Yes <input type="checkbox"/> No	Qualitative Study	2003
How are your exports dealt with? Please tick as many. <input type="checkbox"/> By the sales/marketing department <input type="checkbox"/> By the managing director <input type="checkbox"/> By an independent export agent <input type="checkbox"/> Other (please specify): _____	Sanriee and Walton	1990
What is the relative importance of the following 5 objectives (sales, profits, market share, market entry, customer satisfaction) to export success in your firm? To answer this important question, please allocate a total of 100 points among the 5 objectives. For example, if they are all equally important, please allocate 20 points to each of the 5 objectives. Export Sales Volume _____ % Export Profitability _____ % Export Market Share _____ % Rate of New Entry Into Export Markets _____ % To Satisfy Customers' Needs _____ % Total 100%	Procter et al. Qualitative Study	2000 2003
Which of the following statements best describes your company? (PLEASE TICK ONLY <u>ONE</u> BOX) <input type="checkbox"/> Exporting is part of our global strategy which includes other forms of international involvement (e.g. joint ventures, licensing). <input type="checkbox"/> Our firm is an experienced exporter and exports to several markets. <input type="checkbox"/> Our firm exports experimentally to few markets. <input type="checkbox"/> Our firm only responds to unsolicited orders from abroad.	Johanson and Vahlne Seringhaus	1977 1987

<p>How many product/service lines does your company market in total? (A product/service line is a group of products/services that are closely related to each other, either through a similar production process or through similar marketing issues (e.g., they fulfill similar needs, or are sold to the same customer group); for example, Gillette markets a line of razors and blades, a line of toiletries, a line of pens and a line of cigarette lighters.)</p> <p>_____ product/service lines <input type="checkbox"/> don't know</p> <p>Of these, how many do you export?</p> <p>_____ product/service lines <input type="checkbox"/> don't know</p>	Diamantopoulos et al.	1990
<p>Approximately what percentage of total sales is derived from exports? If you are unsure about this figure, please provide an approximate export sale turnover figure (remember this survey is confidential and only aggregated data will be analyzed – your response will not be identified as yours at any point) _____%</p>	Diamantopoulos and Schlegelmilch	1994
<p>Approximately what percentage of total profits is derived from exports? If you are unsure about this figure, please provide an approximate export sale profit (remember this survey is confidential and only aggregated data will be analyzed – your response will not be identified as yours at any point) _____%</p>	Louter et al.	1991
<p>Over the past 3 years, average annual export <u>sales</u> have been (PLEASE TICK ONE BOX):</p> <p><input type="checkbox"/> Increasing <input type="checkbox"/> Decreasing <input type="checkbox"/> Static</p>	Reid	1982
<p>Over the past 3 years, average annual export <u>sales</u> have grown/declined by _____%</p>	Reid	1982
<p>Over the past 3 years, average annual <u>export profits</u> has been (PLEASE TICK ONE BOX):</p> <p><input type="checkbox"/> Increasing <input type="checkbox"/> Decreasing <input type="checkbox"/> Static</p>	Reid	1982
<p>Over the past 3 years, average annual <u>export profits</u> has grown/declined by _____%</p>	Reid	1982
<p>Which of the following regions are you currently exporting to? (please tick as many)</p> <p><input type="checkbox"/> EU countries</p> <p><input type="checkbox"/> Other European countries excluding EU</p> <p><input type="checkbox"/> North America</p> <p><input type="checkbox"/> South/Central America</p> <p><input type="checkbox"/> Africa and Middle East</p> <p><input type="checkbox"/> Australia and New Zealand</p> <p><input type="checkbox"/> China, Japan, Korea</p> <p><input type="checkbox"/> Rest of Asia</p>	Seringhaus and Rosson	1991
<p>To how many countries does your company export? _____</p>	Koh et al.	1993
<p>Overall, how satisfied are you with your performance along the</p>	Procter et al.	2000

following dimensions? (5-point Likert scale)		
Export Sales Volume		
Export Profitability		
Export Market Share		
Rate of New Entry into Export Markets		
Satisfying Export Customers' Needs		
How would you rate your firm's export performance <u>compared</u> to other exporters in your sector? (Please <u>encircle</u> the number of your choice on the scale provided)? (5-point Likert scale)	Myers and Cavusgil	1995
How would you rate your firm's export performance <u>compared</u> to other exporters in your country? (Please <u>encircle</u> the number of your choice on the scale provided). country? (Please <u>encircle</u> the number of your choice on the scale provided). (5-point Likert scale)	Qualitative Study	2003
Overall, how would you rate your firm's export performance? (Please <u>encircle</u> the number of your choice on the scale provided). (5-point Likert scale)	Cavusgil and Zou	1994

5.2.1.13. Firm characteristics

Past studies report on certain general company characteristics that have significant impacts on specific capabilities of companies. For one, firm size has been shown to have a strong positive influence on export behavior (Tookey 1964; Hunt et al. 1967; Hirsch and Adar 1974; Reid 1982; and Burton and Schlegelmilch 1987. Because of the possible impact of different firm characteristics on export memory quality, export memory use quality and export performance, information on different firm characteristics (e.g., age, size, organizational status) were gathered (cf. Diamantopoulos and Souchon 1996).

The questions about firm characteristics were aggregated from the literature on market information processing, (Sinkula 1994; Hart et al. 1994; Horncastle 1992; McGuinness and Little; 1981; Procter et al. 2000) results of the Qualitative Study and pilot studies. The results of the first pilot study (5.3.3.1) show that nationality of ownership is an important factor that affects exporting operations of the respondents. An item for the position or title of the person who answered the questionnaire is placed for verifying his or her authority to represent the respondent company. Table 5.14 presents the main items for firm characteristics.

Table 5.14. Questions on firm characteristics.

Questions	Adapted from (Illustrative Articles)	
In which year was your firm established? _____	Sinkula	1994
How many full-time employees does your company currently have? (only consider those on your Philippine payroll) _____	Hart et al.	1994
How many part-time employees does your company currently have? (only consider those on your Philippine payroll) _____	Qualitative Study	2003
Please indicate the extent to which your company is involved in selling the following types of offerings, by allocating a total of 100 points across the four categories: - Consumer Physical Goods _____ % - Business to Business Physical Goods _____ % - Consumer Services _____ % - Business to Business Services _____ % TOTAL 100%	Horncastle	1992
Approximately what is your company's annual sales turnover? <input type="checkbox"/> Less than P2 Million <input type="checkbox"/> Greater than P2 Million but less than or equal to P3 Million <input type="checkbox"/> Greater than P3 Million but less than or equal to P7 Million <input type="checkbox"/> Greater than P7 Million but less than or equal to P15 Million <input type="checkbox"/> Greater than P15 Million but less than or equal to P50 Million <input type="checkbox"/> Greater than P 50 million but less than or equal to P100 Million <input type="checkbox"/> Greater than P100 Million	McGuinness and Little	1981
Which of the following best describes your firm? (Please tick only one). <input type="checkbox"/> An Independent Company <input type="checkbox"/> A Subsidiary/Affiliate Company <input type="checkbox"/> A Division of a Multinational Firm <input type="checkbox"/> Other (please specify): _____	Procter et al.	2000
Please state your position or title: _____	Pretest	2003
Is your company 100% Filipino-owned? <input type="checkbox"/> Yes <input type="checkbox"/> No	Pretest	2003
If not, please state nationality of foreign ownership and the percentage of foreign ownership. Nationality/ies _____ Percentage Ownership _____ % _____ %	Pretest	2003

5.2.2. Question Content and Wording

The content of the questionnaire was carefully selected to obtain valid and reliable data with the least effort from the respondents, and in a bid to preserve the respondents' "sense of cooperation" (Malhotra 2002, p. 316). The language used in the questionnaire was adjusted to the "level of the respondent." (Miller and Salkind 2002, p. 302). Since most questions in the questionnaire are "difficult" (i.e., "*composite measurement* which is composed of responses or scores from a number of discrete questions" [Sapsford and Jupp 1996, p. 107]), "simple sentence structures were used to avoid ambiguity and confusion" (Miller and Salkind 2002, p. 302). Most of the items used for questions were adapted from market information literature (e.g., Dweyer and Welsh 1985; Sinkula 1990; Walsh and Ungson 1991; Jaworski and Kohli 1993; Diamantopoulos and Souchon 1996; Procter et al. 2000).

The content of the questionnaire was based on the literature (Chapter Two), the qualitative research (Chapter Three), and the results of the five protocols and three pilot studies (5.3. Pretesting). The sources of the items under these questions are presented in the following sub-sections, arranged in the same way as the previous section (i.e., Information Acquisition – Firm characteristics). A copy of the main questionnaire can be found in Appendix 5.1.

Whenever possible, the questionnaire contains for each new construct being developed and measured both a main scale that captures the key variable of interest and a secondary scale termed validation scale that also captures the same variable of interest. The difference between the two scales would be in the items used. This allows assessing the association between the two scales and thus provides a means of measure validation.

5.2.3. Form of Response

The responses to the questions are structured. In contrast to open-ended responses, structured responses allows for more systematic collation and interpretation of data (Peterson 1988). Interval scaling was used so that higher parametric statistical tests could be used in analyzing the data. A five-point scale (Churchill 1995) with categories

from “Strongly Disagree” to “Strongly Agree” was used for the main items in Parts 1-9 of the questionnaire. For Part 10, the categories were from “Very Negative Impact” to “Very Positive Impact” which was used by Dweyer and Welsh (1985) for measuring regulatory features.

A seven-point Likert scale was used to measure the validating items for most of the constructs (Burns and Bush 1995). The seven-scale was adopted as it was the general standard for optimal number of response alternatives (Miller 1956; Wyrwich and Staebler Tardino 2004). It also improved the variance of the responses to the items.

5.2.4. Question Sequence

Question sequence is a significant aspect of questionnaire design (Churchill 1991). An effective opening for a questionnaire is to “ensure that common definitions are attached to specific acts” (Yates 2004, p. 54). Thus, the questionnaire starts by providing a formal and comprehensive definition of export memory, with a list of its contents, which was adapted from Huber (1991), and Walsh and Ungson (1991). On question sequence, Yates (2004) suggests that “relatively neutral lead gently to more intimate and sensitive ones” (p. 53). The questionnaire was arranged such that parts that deal with “sensitive topics/questions” (Wilson 1996, p. 105), such as those about income and those that affect the respondents’ ego (i.e., Part 11 on export involvement and Part 12 on firm characteristics) were placed at the end of the questionnaire (Miller and Salkind 2002). Malhotra (2002) said that to “increase the likelihood of obtaining sensitive information, such topics should be placed at the end of the questionnaire” (p. 317).

The cultural background of the respondents was also taken into consideration in arranging the parts of the questionnaire since “recent comparisons of Western and East Asian reasoning documented pervasive cultural differences across a variety of cognitive tasks” (Scharz 2003, p. 93). Most of the respondents are Filipino-Chinese business persons whose responses in the Qualitative Study, protocols and pilot studies confirm Redding and Wong’s (1986, p. 279) findings that:

“In the Chinese context, these clear principles run into two barriers, each with psychological components. Firstly, the establishment of corporate goals is usually an internal family matter and is not for discussion among a wider body of executives. It is not easy for a wide range of personnel to assume responsibility for corporate goals. Secondly, there is much secrecy about performance, and particularly over information bearing on finance and profitability. These are seen as private (that is, family) preserves. It is therefore difficult to operate completely open control systems except in non-controversial areas such as production management”.

As a result, all parts of the questionnaire that relate to financial and export performance of the respondents were placed at the end of the questionnaire. This cultural consideration not only affects question sequence but also the physical characteristics of the questionnaire (see section 5.2.5).

Questions were organized by topic areas to avoid confusing the respondents (Aaker and Day 1990; Malhotra 2002). The questions were grouped into 12 parts with the following respective headings:

Part 1. Acquisition of Export Information

Part 2. Distribution of Export Information

Part 3. Export Information Interpretation

Part 4. Response to Export Information

Part 5. Export Learning Orientation and Coordination

Part 6. Integration into the Organizational System

Part 7. Content of Export Memory

Part 8. Using Export Market Memory

Part 9. The External Environment

Part 10. Regulatory Features

Part 11. Export Involvement

Part 12. Firm characteristics

All the parts of the questionnaire contain constructs of the study. The order of presenting the constructs took into consideration the “type of information sought”, difficulty of the questions and “effect of subsequent questions” (Malhotra 2002, p. 323).

Parts 1-6 of the questionnaire cover the constructs which are hypothesized to have an influence on export memory quality (Part II, 4.1 Export Memory Quality). Then, Part 7 and 8 about measurement of the quality of export memory and the use of export memory follow. These parts are placed near the end of the questionnaire because they contain more items and more complicated procedures for answering. This arrangement follows Balnaves and Caputi's (2001) suggestion that “simple questions should go first, complex questions last; concrete questions first, abstract questions last” (p. 84). Then, questions on the external environment and regulatory features are placed in Parts 9 and 10 as prelude to questions on export involvement (Part 11) and firm characteristics (Part 12). The main items under Part 1-10 were randomly presented. This arrangement reduces “order or position bias” which is “respondents' tendency to check an alternative merely because it occupies a certain position in a list” (Malhotra 2002, p. 320).

5.2.5. Physical Characteristics

The appearance of a questionnaire induces respondents to answer (Luck and Rubin 1987) and reduces faulty responses (Tull and Hawkins 1993). Jones (1996, p. 194) notes that “with a mailed survey, the actual physical appearance and layout of the questionnaire are extremely important.” Thus, care was taken in making the questionnaire visually appealing.

The questionnaire cover contains a title (i.e., A Study of Exporting Firms: The Quality of Export Memory), name of the doctoral candidate, name of the thesis supervisor, and seal of the Aston Business School (see Appendix 5.1). These are “essential” components of all questionnaire covers that affect the return rate of mail questionnaires (Hessler 1992, p. 109). Contact details of the doctoral candidate and of the thesis supervisor were placed in the cover page for respondents' inquiries. A cream colored

paper was used for the questionnaire to make it stand out from the cover letter and two letters of endorsements which the respondent would receive.

Attached to the questionnaire was a cover letter which was used to increase response rate. A “cover letter is one of the few direct opportunities to influence respondents and motivate” (Kanuk and Berenson 1975 and Linsky 1975 cited by Miller and Salkind 2002, p. 306). The letter explained the importance of the respondents’ answers (Houston and Nevin 1977) then appealed for their participation (see Appendix 5.2).

To make the questionnaires “look as professional as possible” (Hessler 1992, p. 109), each questionnaire was ring-bound with a plastic first page cover made of high quality green thick back paper. The standard technical format of Times New Roman was used with varying sizes for the items. Questions, response alternatives, and scales were in sizes 12, 11 and 10, respectively. Fonts lower than 10 were not used as these were found to adversely affect readability (Malhotra 1993) and visual appeal (Harvey 1987).

Since the questionnaire reached 18 pages, these were in double-sided format to create the illusion of being shorter than single-side printing (Jobber 1989); and “reduces weight and simplifies the tasks of both the respondent and the tabulator” (Erdos 1974, p. 2-95).

5.3. Pretesting

Pretesting is the process of “testing the questionnaire on a small sample of respondents, usually 15 to 30, to identify and eliminate potential problems” (Malhotra 2002, p. 328). This process is an “essential step in quality control” (Miller and Salkind 2002, p. 304) for the survey instrument. Pretesting provides insights on how the respondents would probably respond; thus, showing the potential effectiveness of a questionnaire (Reynolds et al. 1993; Reynolds and Diamantopoulos 1998). With pre-testing, the phrasing of questions, content, sequence and physical characteristics of the questionnaire can be checked and improved before actual data gathering (Oppenheim 1996). The pretest can also test the “effect of using advance mailings, incentives and various types of follow-up efforts” (Erdos 1974, p. 2-93).

Another significant contribution of pretesting is to “devise a set of codes or response categories for each question, as comprehensively as possible, the full range of responses which may be given in reply to the question in the main investigation” (Wilson 1996, p. 103). Since there were constructs in the study for which new measures were being developed (i.e., export information interpretation and integration into the organizational system, extent of export memory use, different dimensions of export memory use and export memory overload), conducting pretests could be used for developing response categories for these constructs.

In conducting a pretest, most scholars recommend that the initial pretest be done through personal interviews before using the instrument in the final pilot study (Peterson 1988; Boyd et al. 1989; Kinnear and Taylor 1991). On the required number of pretests, Malhotra (2002) suggests that there should be “extensive pretesting” (p. 328). Following this rule, pretests were conducted until the flaws and areas for improvement identified in previous pretests were addressed. As a result, three pretests were conducted for the study.

After the respondents returned the questionnaires, answered questionnaires were segregated numbered according to arrival sequence then analyzed. The results of the first pretest were used as bases for improving the questionnaire (discussed in 5.3.3.1. First Pretest). Two additional pilot studies were conducted to further refine the questionnaire (discussed in 5.3.3.2. Second Pretest, and in 5.3.6.3. Third Pretest).

In the first pilot study, 70 questionnaires were sent, and a response rate of 31% was obtained. For the second and third pilot studies, 100 questionnaires were sent, and response rates of 29% and 31% were achieved, respectively. To ensure that the pretest respondents had the same qualifications as the target respondents, the former were contacted through telephone calls before sending the questionnaire in order to check that the company was indeed an exporter, practicing marketing, and have at least ten employees (see section 5.3.2 Sample Design and Survey Administration for information about sampling). For all the three pretest, follow-up calls were done two weeks after the mailing. Table 5.15. summarizes the results of these pilot studies. The contribution of the pretest to the improvement of the questionnaire is discussed in section 5.3.3. Questionnaire Revisions.

Table 5.15. Results of the three Pretests.

Pretest	Returned Useable
	Questionnaire
First Pretest (70 sent)	22 responses
Second Pretest (100 sent)	29 responses
Third Pretest (100 sent)	31 responses

5.3.1. Protocols

A protocol is an interview where a respondent is asked to think aloud as he answers the questions (Diamantopoulos et al. 1994). This procedure enables the researcher to know how the questions are understood by a respondent (Erdos 1974, p. 2-90). With this procedure, a researcher can understand what goes into the mind of the respondents when they actually answer the questions. Five protocols, lasting 40 minutes each, were conducted in April 2003 with five exporters in Metro Manila. They were asked to answer and comment on the proposed questionnaire. The responses and perceptions of the respondents were used to improve the questionnaire. For example, all the respondents in the protocols were apprehensive of Chinese exporters. Exporter 1 for example said, "We are facing now fierce competition from Chinese exporters. They join exhibitions, copy the products and later produce them at a much lower cost." To prevent this perception from distorting the answers of the respondents; the questionnaire, cover letter, and endorsement letters were devoid of any statement that related the research to the University of Macau in China. In communicating with the respondents, the researcher avoided mentioning that he is a lecturer in the University of Macau. Instead, he introduced himself as a PhD student from the Aston Business School in the United Kingdom. Non-disclosure of this information was done to avoid respondent biases that could distort their responses (cf. Erdos 1974).

From the protocols two important lessons were gained in terms of administering the questionnaires. First, the research's affiliation must be limited to the Aston Business School to avoid respondents' bias against Chinese exporters. Second, recommendation letters from Philippine Government Offices and Philippine business groups were necessary to obtain higher response rates. The effect of obtaining recommendation letters is similar to sponsorship's effect of improving mail survey response rates

(Linsky 1975; Diamantopoulos and Schlegelmilch 1996). The results of the protocols did not suggest any change to the content or format of the questionnaire.

5.3.2. Sample Design and Survey Administration

The population of interest was Philippine exporting organizations. The sampling frame for the study was made from the databases of the Department of Trade and Industry of the Philippines, Philippines Exporters Federation, American Chamber of Commerce of the Philippines, European Chamber of Commerce of the Philippines, Cebu Chamber of Exporters, Philippine Chamber of Furniture, and Philippine Overseas Employment Administration. Obtaining, organizing and updating these different databases were challenging and costly tasks. This was done because the most comprehensive database maintained by the Philippine Statistical Office is not available for public use.

Requests for databases were sent to all these group of organizations. After receiving the databases, it was observed that there were overlapping member companies. The lists of the members in each database had to be filtered to avoid duplication of entries. Then, all of the companies in the list were contacted to verify the information provided for them in the list. It was found out that around 30% of the entries were either inaccurate or obsolete.

In making the sampling frame, it was important to determine first if the companies qualified as respondents for the study. Intrinsic to the nature of the research, only exporting companies engaged in export marketing with at least ten employees qualified to be part of the sample. A minimum of ten personnel was set since the concept of organizational export memory would not apply to very small companies following the conceptualization of the model used in this research (cf., Levitt and March 1988). Thus, all the companies available in the data bank were contacted through telephone calls to verify their qualifications.

Overall, three pretest surveys were conducted before the final main survey. What follows is a discussion on how the pretest and main surveys were conducted.

5.3.2.1 Response Rate Enhancement

Different response rate enhancement techniques (i.e., pre-notification, confidentiality, anonymity and personalization, endorsement, appeal, incentive, and follow-up) were used in the study to encourage respondent participation in the research. These adjustments also aimed at curtailing the presumed bias (Leslie 1972) and low response rates (Pucel et al. 1971) usually associated with mail surveys. These techniques are discussed in detail in the succeeding sub-sections.

5.3.2.1.1 *Pre-notification*

Pre-notification, through telephone calls and telefax, was done to the 1,250. A letter of introduction requesting for participation was faxed to each company. After which, a telephone call was made to further clarify information about the company and request for their participation. Pre-notification was done because it has been found to increase mail response rates, as observed in industrial samples (Comer and Kelly 1982). Although this procedure entailed additional costs, these are compensated by the increased response rate and eventual higher reliability of the results.

5.3.2.1.2 *Confidentiality*

Futrell (1981) defines confidentiality as the seclusion of information gathered from the respondent to the exclusivity of the researcher. Assurances of confidentiality were expressed in the initial telephone call and in the introductory letter faxed during pre-notification, in the endorsement letters, and in the cover letter of the questionnaire. Guarantees of confidentiality were reiterated during all succeeding telephone calls made to each of the respondent companies. Yates (2004) observes that “[r]eassuring respondents of the confidentiality of the survey can also do much to ensure veracity of response” (p. 55). But more than this, maintaining the confidentiality of the survey is an “obligation” under this research (Miller and Salkind, 2002, p. 107).

5.3.2.1.3 Anonymity and Personalization

Anonymity was also guaranteed to each of the respondents. This means that the researcher does not know the individual respondent to the survey (Futrell 1981). The anonymity of the respondent was assured in the pre-notification, endorsement and cover letters, and in all telephone calls to the respondents to encourage response (cf. Harvey 1987). Providing both confidentiality and anonymity has been associated with high response rates (Futrell 1981).

5.3.2.1.4 Self-addressed Stamped Return Envelopes

Personally-addressed cover letters were sent to the respondents to inform them about the nature of the research, and to solicit their participation. Self-addressed stamped return envelopes were sent with the questionnaires. As suggested by Miller and Salkind (2002), “including return postage rather than requiring respondents to provide their own has been shown to increase response rates significantly” (p. 306). Second class stamps were used, as these were not found to be inferior to first class stamps in terms of response rate (Jobber 1986; Hessler 1992).

5.3.2.1.5 *Endorsement*

Endorsement letters were attached to each questionnaire (see Appendix 5.3). This technique was done to increase the perceived credibility of the research. As observed by Harvey (1987), and Diamantopoulos and Schlegelmilch (1996), identification of a study to an official organization increases the response rates of the study. Each company received two endorsement letters. If the company was exporting products, it would receive endorsement letters from the President of the Philippine Exporters' Federation and from the Head of the Bureau of Export Trade and Promotion of the Department of Trade and Industry of the Philippines. If the company was exporting services, it would receive endorsement letters from the Head of the Bureau of Export Trade and Promotion and from the chairwoman of the Philippine Overseas Employment Administration.

5.3.2.1.6 *Appeal*

The relation of appeal to response rates is still unclear (Harvey 1987). However, the use of appeals in the letters sent to respondents could serve as an additional venue for encouraging respondent participation (Houston and Nevin 1977).

5.3.2.1.7 *Incentive*

The respondents were assured that a copy of the results of the study would be sent to them. Furthermore, a calendar showing the photo of the researcher and some aspects of the Aston Business School were included in the package sent to the respondents. These gestures were intended to enhance the confidence of the respondents on the research and the Institution behind it. Showing the photo of the university as well as the person doing the research was done to personalize the request and in the process to get the trust and confidence of the respondents. The calendar was considered to be small token for their participation. The aim was to increase response rate and quality of responses. The "enclosed incentives" are actually more effective than "promised incentives" (Miller and Salkind 2002, p. 307).

5.3.2.1.8 *Follow-up*

Follow-up is one of the most effective response rate enhancement techniques that could provide a return rate of 20% to 80% depending on “how salient the research problem and questions are to the respondents” (Hessler 1992, p. 109). In the study, this technique was repeatedly used to increase the response rate. One week after mailing the questionnaire, the research assistants faxed a personal follow-up letter to each manager reminding them to answer and return the questionnaire. It was mentioned in the letter that if they had already returned the questionnaire, apologies were offered. Two weeks after mailing, the research assistants would call up each company to follow-up the questionnaire. If they mentioned that they had already sent the questionnaire, the research assistants would mark down their names so that they would not be followed-up again. For each succeeding week, the research assistants would keep on following-up the questionnaires of the remaining companies through telephone calls.

Many times, the managers were said to be out of town, thus the need to keep on calling the secretaries to help us remind the managers to answer the questionnaire once they had returned. Another personal follow-up letter was faxed after four weeks to those remaining in the list who had not yet confirmed the return of their questionnaires. Almost half of the respondents in the study were called more than once by phone. The repeated telephone calls to the respondents were intended to increase response rates. As noted by Miller and Salkind (2002):

“When personnel are well trained, telephone follow-up can effectively increase response rates. The personal contact can serve to underscore the importance of the survey and communicate the importance of respondents’ input” (p. 307).

5.3.3. Further Questionnaire Revisions

This section presents the problems that were identified in the formulation and administration of the questionnaire after the three pilot studies. The improvements made are presented and explained. The main changes in the structure and content of the questionnaires were made after the first pilot study. The succeeding pilots are more of calibrations of the improvements introduced by the first pilot.

5.3.3.1. *First Pretest*

The questionnaire used in the first pilot study was 9 pages long. A sample copy of this questionnaire can be seen in Appendix 5.4. It had nine sections: acquisition of market information, distribution of market information, quality of export market interpretation, degree of documentation and storage, quality of export memory, using export market memory, the external environment, export involvement, and firm characteristics.

Several problems were identified after this first pilot study. The first problem was non-response to some questions maybe due to unclear instructions. In item 5 of part 8 on the relative importance of some dimensions of export success, around 15 % of the respondents did not answer because they seem not to understand the procedure for answering. This kind of problem was verified by posing the questions directly to university students who said that the instruction was not clear enough. To solve this problem, a more detailed instruction for answering was provided. The method of answering was illustrated by an example to guide them in answering. Two ways of answering the scale were introduced to differentiate the five-point scale from the seven-point scale. The former is answered by encircling a number while the latter is answered by writing a number. For the rest of the questionnaire, general instructions in all sections have been simplified to make them clearer.

The second problem was the ambiguity of some questions which resulted in improper responses. In item 7 of part 8 on product lines and groups, 15 % of the respondents

estimated the number of product lines and groups that they have (e.g., “many”, “few”, “some”, etc.) instead of giving a numerical answer. Thus, a definition of product lines and groups was provided, together with examples, to guide the respondents in identifying their product lines and groups.

The third problem was the unfamiliarity of some respondents with terms used in the questionnaire. To address this problem, less technical words were used. In item 8 of part 8, “annual sales” was used instead of “annual sales turnover.”

The fourth problem was the imprecision of terms used in the questionnaire. Thus, more appropriate terms were used to avoid confusing the respondent. In item 2 of part 5 on corporate culture, “corporate culture” was changed to “export culture” because the study is on export function and not on the general culture of the entire organization. In item 4 of part 5, “export operation or function” was used instead of “export department” since some companies do not have a specific export department.

The fifth problem was the inappropriateness of some quality attributes under the items. For example, in item 6 of part 5 on physical structure, the choice “timely” was removed because it was not a meaningful quality attribute of physical structures.

The sixth problem was the low variance in the scales. As a result, a seven-point scale was used instead of the five-point scale for validation items. But for the main items, the five-point scale was still used because it did not suffer from low variance.

The seventh problem was the omission of some items for the questions that were useful for data analysis. Thus, additional items about nationality of ownership and about the position or title of the person who answered the questionnaires were added in part 9 on firm characteristics. Title of the respondent could verify if questionnaire was answered by the appropriate person in the company.

The eighth problem was the lack of validation items for some parts of the questionnaire dealing with new or heavily adapted constructs. Since most of the questions dealt with new or heavily adapted constructs, validation items were introduced; except for parts of the questionnaire on regulatory features, export involvement and firm characteristics.

The ninth problem was arguably not a problem at all, but it was thought that the response rate of 31% (which is considered already to be a reasonably high return ratio) could still be improved upon. This response rate was affected by factors extrinsic to questionnaire formulation and administration. For example, the results of the first pilot study show that most of those who did not respond to the questionnaire were marketing managers who were out of town. Following up these respondents was not possible because their phone numbers, as presented in the database, were not working. To increase the response rate for available respondents, techniques for increasing the response rate were employed such as following-up, use of introductory letters and further improving the questions (Miller and Salkind 2002, p. 305). To increase the response rate, the visual appeal of the questionnaire was improved (cf. Luck and Rubin 1987; Tull and Hawkins 1993; Jones 1996). A calendar for 2004 with a photo of the researcher and of Aston University was included to increase the confidence of the targeted sample on the researcher and thereby increase response rate (cf. Miller and Salkind 2002). A logo of Aston Business School was printed on every page of the questionnaire. "Thank you very much" was included at the bottom of the last page.

5.3.3.2. Second Pretest

After improving the questionnaire based on the results of the first pilot, a second pilot study was conducted. The second pilot determined if the changes made in the questionnaire were appropriate and adequate to solve the problems identified in the first pretest. A copy of the 16-page questionnaire for the second pretest can be seen in Appendix 5.5.

Some of the changes introduced as a result of the first pretest proved effective. First, the validating items yielded useful data for analysis (discussed later in Chapters Seven to Ten). Second, the definitions placed before usually misunderstood concepts in the questionnaire (i.e., export memory, export function, product/service lines) increased responses for these questions. That said, additional changes were made. Specifically, an additional quality attribute (i.e., "of good quality") was added as a validating item to the total quality of each export memory repository. The definition of export memory was expanded by giving more examples from literature. This was done to make the concept

of export memory more concrete and specific for the respondents. Thus, a common understanding of what was being assessed could be achieved. Third, a low variance in the quality of export memory content scales was detected. As a result, instead of a five-point scale a seven-point scale for the main items under Part 7 on content of export memory was used. Fourth, for the main items on memory overload in Part 8, the scale was not reliable enough with alpha value of .67 which was below Nunally's threshold for reliability. Similarly, the conceptual use scale was not covered adequately. The alpha returned was .32, and the conceptual content of the construct did not appear adequately captured. To address this, the following eight items were added based on the literature to the existing five items on memory overload:

1. We normally have more export memory than what we actually need.
2. We feel overwhelmed by the amount of export memory we have.
3. We usually find ourselves with more export memory than what we could efficiently handle.
4. We have so much export memory, decisions made would be very different.
5. The amount of export memory we have is more than what we could actually use.
6. We have too much export memory that hamper quick decisions and cause numerous organizational problems.
7. We usually have just the right amount of export memory in our organization.
8. We often find ourselves with less export memory than what we actually need.

Fifth, as a result of the second pretest, additional questions were added to the questionnaire. In item 5 of part 11 on the relative importance of company objectives, the qualitative attribute of "To satisfy customer's needs" was added based on a recommendation by one exporter who examined the questionnaire after the second pretest. In part 11 on export involvement, an item was added on the comparison of a respondent's export performance to those of other exporters in the same sector. This question was added since export performance level is relative to the performance of other exporters to a certain extent.

5.3.3.3. *Third Pretest*

A sample copy of the questionnaire used in the third pretest is presented in Appendix 5.6.

From the results of the third pretest, two major improvements were done. First, the contents of the questionnaire were re-organized. Second, the improvements based on the first and second pretests were further calibrated.

Contents of the questionnaire were re-organized to aid the respondents in answering. For example, in part 5 on export learning orientation and coordination, all items on perceptions of the importance of export operations were placed beside each other although asked in a random sequence. Item 5 of part 7 on relationships with external export-specific groups was divided into two questions dealing with the formal relationships and the informal relationships. This would help distinguish the status of these two kinds of relationship in an organization.

Definitions used in the questionnaire were improved by making them clearer and easily understood. The definitions given in the questionnaire that are often misunderstood by respondents were further refined. This was done in Part 5 on export learning and coordination for “export function.”

Items were changed or added based upon the third pretest. An item for “There is a real ‘esprit-de-corps’ within our export function.” was added. In Part 7 on content of export memory, “up-to-date” was added on a new quality attribute. In Item 5 of Part 11, the quality attribute of “rate of new entry into export markets”, and export growth/decline in export sales and profits were added. And in Item 2, “export matters” was replaced with “export marketing matters” which is more specific. The item was delimited into employees in their Philippine payroll. In Item 4 of Part 12, the alternative categories were reduced to four from the original 15 possible answers to aid the respondent in answering.

In Part 8, an item about who makes use of export memory, measured on a 5-point scale, was added. Souchon et al. (2003, p. 111) mentioned:

“Information use also likely depends on the information users, that is, the department/units in the firm that use information in decision makings. Such users may include not only export personnel but also other departments, such as marketing and production”

This was confirmed by Procter et al. (2000) who, in line with current market orientation thought, proposed a measure of organization-wide involvement in marketing information use. Use of export memory was captured on 5-point scales with marketing, financial, production, R&D, and top management personnel as possible users.

In the third pilot, it was still noticed that there were some missing values in Part 7 on content of export memory which may be due to fatigue. Erdos (1974) noted that “[b]ias can be introduced by fatigue when a large number of items are listed on a check question” (p. 2-97). To reduce the effect of fatigue, the scale was reprinted at the top of every page that covers part seven to serve as easier reference for the respondents.

5.4 Main Sample Survey

5.4.1. Sample Design

In this section, the sample design, response rate enhancement methods used, and response rate calculation, are respectively discussed.

The results of the three pretests were used in developing the questionnaire for the main survey. The 18-page questionnaire had twelve parts on information acquisition, export information dissemination, information interpretation, response to export information, export learning orientation and coordination, integration into the organizational system, content of export memory, external environment, regulatory features, export involvement and firm characteristics. A copy of the questionnaire can be seen in Appendix 5.1.

Attached to the questionnaire were two endorsement letters. For respondents who are mainly service exporters, they received endorsement letters from the Assistant Director of the Bureau of Export Trade and Promotion of the Department of Trade and Industry,

Philippines; and from the Administrator of the Philippine Overseas Employment Administration (POEA). For respondents who are mainly product exporters, they received endorsement letters from the Assistant Director of the Bureau of Export Trade and Promotion of the Department of Trade and Industry, Philippines; and from the President of the Philippine Exporter's Confederation (PEC). These endorsement letters helped in legitimizing and increasing the credibility of the survey.

In conducting the main survey, the respondents were first contacted through telephone calls to verify their contact details (e.g., mailing address and name of export manager). Then, a personal letter of introduction was faxed together with the endorsement letters to each of the prospective respondents. Two days after faxing the letters, another telephone call was made to ask from the export manager his or her consent to answer the questionnaire. During the telephone call, queries of the prospective respondents about the survey were addressed. Questionnaires were only sent to companies who agreed to join the survey. To ensure that the questionnaire was addressed to the appropriate person, each respondent company was again called up for confirmation of its participation in the research while verifying the identity of the respondent.

The main survey used the same enhancements which were used in the pre-tests. The additional incentive was the calendar bearing the picture of the researcher. This was done to give a personal touch to the survey and to gain the confidence of the sampled companies.

A sample survey response rate of 30% was estimated from the pretest average response rate of 30%. A sample frame of 1,250 exporters was used to have at least the recommended minimum of 200 cases for reliability and validity (Spector 1992). There were 700 product exporters and 550 service exporters in the sample frame. These are the number of companies that agreed to participate in the survey.

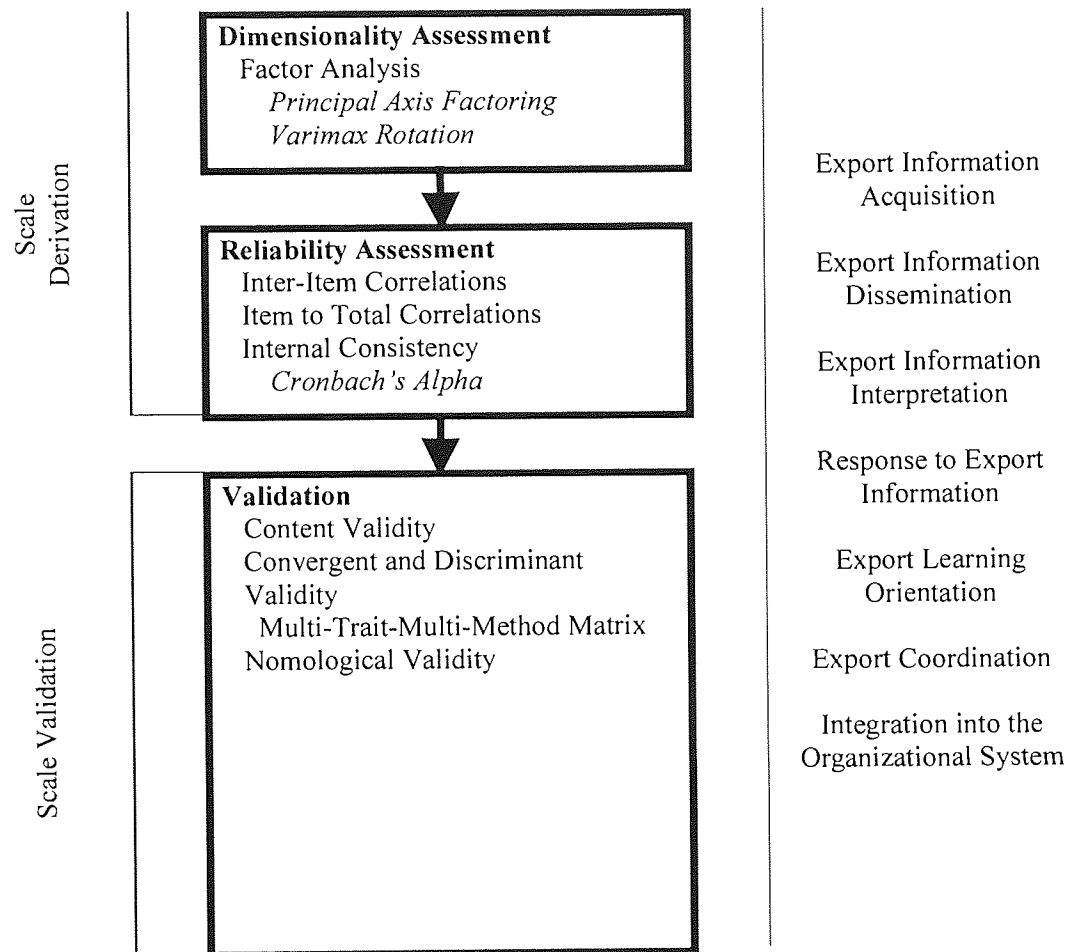
The study employed simple random sampling (Aaker and Day 1990). The sample size of the study was dictated by the number of respondents needed for statistical significance, balanced with the contingencies on questionnaire returns and responses.

5.4.2. Response Rate Calculation

Out of the 1,250 questionnaires sent, 354 answered questionnaires were received - a response rate of 28%. This response rate is considered high taking into account the length of the questionnaire (18 pages) – way beyond the maximum 12 pages observed by Dillman (1978) for questionnaires to the general public.

The measurement development procedures in the study was adopted from that of Camines and Zeller (1980) and Spector (1992), and are outlined below:

Figure 5.1. Measure development procedure.



5.5. Measurement Development Procedures

Three steps were adopted for the development of the measures of the different constructs used in this study. Dimensionality assessment, reliability assessment and validation phases used are discussed in the following sub-sections.

5.5.1. Dimensionality Assessment

First, dimensionality of each scale was tested for (Hattie 1985) using a common (principal axis) factor analysis to determine that correlations between the items in the scale were due to shared factors. Common factor analysis was used instead of the alternative confirmatory factor analysis because the research is in an exploratory stage and the items determining the factors are not yet known. The items are not causal indicators (Bollen and Lennox 1991). The observed variance for each item cannot be separated from the rest of the items in the same scale. The individual distinctions between the items are obliterated, which is inherent in the factor analysis technique as used by Sharma (1996).

However, when the items considered in measuring a construct are formative rather than reflective (e.g., development of measures for export memory quality and export performance), principal component analysis was used.

An orthogonal rotation procedure was undertaken as opposed to the experimental oblique factor rotation (Keiffer 1998). This procedure considers the impact of a factor while segregating the contributing effects of the rest of the factors considered (Sharma 1996). More accurate conclusions can be inferred from the results of orthogonal versus oblique rotation (Kieffer 1998). Aside from the acceptance that it has gained among researcher (Hair et al. 1992), Kim and Mueller (1978) add that a VARIMAX orthogonal factor rotation allows for clearer delineation between the effects of the factors. However, in instances where no logical outputs resulted, the oblique factor rotation was also used specially in cases where the factors are not thought to be uncorrelated.

5.5.2. Reliability Assessment

The second phase is the reliability assessment of the scales. As defined by De Vellis (1991, p. 24), “scale reliability is the proportion of the variance attributable to the true score of the latent variable.” Three basic methods are available to assess the reliability of the scales, namely test-retest, internal consistency, and alternative forms (Peter 1979). The internal consistency method is used in this research since the use of test-retest and alternative forms require respondents to be asked at two different points in time. Lack of time did not allow this method of reliability test.

The first step in determining reliability through internal consistency testing is to identify items that form an internally consistent scale (Spector 1992). This can be done by (a) correlating each item with the sum of the remaining items (item-whole correlations), and by (b) correlating each item with every other item in the scale (inter-item correlations) (DeVellis 1991). Two criteria for retaining items within the scale are available: (a) to preset a specific number of items to be included in a scale, and (b) to set a minimum item-whole correlation coefficient as a determinant of which items should be excluded from the set. For this research no preset number of items was determined. However only items which were statistically significant (at $p < .05$) in terms of their item-whole correlations were included in the scale. Cronbach's (1951) alpha measure was also computed for each scale. It indicates the extent by which a set of items measure a single latent variable (Cronbach 1951). Following Nunally's suggestion .70 was considered as minimum score acceptable for alpha.

5.5.3. Validation

After assessing dimensionality and reliability of the scale, what follows is its validation. Heller and Ray (1972, p. 361) explain that, “a scale is valid if it measures what it is supposed to measure.” Reliability and unidimensionality are necessary for construct validity, however, they do not offer sufficient information for accepting construct validity (Peter 1981). What follows next are the different methods used in this study in testing the validity of the constructs.

Content validity is usually considered first. Content validity is “the extent to which a specific set of items reflects a content domain” (De Vellis 1991, p. 43). All the scales developed in chapters eight to ten of this research were considered to be content-valid since (a) all items pertaining to each scale were derived from the literature and the qualitative study (see chapters three and five for the qualitative study and the development of the questionnaire respectively), and (b) domains were clearly stated within the questionnaire making it easier for respondents to relate to each of the constructs.

Convergent validity shows the degree by which measures that should be related are actually related in reality while convergent validity shows the degree by which measures that should not be related are actually not related. Convergent and discriminant validity were assessed through a multi-trait-multimethod (MTMM) matrix (Campbell and Fiske 1959). The MTMM is simply a matrix or table of correlations arranged to facilitate the interpretation of the assessment of construct validity. The MTMM assumes that each concept is measured by several methods (e.g., direct observation, a performance measure). For this research validating items were used (e.g., quality of export information acquisition, quality of export information dissemination) (Souchon and Diamantopoulos 1999).

Finally, nomological validity can be used when well established theory exists linking the constructs to be measured with other constructs (Churchill 1991). From the literature review (Chapter Two) a substantial amount of theories and findings were discovered. The past studies on the information processing in general and those done within the context of export marketing are foundations for this initial research on export memory. For example, findings relating information overload to information disavowal could be used in examining the relation between export memory overload and export memory disavowal.

Factor analysis is a method used to decrease the number of items used for measuring a construct as well as determining possible dimensions of a construct.

The items measuring a construct should be tested for its level of reliability which is the extent by which repeated use of the measure yields the same results (Carmines and Zeller 1979). There are several ways of testing reliability such as the test-retest method,

the alternative form method, and the split-halves method (DeVellis 1991). Reliability could also be assessed by measuring the internal consistency and the value of the coefficient alpha (Carmines and Zeller 1979).

In coming up with a measure it is important to choose items that reflect well the variations in a latent construct. Those items that do not behave as expected should be eliminated from the scale. Items in a scale should be positively correlated (Bollen 1984). This is called internal consistency which is a quality of a good scale (DeVellis 1991).

5.6. Regression

As was seen in Chapter Two, export memory is part of the organizational learning process which is cyclical. The study of export memory as part of the whole cycle is beyond the scope of this research. Although a longitudinal study would be most suitable method in dealing with a cyclical process (which will be considered later in Chapter Eleven within areas for future research), this method was not chosen since this study does not consider the whole cyclical process but only some segments of that process. Neither was a simultaneous equation modeling used in this study because the number of variables considered exceeded the capacity of the available software. Since the goals of this research cover the measurement of new constructs and assessing the relations of export memory with other relevant constructs, the regression analysis was used in this research.

In Chapter Four it was proposed three main models: first, export memory quality and its antecedents; second, export memory uses and their antecedents; and third, export memory uses and export performance. It was also proposed that some moderating factors (export memory overload and environmental turbulence) would moderate the relationship between export memory uses and export performance. In this context it was decided to adopt multiple linear regression techniques in order to test the hypothesis detailed in Chapter Four, since “[m]ultiple regression ...may be used

whenever a quantitative variable (the dependent variable) is to be studied as a function of, or in relationship to, any factors of interest (expressed as independent variables)” (Cohen and Cohen 1975, p.3).

Several issues must be addressed when using multiple linear regression. They relate mostly on the assumptions underlying regression analysis. However, there are also other factors that need to be considered concerning the analytic process and interpretation of results.

5.6.1. Regression Assumptions

There are four assumptions which are normally required in order to draw conclusions about the presence or absence of relationships in linear regression models, namely, linearity, normality, equality of variance, and independence (Hair et al. 1992). Linearity means that the dependent variable is assumed to be a linear function of the independent variables. Under the assumptions of normality and equality of variance (homoscedasticity), the dependent variable is assumed to be normally distributed, and have equal variance, for any fixed combination of the independent variables. Finally, observations of the dependent variable must be statistically independent.

Regression analysis is fairly robust to violations of the assumptions of normality and homoscedasticity. As Cohen and Cohen (1975, p. 48) note: “[f]ortunately, the available evidence suggests that even fairly substantial departure from the assumptions will frequently result in little error of inference when the data are treated as if the assumptions were valid”. However, they do urge for caution since, when these assumptions are violated, it is possible that the significance of the t and F tests “calculated under such circumstances may be somewhat over-or underestimated” (Cohen and Cohen 1975, p.49).

5.6.2. Analysis Issues

Several other issues play an important part in regression analysis, affecting both procedure and inference. These concerns outliers and influential points, the issue of multicollinearity, and the power of that test.

Outliers and influential data points are extreme values which can significantly affect the fitting of a regression model. It is important that these values be identified and checked for plausibility in order to determine whether the observation(s) in question should be deleted (Kleinbaum et al. 1988).

Multicollinearity refers to the situation where there is high multiple correlation between the independent variables. The presence of multicollinearity makes it difficult to separate the effects of the independent variables and creates instability in the resulting test statistics (Cohen and Cohen, 1975). This problem can be solved by purging the independent variables of those which display high multicollinearity (Cohen and Cohen, 1975) although one must be careful that this does not create specification error.

Finally, the power of a test is the probability of correctly rejecting the null hypothesis when the alternative is true (Wetherill, 1982). Obviously, it is important that power be as high as possible in order to improve the confidence when interpreting regression results. If the power is insufficient, there will be a high probability that the null hypothesis will not be rejected, even if it is false. Of practical significance here is the sample size used in the regression analysis. Power is partly determined by the sample size; the greater the sample size, the greater the power. However, for a given sample size, the greater the number of variables entered into the equation, the lower the power.

5.6.3. Analysis Procedure

In order to test the hypotheses as presented in Chapter Four, a series of regression equations were constructed. All regression equations were first examined for violations of assumptions and regression diagnostics were performed in order to ensure that inferences were meaningful. Procedures recommended in the literature were followed

to identify outliers and influential points, assess collinearity, and to estimate the power of the tests (e.g. Kleinbaum et al. 1988; Hair et al. 1992).

1) Multicollinearity

In line with recommendations by Cohen and Cohen (1975), efforts were taken to minimize the possibility of multicollinearity before any regression analysis was initiated. Specifically, Cohen and Cohen (1975, p. 116) suggests that purging “should be done a priori, or at least without knowledge of the [independent variables’ degree of association with the dependent variable], in order to avoid capitalization on chance. Following the construction of the regression equations, the analyses were run and multicollinearity diagnostics statistics were calculated. First tolerance values were computed for each independent variable. Kleinbaum et al. (1988) suggest that, as a rule of thumb, one should be concerned with any tolerance values less than .10.

2) Violations of Assumptions

In order to test for violations of assumptions, the standardized residuals were plotted against the regression standardized predicted values and against each independent variable; the plots were examined for violations of the linearity and homoscedasticity assumptions. The assumption of normality was assessed by examining both the histogram of standardized residuals and the cumulative probability plot of the expected residuals against the observed residuals (normal P-P plot). This procedure identified a number of violations of the assumption of normality. Correction actions were taken by eliminating extreme values which resulted in significant improvements in the residual plots.

3) Outliers and Influential Data Points

The decision to eliminate an outlier or influential data point must be based on what Kleinbaum et al. (1988, p. 201) call “scientific judgment”. However, they warn against data snooping “simply to polish the fit of the model by discarding troublesome data points” (p. 201). For this reason, extreme values were eliminated from the model only if strong reasons to eliminate them were apparent.

4) Model Selection and a Comment on Power

There are several methods of model selection in regression analysis, including forward, backward, stepwise, and simultaneous entry of variables (see, e.g., Kleinbaum et al., 1988). Cohen and Cohen (1975) point out several weaknesses with stepwise procedures (and their arguments cover both forward and backward entry), and argue that stepwise regression should only be used when the purpose of the study is entirely predictive and not at all explanatory. In the latter situation, simultaneous entry of variables (or some theoretically justifiable hierarchical entry procedure) should be used in favor of the stepwise approach. Given that the purpose of the regression analyses undertaken in this study was not one of prediction, but to test several hypotheses, the simultaneous entry method was chosen when testing for main effects, and hierarchical entry procedures were used when testing for moderator effects.

Finally, using methods outlined by Cohen and Cohen (1975) the power of each equation was calculated based on the observed R^2 . Unless otherwise specified, all powers were in excess of 80%, and the majority greater than 95%. In practical terms, this means that the probability of rejecting the null hypothesis (the independent variables are not related to the dependent variable) when the null hypothesis is false is high. Therefore, the absence of a significant finding for an equation with a high power is less likely to be attributable to a failure in detecting

5.7 Summary

This chapter provided a description of the quantitative research methodology employed in this research. An instrument was designed, based on the qualitative study and the literature, and used in a mail survey of Philippine exporting companies. After the use of protocols and three rigorous pretests, the final main survey was developed and sent to 1250 Philippine based exporters. The effective response rate was favorable and non-response bias was not a problem. The 354 usable responses can now be analyzed. The rest of the succeeding chapters present the analysis undertaken with the data and the findings of this research.

<p style="text-align: center;">Overview of Chapter Six: PROFILING THE RESPONDENTS</p>

6.1. Company Characteristics

- 6.1.1. Company Size
- 6.1.2. Company Age
- 6.1.3. Sector Activity
- 6.1.4. Company Status
- 6.1.5. Company Ownership

6.2. Export Profile

- 6.2.1. Export Experience
- 6.2.2. Export Structure
- 6.2.3. Goals Important to Export Function
- 6.2.4. Export Stage
- 6.2.5. Export Product or Service Complexity
- 6.2.6. Export Dependence
- 6.2.7. Export Complexity

6.3. Summary

6.4. Preview of the Succeeding Chapters

Chapter Six: PROFILING THE RESPONDENTS

The preceding chapter covered the details of the quantitative methodology that was used in this research. Before doing any analysis on the data gathered in the survey, it is appropriate to know the characteristics of the respondents which will be valuable information for the different analyses and interpretations conducted in the succeeding chapters. This chapter presents the profile of the respondents in two parts. First, the company characteristics of the respondents are presented such as company size, company age, sector activity, company status and company ownership. Second are the export profiles of the respondents are discussed, organized into topics about export experience, export structure, goals important to export function, export stage, export product or service complexity, export dependence, and export complexity. As mentioned earlier, all analyses presented in this chapter are useful for subsequent statistical tests presented in the succeeding chapters. For example, information about variable distribution presented here will inform decisions about which types of tests (e.g., parametric versus nonparametric) to run in further work. The peculiar facts about the respondents are also used to explain significant and non-significant findings of the study.

A third section is devoted to the development of the construct environmental turbulence which will be extensively used in regression analyses in Chapters 9 and 10.

Before proceeding to the profile analysis of the respondents, a note must be made on missing values and the treatment for missing values.

It is common to note some missing data (e.g., Freedman and Wolf 1995; Scheffer 2002) due to respondents' failure to provide answers. This could be because of their fatigue, sensitivity, lack of knowledge, or simply incorrect inputting of data. Before any decisions can be made on how to address missing values, it is important to assess first the nature of the absence of the data. There are three possibilities in this regard. First, data are missing completely at random (MCAR) (Little 1977; Little and Rubin 1987). This means that the probability that an observation (X_i) is missing is unrelated to that value of X_i or to the value of any other variables. Second, data can be missing at

random (MAR) (Acock 2005). In this case the data should meet the requirement that the absence does not depend on the value of X_i after controlling for another variable. For example, respondents who are from the handicrafts sector may be less inclined to report their sales, and thus reported sales will be related to sector of the industry where the respondents come from. However, if, within those in the handicrafts sector, the probability of reported sales was unrelated to the level of sales, then the data would be considered MAR. Third and last, data are not missing by random but are missing as a function of some other variable. This is the case when missing data are not ignorable compared to the first two cases where missing data is ignorable.

Once the nature of missingness is determined, a choice can be made on the way the missing data should be handled. Users of data have several options to follow in terms of addressing the missing data (Acock 2005). First, exclude all cases that have missing data. This is called casewise deletion. Second, omit cases which do not have data on a variable used in current calculation. This is called pairwise deletion. Third, impute values on missing cases. This is called data imputation, and can be handled in several ways (e.g., mean substitution, multiple regression, maximum likelihood estimation (MLE), and multiple imputation (MI) (Freedman and Wolf 1995; Ghosh-Dastidar and Schafer 2003)). Casewise deletion or pairwise deletion can only be used when the data is MCAR. Listwise deletion is preferred over pairwise deletion when the sample size is large in relation to the number of cases which have missing data. Pairwise deletion can lead to serious problems when there is a 'hidden' systematic distribution of missing points, which results in a bias when calculating a correlation matrix. However, listwise deletion is also considered an inefficient method which leads to bias (Anderson et al. 1985; King et al. 2001).

When missingness is MAR, the different imputation methods can be used. Mean substitution was, historically, the most common method of imputation of missing values (Tippets and Marques 1992) but is no longer popular (Allison 2001). Substitution by the simple (grand) mean can reduce the variance of the variable. Reduced variance can bias correlation downward (attenuation) or, if the same cases are missing for two variables and means are substituted, correlation can be inflated. That is, this method creates a spiked distribution at the mean in frequency distributions and causes attenuation in correlation of the item with others, and underestimates variance.

These effects on correlation carry over in a regression context to lack of reliability of the beta weights and of the related estimates of the relative importance of independent variables (Acock 1989). That is, mean substitution in the case of one variable can lead to bias estimates of the effects of other or all variables in the regression analysis, because bias in one correlation can affect the beta weights of all the variables. By and large, therefore, mean substitution is no longer recommended (Acock 2005).

Multiple regression may be used for data imputation simply by using non-missing data to predict the values of missing. Note that this may “over-correct,” introducing unrealistically low levels of noise in the data. The regression method has the problem that all case with the same values on the independent variables will be imputed with the same value on the missing variable, causing a portion of the same problems as mean substitution (Acock 2005).

Maximum likelihood estimation (MLE), such as implemented by the Expectation Maximization (EM) algorithm in the SPSS Missing Values option, imputes values iteratively until successive iterations are sufficiently similar. Successive iterations use information from previous iterations. This process will continue “until the covariance matrix for the next iterations is virtually the same as that of the preceding iterations” (Acock 2005, p.1018). MLE makes few demands on the data in terms of statistical assumptions and is generally considered superior to imputation by multiple regression (Little and Rubin (2002). This is now the most common method of imputation. The MLE method assumes missing values are MAR (as opposed to MCAR) and shares with multiple regression the problem of over-correction and possible modeling of noise.

Multiple imputation (MI) is a method of generating multiple simulated values for each incomplete datum, then iteratively analyzing datasets with each simulated value substituted in turn Fichman and Cummings (2003). The purpose is, arguably, to generate estimates that better reflect true variability and uncertainty in the data than do regression methods. Multiple imputation methods yield multiple imputed replicate datasets (5 is typical) each of which is analyzed in turn. The results are combined and the average is reported as the estimate. SPSS does not yet support multiple imputation.

The SPSS Missing Value Analysis used in this research is the EM (Expectation-Maximization) algorithm which is an iterative algorithm that can impute missing values

in the presence of a general pattern of missingness. EM was selected because of its user-friendly features. Statisticians use maximum likelihood methods as a general approach to develop estimators with desirable properties. In an SPSS White paper (2003 p. 5), it is stated that with maximum likelihood method “[i]n the context of missing values, the researcher assumes a model for the distribution of the data, and a model for missing-data mechanisms.” However, the EM acknowledges two limitations: “(1) the standard errors and test statistics reported by the software will not be correct and (2) the estimates will not be fully efficient for overidentified models (Allison 2002, p. 19)”. Von Hippel (2004) was critical of the way SPSS implements EM in the MVA module because of the possible biased interpretation caused by values imputed without residual variation.

Although the multiple imputation is more superior than the single imputation method, the single imputation method was used because of the large number of analyses that are to be performed on the data, and the use of variables more than once in those analyses. For example, if a factor analysis on two sets of variables using multiple imputation, generating imputed values, then a regression involving variables derived from these two sets will not have missing values because of the earlier imputation. But essentially the missing values are still there (since they were derived using imputed data originally having missing values), and in the spirit of multiple imputation, these should be imputed during the said regression, which is not possible anymore. So single imputation using the entire data set (and not subsets of variables) is preferred, so that different analyses use the same imputed values. Single imputation methods are inferior to multiple imputation methods, but given the scenario above, single imputation seems to be a second-best option.

The presence of illogical values after the MVA is due to the internal algorithm of the technique. The EM algorithm does not take into account the allowable ranges of the variables. However, it is better to leave them than to change them into the nearest logical values so as not to introduce bias.

Due to the large size of variables used in this research, the data had to be divided into three parts when running the SPSS MVA in order for the procedure to converge. The first part included data from Parts 1 to 6 of the questionnaire, the second part included

the data on Part 7, and the third part included the data from Parts 8 to 12. After running the three MVAs, the three resulting data were merged.

The data used in profiling the respondents are those with the imputed missing values, except for a few occasions where categorical factors were used. For the later cases, the data without the imputed missing values were used instead (e.g., company ownership). Using MVA, imputed data included negative values because the distributions in the missing value analysis were assumed normal.

6.1. Company Characteristics

The company characteristics presented include company size, company age, sector activity, company status, and company ownership. In most cases, data used was the one treated with the missing value analysis. It should therefore not be surprising that in a few cases, negative numbers will come out, e.g., number of employees which had a maximum of 10,000 and minimum of -909. Data cleansing was done and an examination of outliers was also conducted (see Appendix 6.1 for a check on outliers). After double checking the questionnaires for the actual answers, it was decided to keep all the outliers since they were actually the answers of the respondents. Furthermore, the answers were all still very reasonable. The company characteristics are discussed individually in the following sub-sections.

6.1.1. Company Size

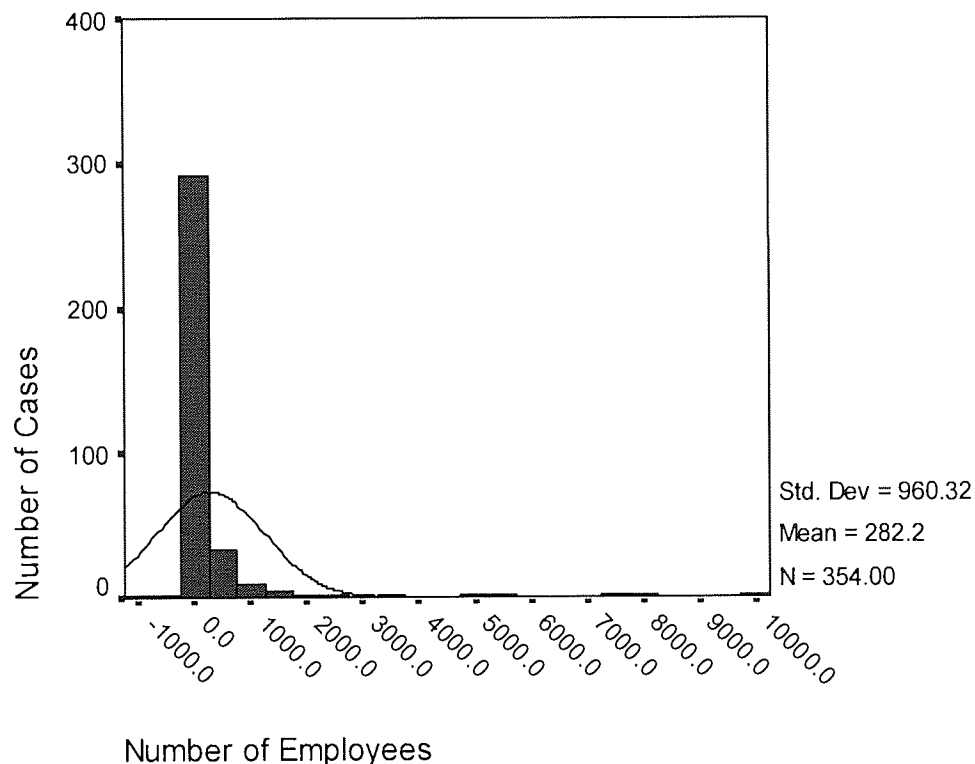
There are several indicators for company size, among these are: (1) number of employees (Lado et al. 2004), (2) total sales turnover (Katsikeas and Morgan 1994), and (3) number of product/service groups exported (Diamantopoulos et al. 1990).

In order to capture more comprehensively the company size by number of employees, the number of full time and part-time employees were combined following the calculation proposed by Quinn (1991):

$$\text{SIZE (number of employees)} = \text{Full Time} + (\text{Part-Time}/2)$$

Using this first indicator, the respondent companies of the study had a mean of 282.2, a median of 64, and a mode of 25 employees. This distribution was qualified by a large standard deviation of 960.3 which points to a large disparity of the number of employees of the respondents companies that participated in the study (Figure 6.1). However, the distribution of number of employees is skewed to the right, which means that most respondent companies have a few employees; 75 % of the companies which responded have 169 or fewer employees in contrast to respondent companies who have relatively large number of employees, barely 6 % of the respondents have 1,000 or more employees. The majority of the respondents therefore are small to medium sized companies if employment figures are considered.

Figure 6.1. Histogram of number of employees.



In order to capture annual sales turnover, an ordinal scale was used since Philippine managers/company owners would tend not to divulge outright financial figures of the company (see Chapter Five).

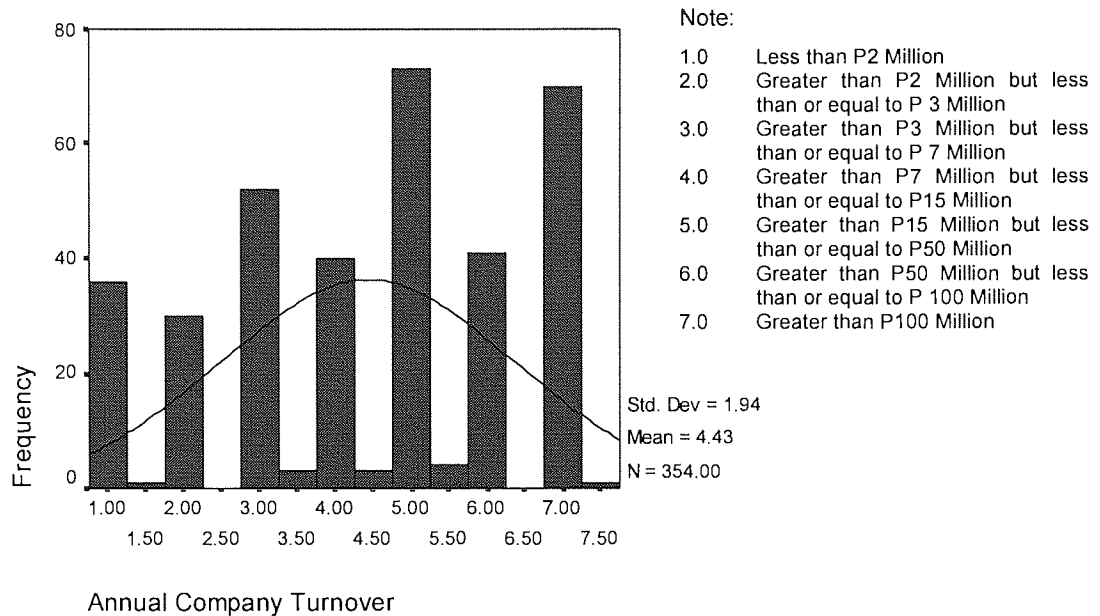
Regarding total sales turn-over as a second indicator of company size, the distribution of the respondent companies is shown in the following Table 6.1 and Figure 6.2. These

findings show that the distribution of annual sales turnover is skewed minimally to the left. The mean is 4.4 with a median of 5. This is a favorable finding for the study which employed a cross-sectional methodology. It can be inferred that the data used in the study comes from a wide range of companies significantly differing in sizes; insofar as company size is measured through sales turnover.

Table 6.1. Annual sales turnover (in Philippine Pesos).

Less than P 2 Million	10.2 %
Greater than P2 Million but less than or equal to P3 Million	8.5 %
Greater than P3 Million but less than or equal to P7 Million	14.1 %
Greater than P7 Million but less than or equal to P15 Million	10.7 %
Greater than P15 Million but less than or equal to P50 Million	20.6 %
Greater than P50 Million but less than or equal to P100 Million	11.3 %
Greater than P100 Million	20.1 %

* In 2006, P 1.00 = £ .010 or £ 1.00 = P 95.04

Figure 6.2. Histogram of company turnover.

As a traditional standard, focus on the number of product or service lines of the respondents is also important in determining company size (Diamantopoulos et al. 1990). The data shows that almost 80% of the respondents have a limited number of product/service lines of less than 14. In fact, 65% of the companies have five or fewer product/service lines. The companies that have more than 100 product or service lines compose only less than 2 %. The range of the product or service lines of the companies is rather extreme. The continuum ranges from 1 to 500 product/service lines. Thus, as can be seen from Figure 6.3 the distribution of this variable is skewed to the right with very few selling more than 20 product/service lines. The standard deviation is 36.11.

Using Spearman correlations between this variable and the (1) the number of employees (Figure 6.1), and (2) annual turnover (Table 6.1), a one-tailed test was conducted as positive relationships were anticipated (a non-parametric test was performed given the variables' distributions presented in Figures 6.1 and 6.2 and the results of a Kolmogorov-Smirnov test performed on all profiling variables. Spearman test was used because turnover was an ordinal variable.

Table 6.2. Spearman's correlations between company size and product groups.

Product Groups	.035	-.023
Sig. (1-tailed)	.258	.335

Table 6.3. Spearman's correlation between number of employees and sales turnover.

Correlations				
			size	q12.5
Spearman's rho	size	Correlation Coefficient	1.000	.586**
		Sig. (1-tailed)	.	.000
		N	354	354
	q12.5	Correlation Coefficient	.586**	1.000
		Sig. (1-tailed)	.000	.
		N	354	354

** . Correlation is significant at the 0.01 level (1-tailed).

The foregoing tests (Table 6.2) reveal a non-significant correlation between company size and number of product groups. Based on this finding, number of products and services is not used in succeeding analyses.

As between the two indicators of company size, namely the number of employees and the total sales turnover, a significant Spearman correlation coefficient of .586 resulted (see Table 6.3). A non-parametric test was also used for in this case because of the non-normality of the variables used.

These two factors have been employed in past studies for company size. For Hansen et al. (1994), company size was measured using both number of employees and total sales. For Bodur and Cavusgil (1985), companies were designated as small and medium base on the number of full-time employees and total sales turnover. However, these studies did not focus on the total number of employees in the company. For one, Hansen et al (1994) and Bodur and Cavusgil (1985) only used the number of full-time employees for determining the number of employees of a company.

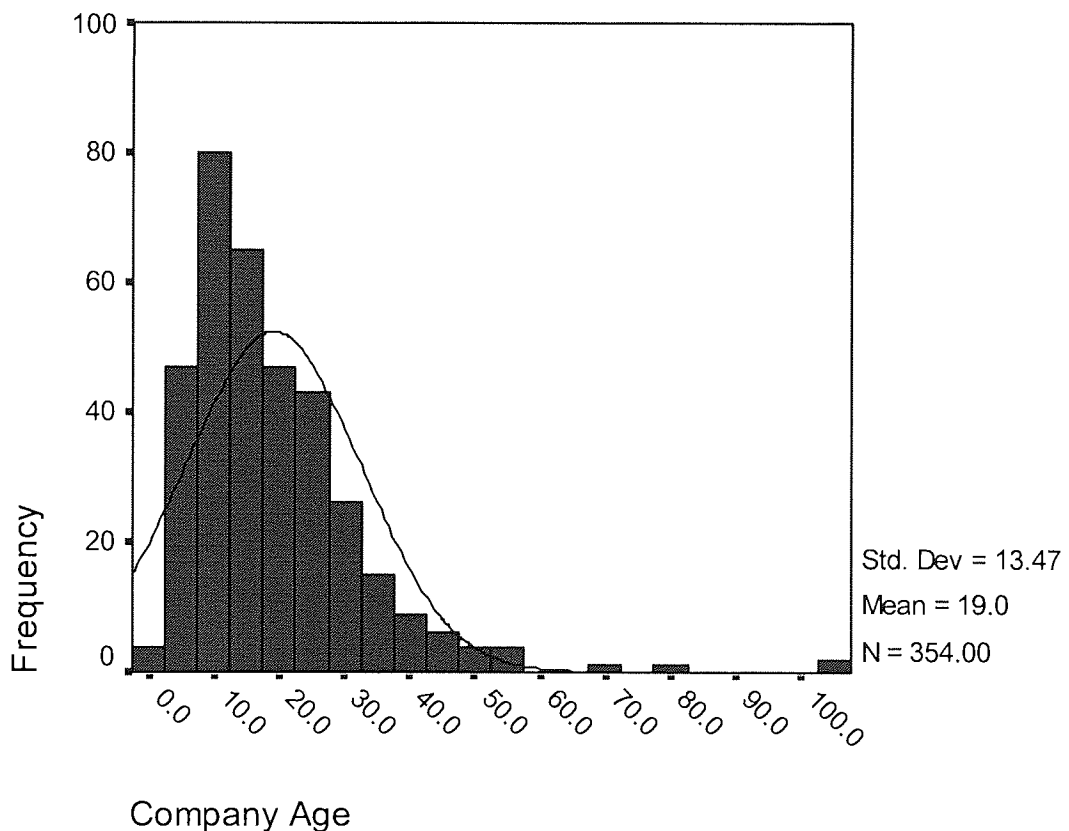
However, as a general standard, number of employees has been used to quantify company size (Katsikeas et al. 1997). Using such standard facilitates the comparison of

the findings in this study with that of other studies that used the same variable (Samiee and Walters 1990). Furthermore, using the number of employees is a more reliable means of measuring company size in contrast to other methods, because of the greater intransigence of employment figures compared to sales figures that easily fluctuate according to varying price levels (Sharkey et al. 1989).

6.1.2. Company Age

Company age in this study refers to the period of time from the establishment of company until their participation in data collection for the study in 2004. The data shows that the mean age is 19 years with a standard deviation of 13.47. The median is 16 years and the mode is 12 years. The age of the companies ranges from 2 to 104 years. The histogram (Figure 6.4) shows that 97% of the companies fall below the 48-year mark. 50% of the respondent companies are relatively young (15 years old).

Figure 6.3. Histogram of company age.



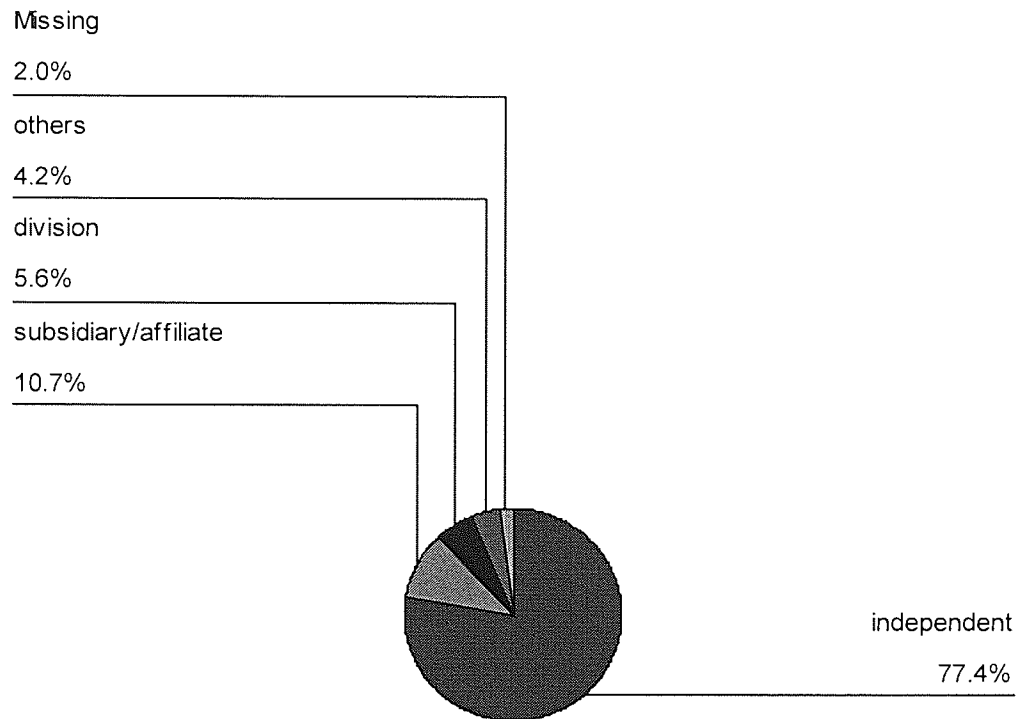
6.1.3. Sector Activity

Consumer physical goods, accounted for 49% of the items exported by the respondents. The breakdown of the rest of the items exported are as follows: business to business physical goods (22%), consumer services (12%) and business to business services (43%). These categorizations are not mutually exclusive which means that a company may be dealing with several types of product/services at the same time.

6.1.4. Company Status

Company status in the study was categorized mainly into independent companies, subsidiaries/affiliate companies and divisions of global or multinational companies, with an additional option for other possible categorization (Diamantopoulos et al. 1990). Using these categories, the distribution of the respondents is presented in Figure 6.6.

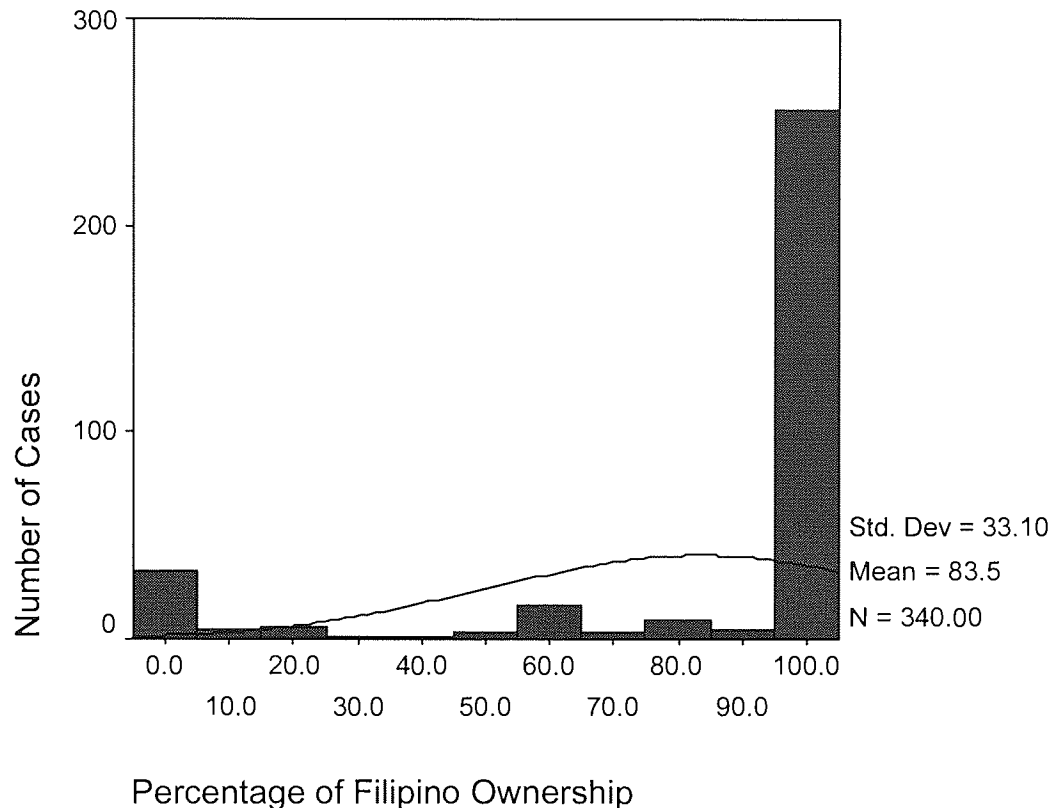
The chart shows that most of the respondent companies of the study are independent companies accounting for 77.4% of the sample. These companies are followed by subsidiary or affiliate companies (10.7%) and multinational companies (5.6%), respectively.

Figure 6.4. Pie chart for company status.

6.1.5. Company Ownership

Figure 6.7 shows that most of the respondents (75%) are wholly Filipino-owned companies while 7% are wholly foreign-owned. The horizontal axis of the graph denotes the percentage of Filipino ownership and the vertical axis shows the number of cases. As could be seen, 255 respondents come from 100% Philippine owned companies while there are only 24 companies among the respondents which were 100% foreign owned. The rest are of mixed ownership. Those who mentioned mixed ownership included the following nationalities as partners: Japanese, American, Chinese, Canadian, German, British, Singaporean, Indian, Italian, Irish, Australian, Dutch, Taiwanese, Swiss, and French.

Figure 6.5. Histogram of nationality of ownership.



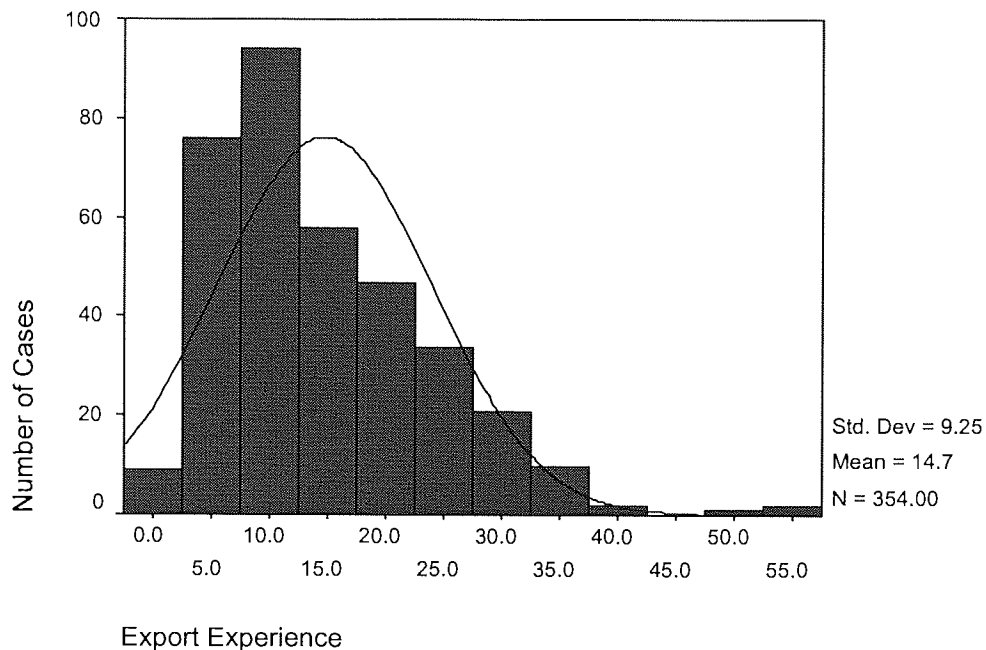
6.2. Export Profile

The export profile of the respondents includes export experience, export structure, goals important to export function, export state, export product or service complexity, export dependence and export complexity. These are discussed successively in the following sub-sections.

6.2.1. Export Experience

Diamantopoulos and Horncastle (1997) argue that export experience is a reliable standard to measure company familiarity with its export market. As a result, export experience of the respondent companies was measured by the number of years they have been involved in export operations (O'Cass and Julian 2003; Lado et al. 2004). Figure 6.8 shows the distribution which is positively skewed. Export experience

returned a mean of 14.7 years, a mode of 10 years, a standard deviation of 9.25, and a median of 12. The range varied from 17 to 57 years. **Figure 6.6.** Histogram of export experience.



6.2.2. Export Structure

Export structure refers to the existence or non-existence of a separate export department primarily in charge of export activities (Albaum et al. 1994)). In the study, 212 (62%) of the respondent companies do not have a separate export department. Asked how export operations were managed, 230 companies (67%) answered that they have a sales or marketing department, 107 companies (51%) rely on a managing director for export operations, and 104 companies (30%) hire an independent export agent. It must be noted these responses are non-exclusive because a company may use a marketing department and an exporting department at the same time. Table 6.3 below shows the results of the Mann-Whitney U test for export structure and company size.

Table 6.4. Results of the Mann-Whitney U test for export structure and company size.

Ranks				
	Export Department	N	Mean Rank	Sum of Ranks
EMPLOY	.00	212	150.23	31848.00
	1.00	129	205.14	26463.00
	Total	341		

Test Statistics ^a	
	EMPLOY
Mann-Whitney U	9270.000
Wilcoxon W	31848.000
Z	-4.989
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: Q11.3

The results show that there is direct relationship between the existence of a separate export department and company size. With significant value of $p = .000$, there is a statistically significant difference in company size between companies having a separate export department and those that do not have one.

The finding corroborates Diamantoupolos et al.'s (1990) findings on the positive correlation between company size and the existence of a separate export department.

6.2.3. Importance of Specific Goals to Export Function

The subject matter of this section is to measure the relative importance of fulfilling five objectives of the export function (Cavusgil and Zou 1994; Evangelista 1994).

Table 6.5. Relative importance of five objectives to company success.

Statistics		q11.5.1	q11.5.2	q11.5.3	q11.5.4	q11.5.5
N	Valid	354	354	354	354	354
	Missing	5034	5034	5034	5034	5034
Mean		23.9403	24.5738	14.2251	12.3122	24.9681
Median		20.0000	20.0000	15.0000	10.0000	20.0000
Mode		20.00	20.00	20.00	10.00	20.00
Std. Deviation		0.55649	0.06388	7.51449	7.11779	1.46866
Skewness		1.728	2.107	.225	.071	1.872
Std. Error of Skewness		.130	.130	.130	.130	.130
Minimum		.00	.00	.00	-.30	-.05
Maximum		80.00	100.00	60.00	30.05	100.00

Note:

11.5.1 = Export Sales Volume

11.5.2 = Export Profitability

11.5.3 = Export Market Share

11.5.4 = Rate of New Entry Into Export Markets

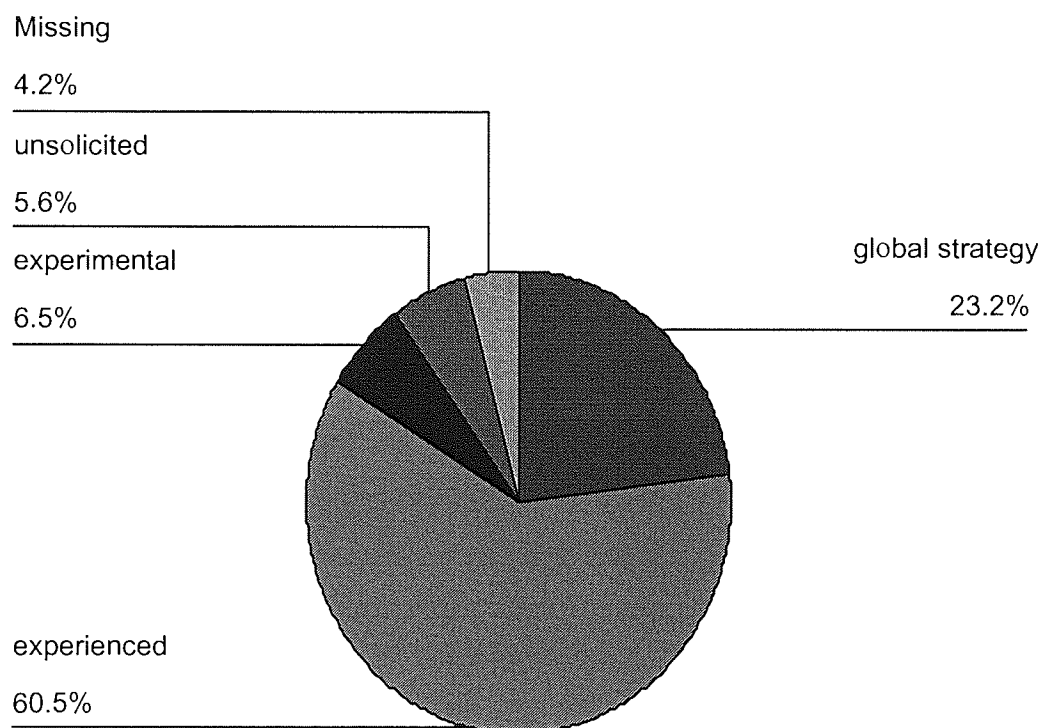
11.5.5 = To Satisfy Customers' Needs

The aforementioned goals were subsequently rated, as shown in Figures 6.5 to 6.8. The goal of satisfying customers' need has the highest mean score of 24.96%; after which closely follows export profitability with a 24.57%.. Then there is export sales volume with an average of 24.57%.

6.2.4. Export Stage

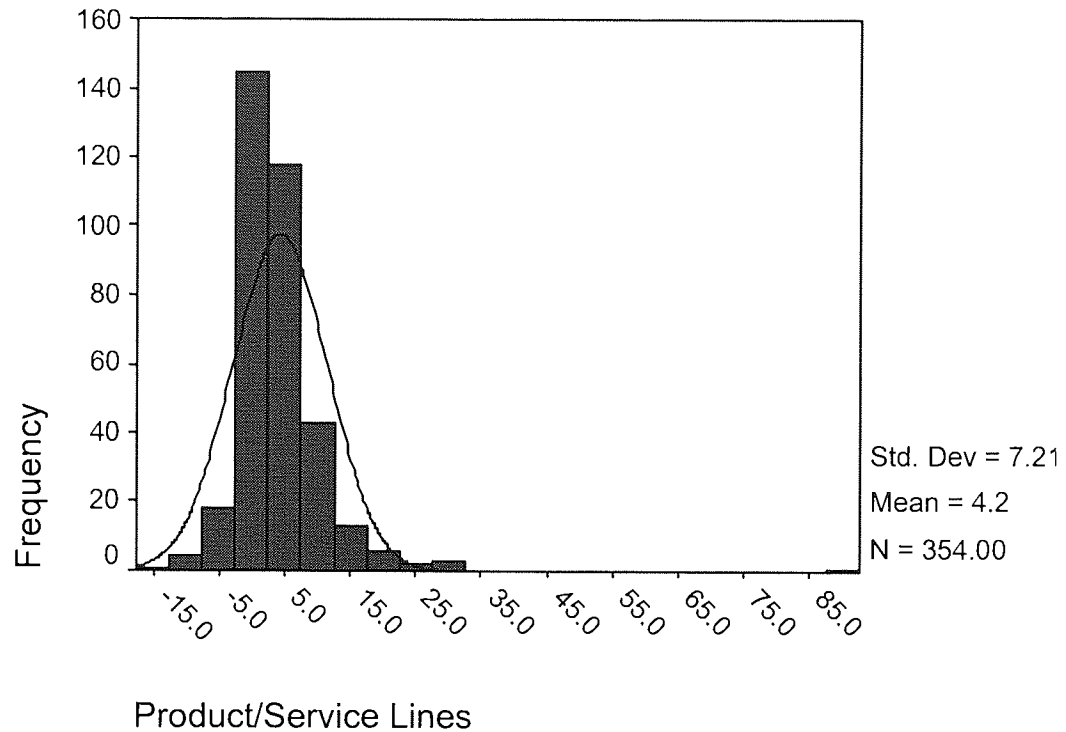
The respondents were asked to indicate the nature of their involvement in export activities. Most of the respondents (83.5%) indicated their intense involvement with exporting products to several markets or with export activities directed towards a global market (Figure 6.10). Respondents' responses belong to the high end of the export stage scale. With such result, comparison between respondents with differing levels of export maturity could not be adequately measured.

Figure 6.7. Pie chart of export stage.



6.2.5. Export Product or Service Complexity

Export product or service complexity is determined by the number of products and diversity of services offered in export market (Diamantopoulos et al. 1990). Figure 6.11 shows that the lines offered range from 1 to 30. Most of the respondents (82%) only handle 1 to 5 export lines. There are only 1.4% of the respondents that handle 30 lines.

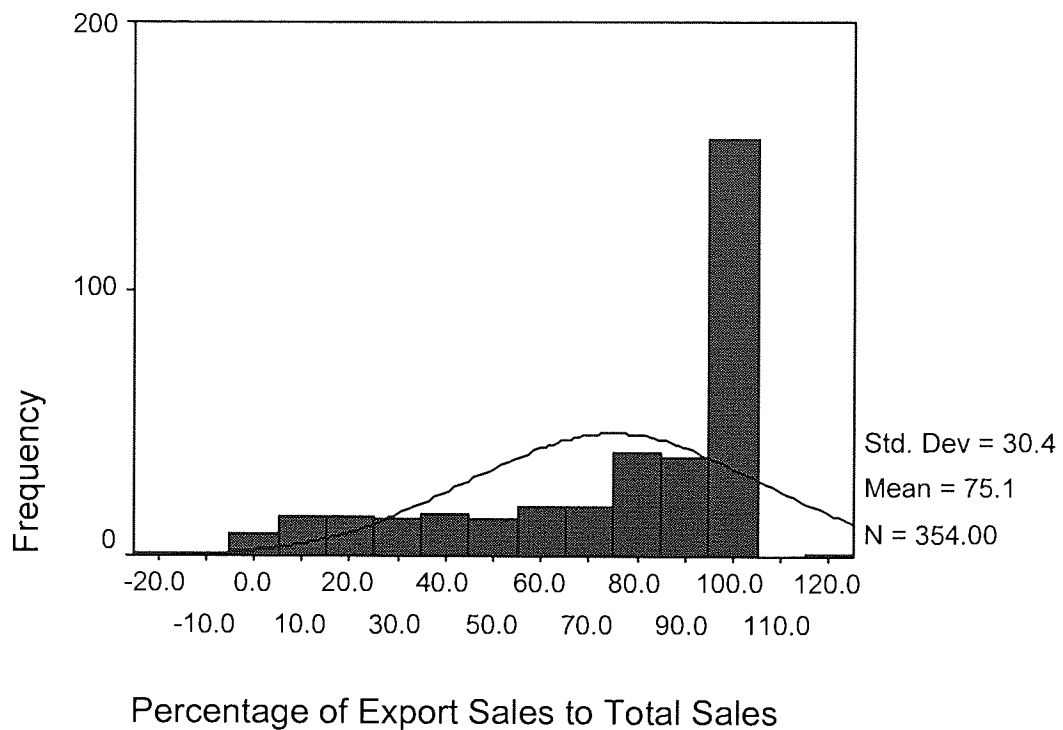
Figure 6.8. Histogram of number of products/services lines exported.

6.2.6. Export Dependence

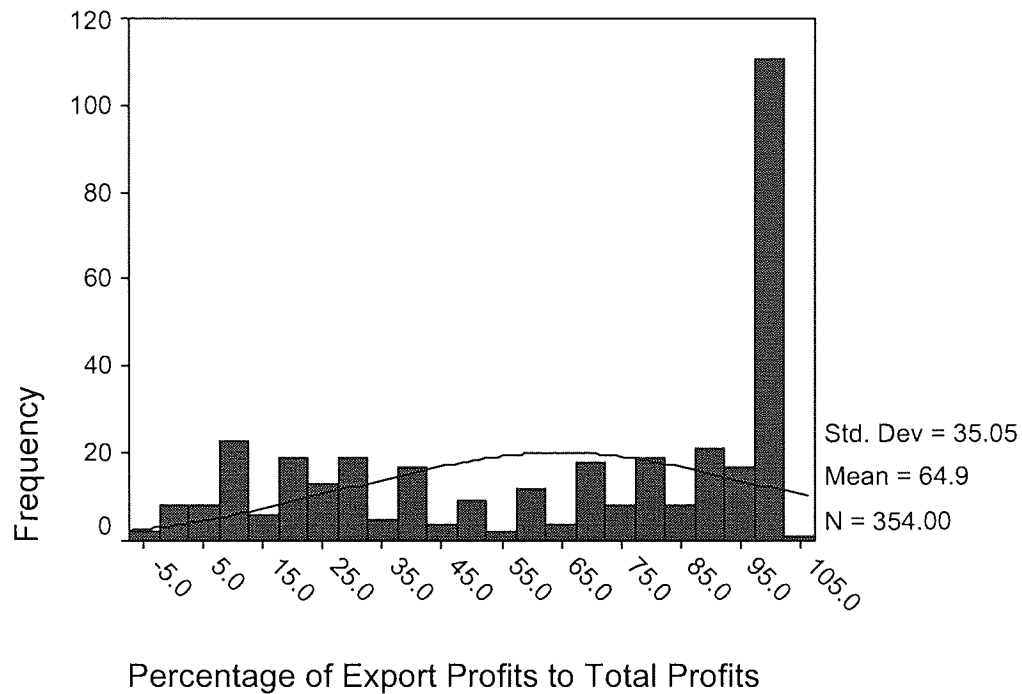
Export dependence is used as an indicator of the “importance” of exporting to the organization as a whole (Diamantopoulos and Horncastle 1997). It was measured using the percentage of export sales to total sales and the percentage of export profits to total profits (Diamantopoulos and Inglis 1988; Ogunmokun and Ng 2004).

If export sales constitute 50% of total sales, a company can be considered highly dependent on export operations (Diamantopoulos and Inglis 1988; Katsikeas 1994). 262 of the respondents passed beyond this limit, with as much as 80.4 % export dependence. Only 65 respondents were found not to be highly dependent on exporting (i.e. 26%).

The distribution of the respondents based on export dependence is shown in Figure 6.12 indicating that most of the companies engage in export as their main source of sales.

Figure 6.9. Histogram of percentage of export sales to total sales.

In terms of export dependence measured through export profits, 202 of the respondents (i.e., 64 percent) derive at least 50 percent of their profits from export while 115 firms (i.e., 36 percent) have less than 50 percent of their profits coming from export. See Figure 6.13 for the histogram of the percentage of export profits to total profits. A percentage point of 120 came out due to the missing value analysis.

Figure 6.11. Histogram of percentage of export profits to total profits.

6.2.7. Export Complexity

Export complexity can be measured using the number of regions (c.f., Ronen and Shenkar 1985; Erramilli 1991) and the number of countries (c.f. Kogut and Singh 1988; Louter et al. 1991) that a company exports to. This dual indicator adopted in the study was used by Diamantopoulos and Inglis (1988) and Katsikeas (1994). The correlation between the two variables is .794 with a one-tailed significance of .000. Table 6.4 shows some descriptive statistics of the two variables.

Table 6.6. Descriptive statistics on the number of countries and the number of regions a company exports to.

Number of countries	8.39	10.07	1-100	354
Number of regions	3.50	1.96	1-8	345

51% of the companies export to only five or fewer number of countries. In contrast, 28% of them export to more than nine countries. Of these companies, 55% export to only one to three regions while only 9% of the respondents export to seven to eight regions. Figures 6.14 and 6.15 show the histograms of both number of countries exported to and the number of regions exported to, both of which are positively skewed.

Figure 6.14. Histogram of number of countries exported to.

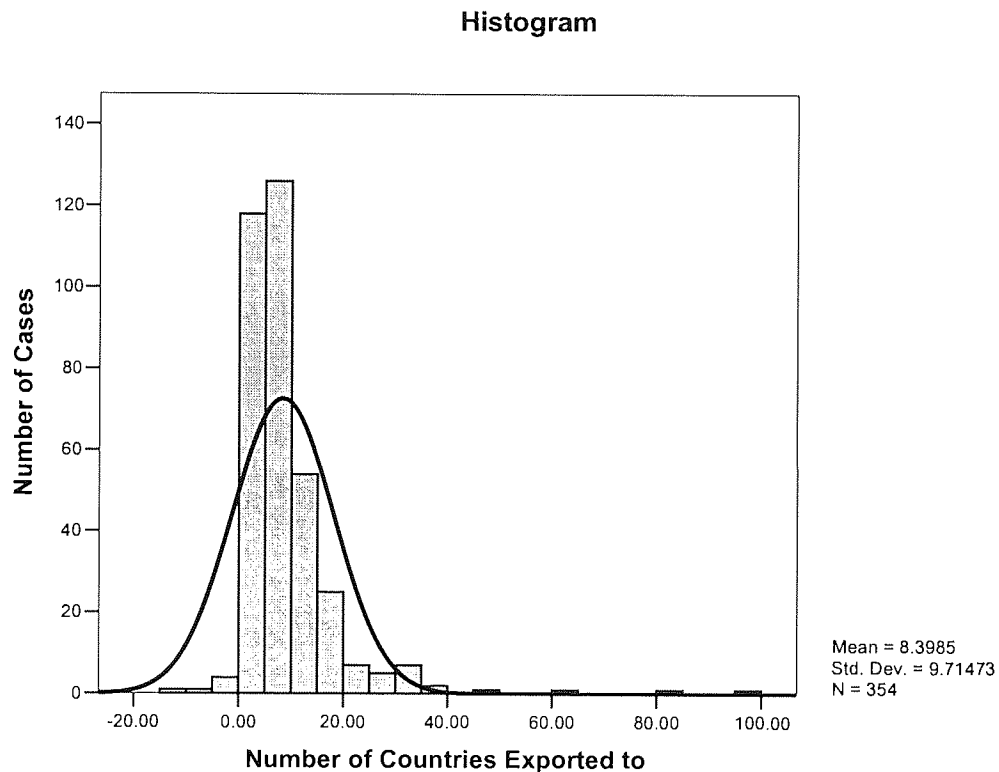
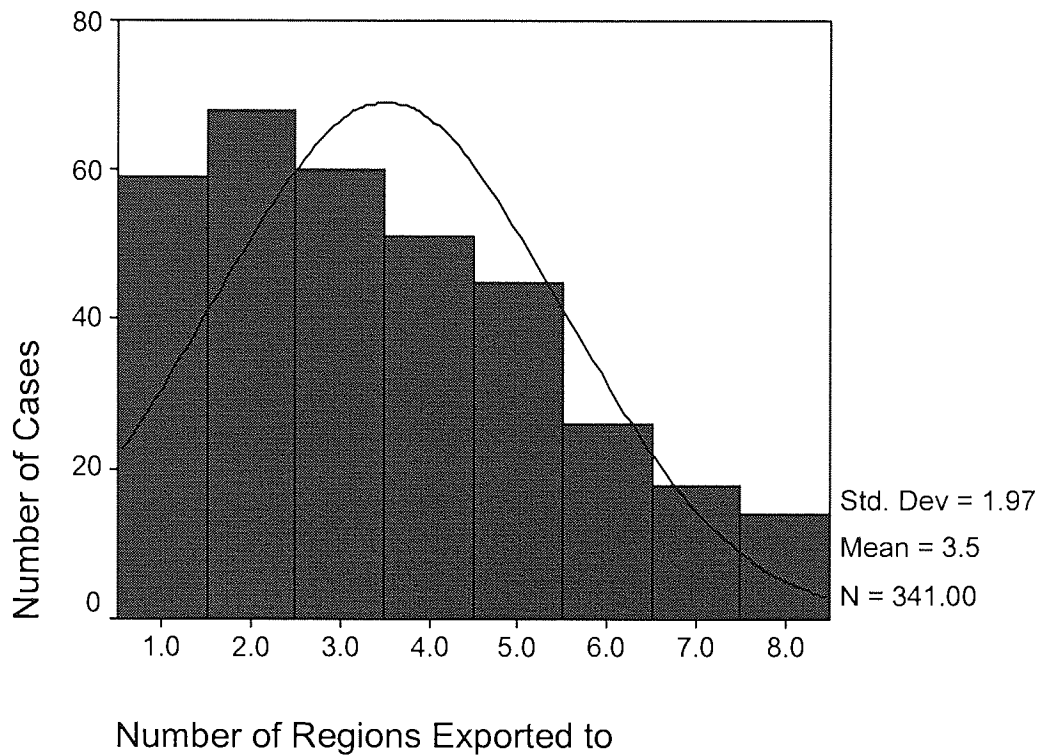


Figure 6.15. Histogram of number of regions exported to.



6.3. Environmental Turbulence

Environmental turbulence is discussed in two parts – profile analysis and measure development. The second part discusses the process of measuring environmental turbulence is discussed. From previous studies, four dimensions of environmental turbulence have been identified, namely: (a) market turbulence, (b) competitive turbulence, (c) technological turbulence, and (d) regulatory turbulence (e.g., Kuivalainen et al. 2004). Items used before in measuring this construct will be used in one big factor analysis in order to test if the above dimensions of environmental turbulence will also come out under a new setting.

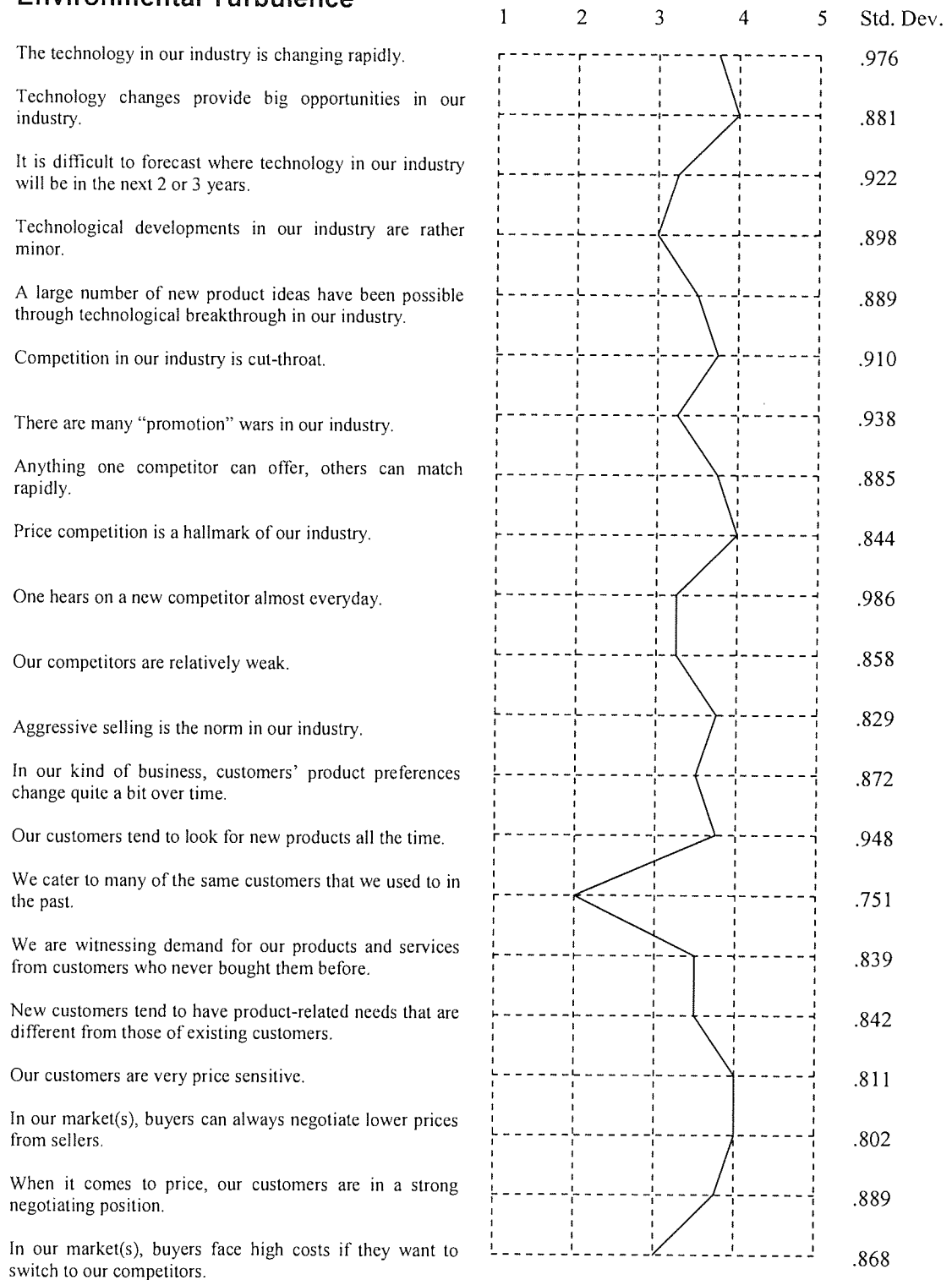
6.3.1. Profile Analysis

6.3.1.1. *Environmental Turbulence Items (competitive, market, and technological)*

Items measuring environmental turbulence were rated on a five point scale (1 = Strongly Disagree to 5 = Strongly Agree).

The first profile analysis shows the combined items used in the past for measuring competitive turbulence, market turbulence and technological turbulence. The items used for measuring regulatory turbulence are considered in a separate analysis due to the differences in the way of measurement. The mean and standard deviation of the environmental turbulence items (competitive, market, and environmental) are presented in Figure 6.16. A big difference in rating could be seen on the item stating that they still cater to the same customer. The other scores are not far apart from each other.

Figure 6.16. Environmental turbulence profile analysis

Environmental Turbulence

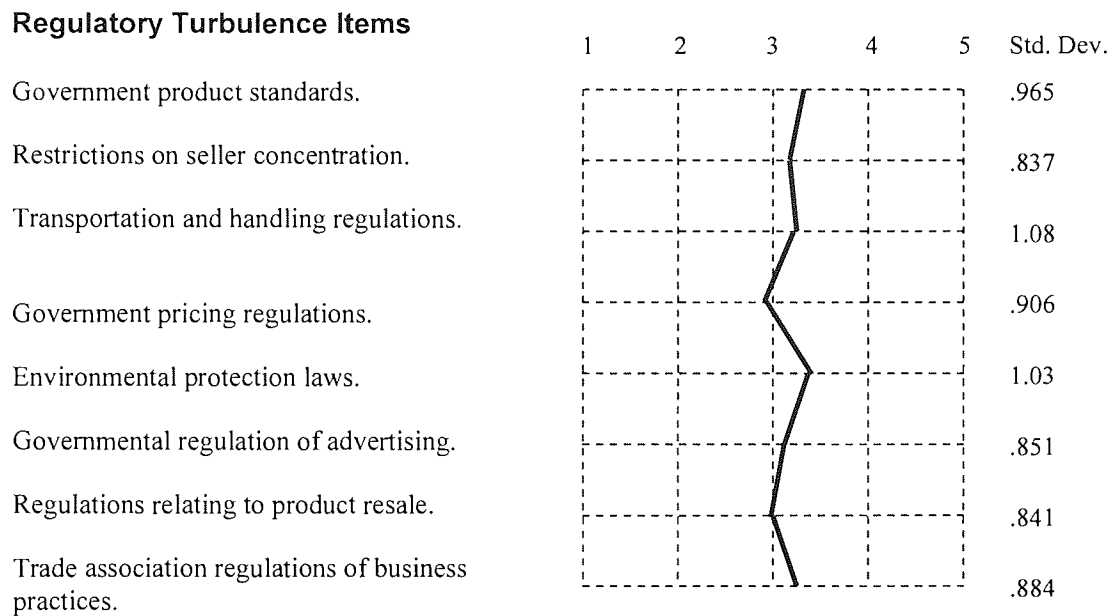
6.3.1.2. Regulatory Turbulence Items

Items measuring regulatory turbulence were rated in terms of their impact using a five point scale (1 = Very Negative Impact to 5 = Very Positive Impact).

Looking at the mean scores of the regulatory items (Figure 6.17), the one with the highest score goes to government product standards. The lowest mean belongs to government pricing regulations. The mean scores are very close to three. All the items scored above three except for government pricing which has a mean score of 2.94. Pricing has a negative influence on the markets of the respondents. On the other hand, government product standards seem to have the biggest positive influence on the respondents' market.

Table 6.7. Profile analysis of regulatory turbulence items.

Items	Mean	Standard Deviation
Government product standards	3.33	.965
Restrictions on seller concentration	3.16	.837
Transportation and handling regulations	3.22	1.08
Government pricing regulations	2.94	.906
Environmental protection laws	3.29	1.03
Governmental regulation of advertising	3.11	.851
Regulations relating to product resale	3.01	.841
Trade association regulations of business practices	3.30	.884

Figure 9.2. . Profile analysis of mean responses to regulatory turbulence items.

6.3.2. Measure Development

The items taken from the literature to measure environmental turbulence were factor analyzed (Costello and Osborne 2005). Since the measures are being applied for the first time in a Philippine setting it was beneficial to see if previous measurements would need to be adjusted to the new context. It was also a way to check if environmental turbulence has only one dimension or several dimensions. (see Appendix 9.11 for the detail of the factor analysis and reliability tests.)

A total of 29 items were included in the questionnaire under external environment and regulatory features. All the items were included in one factor analysis using principal axis factoring procedure. At the end, it resulted in four factors – market turbulence, competitive intensity, technological turbulence, and regulatory turbulence – consistent with earlier studies (e.g., Cadogan et al. 2002; Kuivalainen et al. 2004).

From the original 29 items, a total of 21 items were eventually used to measure the four dimensions of environmental turbulence.

After a series of seven factor analyses, the following seven items were removed based on poor factor loadings (presented according to sequence of removal):

1. Competitors are relatively weak.
2. We cater to many of the same customers that we used to in the past.
3. In our market(s), buyers face high costs if they want to switch to our competitors.
4. New customers tend to have product-related needs that are different from those of existing customers.
5. It is difficult to forecast where technology in our industry will be in the next 2 or 3 years.
6. Technological developments in our industry are rather minor.
7. In our market(s), buyers can always negotiate lower prices from sellers.

Appendix 9.11 shows the results of the factor analyses and reliability tests conducted on the environmental turbulence constructs. The four scales' respective summary statistics are reported in Table 6.8.

Table 6.8. Reliability assessment of environmental turbulence scales.

Statistical Tests	Turbulence			
	<i>Market</i>	<i>Competitive</i>	<i>Technological</i>	<i>Regulatory</i>
Average Inter-Item Correlation	.531	.428	.447	.447
Cronbach's Alpha	.694	.857	.708	.872
Number of Items	2	8	3	8
Number of Cases	354	354	354	354

The next sections present the discussion on the specific reliability tests conducted for each of the four environmental turbulence constructs.

6.3.2.1. Market Turbulence

Finally, two items for market turbulence were also tested for reliability (see Table 6.9). The average inter-item correlation is .531. The Cronbach's Alpha is .694.

Table 6.9. Dimensionality and reliability of market turbulence.

Market Turbulence Items			Factor Loadings	Item-Whole
Our customers tend to look for new products all the time			.728	.531
In our kind of business, customers' product preferences change quite a bit over time			.728	.531
Eigenvalue			1.531	
Percentage of Variance Explained			76.551	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
3.742	1.59366	.531	.694	354

6.3.2.2. Competitive Turbulence

The items for competitive turbulence were also tested for reliability. The average inter-item correlation achieved a score of .428. The Cronbach's Alpha is .857. Table 6.10 shows the items included with their factor loadings.

Table 6.10. Dimensionality and reliability of competitive turbulence.

Competitive Turbulence Items			Factor Loadings	Item-Whole
Competition in our industry is cut-throat			.702	.642
Price competition is a hallmark of our industry			.722	.655
Anything one competitor can offer, others can match rapidly			.655	.603
One hears on a new competitor almost everyday			.642	.592
There are many "promotion" wars in our industry			.631	.583
Aggressive selling is the norm in our industry			.614	.565
Our customers are very price sensitive			.625	.569
When it comes to price, our customers are in a strong negotiating position			.643	.586
Eigenvalue			4.000	
Percentage of Variance Explained			49.999	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
3.742	5.01664	.428	.857	354

6.3.2.3. Technological Turbulence

The three items for technological turbulence was tested for reliability as shown in Table 6.11 with their loadings. The average inter-item correlation is .447. The Cronbach's Alpha is .708.

Table 6.11. Dimensionality and reliability of technological turbulence.

Technological Turbulence Instruments			Factor Loadings	Item-Whole
The technology in our industry is changing rapidly			.665	.526
Technology changes provide big opportunities in our industry			.760	.573
A large number of new product ideas have been possible through technological breakthrough in our industry			.587	.480
Eigenvalue			1.896	
Percentage of Variance Explained			63.204	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
3.783	2.18408	.447	.708	354

6.3.3.4. Regulatory Turbulence

The items for regulatory turbulence were tested for reliability. The items scored an average inter-item correlation of .46. The Cronbach's Alpha is .872. Table 6.12 shows the items included with their factor loadings.

Table 6.12. Dimensionality and reliability of regulatory turbulence.

Regulatory Turbulence Items			Factor Loadings	Item-Whole
Government product standards			.611	.574
Restrictions on seller concentration (e.g., Commerce Act)			.705	.659
Transportation and handling regulations			.620	.591
Government pricing regulations			.693	.639
Environmental protection laws (pollution, noise, etc.)			.575	.540
Governmental regulation of advertising			.739	.667
Governmental regulation of advertising			.764	.683
Trade association regulations of business practices			.718	.653
Eigenvalue			4.233	
Percentage of Variance Explained			52.915	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
3.174	5.36446	.460	.872	354

6.3.3.5. *Validating*

After assessing dimensionality and reliability of the scales, what follows is its validation which is ‘the extent to which a specific set of items reflects a content domain’ (De Vellis 1991, p.43).

The environmental turbulence constructs were assessed in terms of their content validity and nomological validity.

Content validity is “the extent to which a specific set of items reflects a content domain” (De Vellis 1991, p. 43). The pool of items used in coming up with the final set of items to measure the constructs developed in this chapter came from the literature and qualitative study (see Chapter Five).

Nomological validity can be used when well established theory exists linking the constructs to be measured with other constructs (Churchill 1991). Past studies have considered the role of environmental turbulence in terms of its effects on information processing. This study considers the relationship of environmental turbulence on export memory use and export performance (see Chapters Nine and Ten). The findings of this tests act as the assessment of the nomological validity of the constructs.

Lastly, from Appendix 9.13 could be seen a correlation matrix of the different constructs used in the regressions in this chapter. Outcome of the correlation test supported the convergent and discriminant validities of the constructs.

6.4. Summary

The respondents have been described in terms of company characteristics, export characteristics and the environmental turbulence they face. The variables pertaining to these characteristics have been examined, setting the scene for testing the hypotheses outlined in Chapter 4.

6.5. Preview of the Succeeding Chapters

The succeeding chapters will cover both the measure development of new constructs relevant to this research as well as the regression analyses conducted to address the objectives set for this research as presented in Section 1.2 Research Objectives in Chapter One.

In the following chapters (Chapter Seven to Ten), the variables capturing export memory quality and its antecedents, export memory use and its antecedents, and export performance are also described. This descriptive analysis component is followed by the development of measures of acquisition of export information, distribution of export information, export information interpretation, response to export information, export learning orientation, export coordination, integration into the organizational system, extent of export memory use, inter-functional use of export memory, instrumental use of export memory, conceptual use of export memory, symbolic use of export memory and export performance. Although the objectives do not state the development of measures of export performance, this is deemed a necessary condition for adequate testing of the hypotheses concerned with the use of export memory and its impact on export performance. Performance requires multi-item measurement, which, when summed to create a composite measure is less affected by random error than single items taken individually (Zeller and Carmines 1980). The last sections of Chapters Seven, Eight, Nine, and Ten are concerned with hypothesis testing, employing multivariate and moderated regression approaches.

In particular, Chapter Seven focuses on measure development of the export memory quality construct which is at the heart of this research.

As can be seen from Figure 4.1 in Chapter 4, the comprehensive model used in this research could actually be broken down into three smaller models. Chapters Eight, Nine, and Ten will each cover one of the three smaller models.

Chapter Eight focuses on the first model considered in this research which is export memory quality and its antecedent factors. Within this chapter, measure development of the new constructs (e.g. export learning orientation) used in this model are presented.

This is followed by the regression analyses applied in the model (memory quality and its antecedent factors).

Chapter Nine focuses on the second model which is export memory use and its antecedent factors. Similar to Chapter Eight, measures for the new constructs used in this model are first developed. A series of regression analyses are conducted once the measures of the new constructs (e.g. extent of export memory use and instrumental use of export memory) are done.

Chapter Ten focuses on the third model which is export performance and its antecedent factors. Following Chapters Eight and Nine, Chapter Ten begins first with measure development of the construct which will be used in the third model (i.e., export performance). Once this measure development phase is done, what follows are the series of regression analyses relating export performance to a group of possible antecedent factors.

Chapter Eleven wraps up the whole research by providing a summary of what has been done and achieved in this research exercise. Limitations of this research are considered and practical implications are presented. Lastly, future studies are proposed.

<p style="text-align: center;">Overview of Chapter Seven: EXPORT MEMORY QUALITY MEASUREMENT</p>
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7.1 Measure Development

7.1.1. Descriptive Analysis

7.1.2. Factor Analysis

7.1.3. Overall measure of export memory quality

7.1.4. Validating tests for measure of export memory quality

Chapter Seven: EXPORT MEMORY QUALITY MEASUREMENT

With the extensive profile of respondents presented in Chapter Six, it is now possible to proceed with the measure development of one of the main constructs of the study, export memory quality. First, the descriptive analyses of the quality of export memory are presented. Then, the process of measure development for export memory quality is discussed.

7.1 Measure Development

Export memory quality was captured by how it was perceived by the respondents. As a reminder (see also Chapter Five), in the study, twelve export memory items/repositories (Walsh and Ungson 1991; Qualitative Study) were assessed in terms of their quality level. These items/repositories are:

1. Assumptions and beliefs about the export market
2. Export culture (ways of perceiving, thinking, feeling) that is normally retained in language, shared framework, stories, and the grapevine, about the export market
3. Standard operating procedures, rules, routines as regard to the export marketing operation of our organization
4. Written documents, files, and databases
5. Export information we obtain through the formal relationships among the export people in our organization
6. The export information we obtain through the informal relationships among the export people in our organization
7. Physical structure
8. Intuition
9. Export information we obtain through the formal relationships with external export-specific groups (e.g. customers, suppliers)
10. Export information we obtain through the informal relationships with external export-specific groups (e.g. customers, suppliers)
11. Know-how and skills with regard to the export operation
12. Export market information stored outside of our organization

Since export memory is made up of different repositories (cf. Walsh and Ungson 1990), each repository was assessed for their quality level. Memory

quality in each repository was evaluated using several quality attribute items since quality is a multi-dimensional construct. Quality attributes used are shown in Table 7.1.

Table 7.1 Quality attributes of export memory.

Accurate	<i>Katsikeas and Morgan (1994), Wang and Strong (1996), Low and Mohr (2001), Sinkula (2002) and Qualitative Study</i>
Complete	<i>Daft and Huber (1987), Wang and Strong (1996), Lord and Ranft (2000) and Qualitative Study</i>
Easily Understood	<i>Levitt and March (1993), Wang and Strong (1996)</i>
Easily interpreted	<i>Levitt and March (1993), Wang and Strong (1996), Jack and Vassiliou (1997), and Qualitative Study</i>
Objective	<i>Wang and Strong (1996), and Qualitative Study</i>
Relevant	<i>Deshpandé and Zaltman (1981), Katsikeas and Morgan (1994), Wang and Strong (1996), and, Low and Mohr (2001)</i>
Timely	<i>Katsikeas and Morgan (1994), Wang and Strong (1996), Qualitative Study</i>
Useful	<i>Low and Mohr (2001), and Qualitative Study</i>
Adding Value to the Organization	<i>Wang and Strong (1996), and Qualitative Study</i>
Usable	<i>Juran (1974, 1988), Barney (1991), Smith et al. (1996), Wang and Strong (1996), Levitt and March (2002) and Toften and Rustad (2005)</i>
Credible	<i>Qualitative Study</i>
Accessible	<i>Wang and Strong (1996), Welch et al. (1998), and Qualitative Study</i>
Up-to-date	<i>Qualitative Study</i>
Concisely Represented	<i>Huang et al. 1999; Qualitative Study</i>
Consistently Represented	<i>Huang et al. 1999; Qualitative Study</i>

Following the note of Huang et al. (1999), the choice of evaluation criteria was based on intuitive understanding, industrial experience, and literature review. For example, the quality attribute of being useful was chosen from the literature (e.g. Low and Mohr 2001) and from what the respondents in the Qualitative Study mentioned based on their experience (see Chapter Three). The item “of good quality” was added as a validating item. It also serves as an indicator of the overall quality of export memory for each respective memory repository.

7.1.1. Descriptive Analysis

As mentioned earlier, respondents were asked to indicate their assessment of the different aspects of export memory on the basis of the quality attributes presented in Table 7.1. The respondents had to answer all the 12 items in Part 7 on content of export memory in the questionnaire. Each item was posed on a seven-point semantic differential scale ranging from 1 = “Strongly Disagree” to 7 = “Very Strongly Agree”.

The scores of the quality items used for each respective repositories were added up and averaged in order to get the quality level of each respective repositories.

The descriptive scores of the quality of each repository are presented in Table 7.2. The differences in the quality mean scores among the different memory repositories were significant

Table 7.2 Descriptive summary scores for the quality of each repository

	N	Min	Max	Mean	Median	Mode	Standard Deviation
1. Assumptions and Beliefs	354	2.00	6.67	4.5369	4.6154	5.00	.88915
2. Export Culture (shared framework, stories, grapevine)	354	2.00	6.67	4.4158	4.4167	5.00	.94503
3. Standard Operating Procedures, Rules, and Routines	354	1.71	7.00	4.7543	4.8571	5.00	.94109
4. Written Documents, Files, Databases	354	2.00	7.00	4.6837	4.8000	5.00	1.02894
5. Information through Formal Relationships Among Export People	354	1.92	7.00	4.5181	4.6154	5.00	1.00865
6. Information through Informal Relationships Among the Export People	354	1.85	7.00	4.1892	4.1538	5.00	.99478
7. Physical Structure (interior design, physical arrangement, ambiance)	354	1.00	7.10	4.7816	5.0000	5.00	1.04953
8. Intuition	354	2.00	7.00	4.4419	4.4444	5.00	.99715
9. Information through Formal Relationships with External Export-Specific Groups	354	1.00	7.00	4.6801	4.8462	5.00	1.04445
10. Information through Informal Relationships with External Export-Specific Groups	354	1.00	7.00	4.3623	4.3623	5.00	1.02710
11. Know-how and Skills	354	2.00	7.00	4.9533	5.0000	5.00	.97385
12. Export Market Information Stored Outside the Organization	354	1.00	7.00	4.3041	4.2857	5.00	1.10269

Know-how and skills got the highest score of 4.9433 while the information they got through informal relationships among export people had the lowest score of 4.1892.

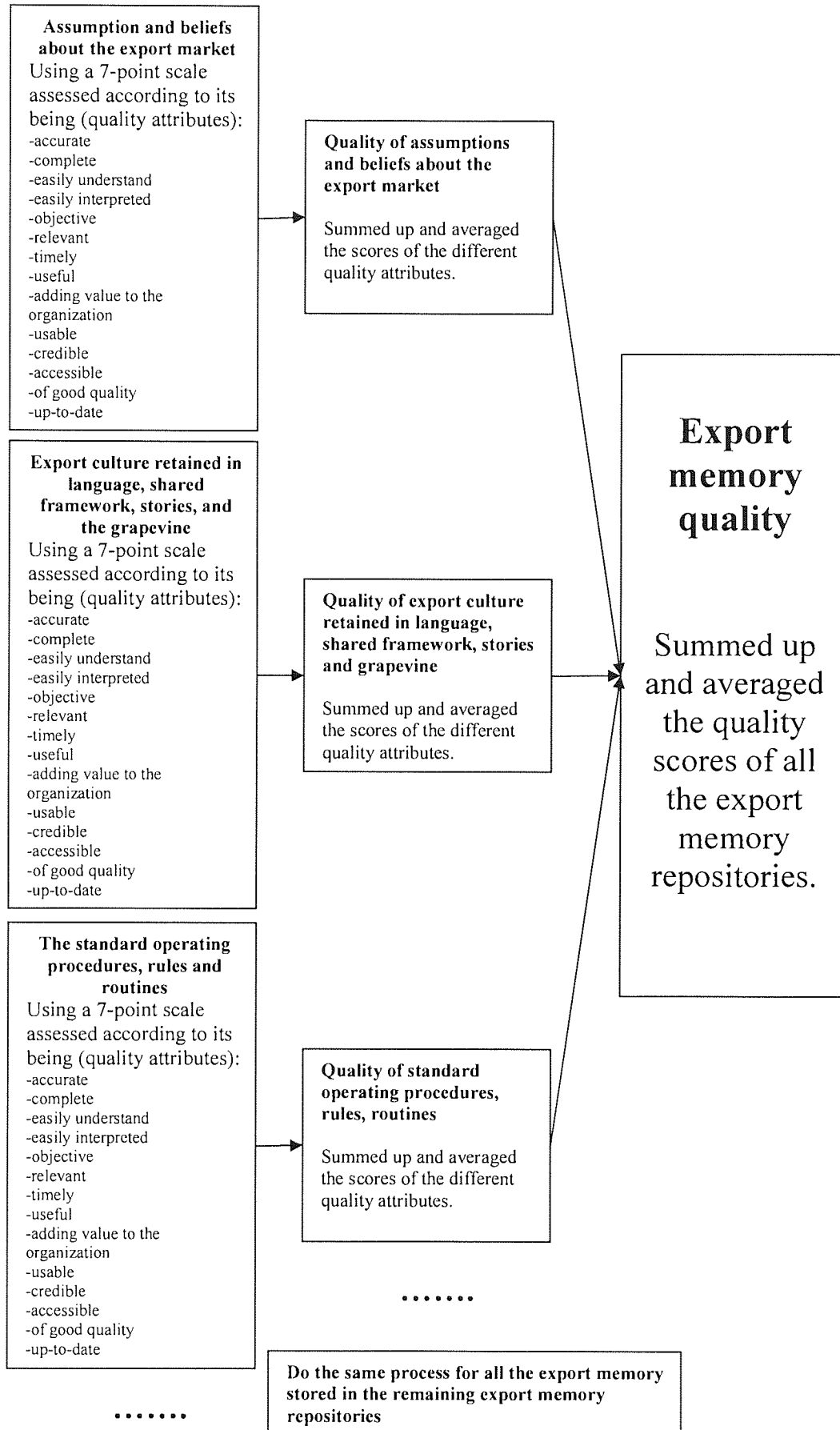
The results show that different memory repositories could exhibit different levels of quality.

7.1.2. Factor Analysis

Factor analysis was done on the quality items pertaining to each memory repository using a principal components analysis in order to see if the fifteen quality attributes could be reduced to just a few ones. As could be seen from Appendix 7.1, all the factor analyses which were conducted on the quality items of each repository, with the exception of the first repository (i.e., assumptions and beliefs about the export market resulted to just one factor each which means that the quality attributes for each repository were just part of one construct called quality of that specific repository. The factor analysis for assumptions and beliefs about the export market produced two factors. However, upon close examination of the items of each resulting factor, no common meaning could be extracted from them. It has been decided that this just happened by chance.

7.1.3. Over-all measure of export memory quality

In order to gauge the overall level of quality that the export memory of an organization has, the averaged quality levels of the memory stored in each of its repositories were summed up and averaged. The individual quality levels were further added up and averaged. The resulting figure represented the overall quality level of the organization's export memory (see Figure 7.1 for better illustration of the process).

Figure 7.1 Process in Deriving the Export memory quality

It is unlikely, however, that export memory quality is a latent construct which *causes* the individual indicators (quality of memory in each memory repositories) to fluctuate. Rather, it is contended that it is the extent to which a firm achieves a certain quality level on each memory repository that will determine the firm's overall export memory quality. This causal direction between the construct and the items composing it indicates that overall export memory quality is an *index* rather than a *scale* (see Bollen and Lennox 1991). As such, the individual items do not need to be inter-correlated since they are not required to covary. For example, know-how and skills may be of very good quality, but physical structures may not. The creation of the index is thus an attempt at capturing a general picture of exporting firms' export memory quality. The quality level at each of the repositories were all added up and averaged. This captured the overall export memory quality and used in the regression analysis.

In order to get a score for the over-all quality of export memory, the quality mean score of each repository were all added up and averaged. In the same way, the scores of the validating item "of good quality" were added up and averaged.

7.1.4. Validity

Construct validity is the "degree of "correspondence between a construct which is unobservable, conceptual level and a purported measure of it which is at an operational level" (Peter 1981, p. 134). Several types of validity could be used in assessing the validity of a measure of a construct. The ones used in this research are convergent, discriminant, content validity, and nomological validity (Churchill 1991).

Convergent validity is achieved when the measure used correlates with the measure for the same thing using another method (Churchill 1979). In order to test for the convergent validity of this measure, the index for each export memory factor was correlated with the validating item capturing overall export memory quality for that factor. This was done for each of the twelve export memory factors (see Appendix 7.2). The Pearson correlations all yielded high coefficients from a minimum of Pearson correlation of .807 to a high of .927. A correlation test between the overall score of quality and the averaged score of the validating items were also conducted. The result

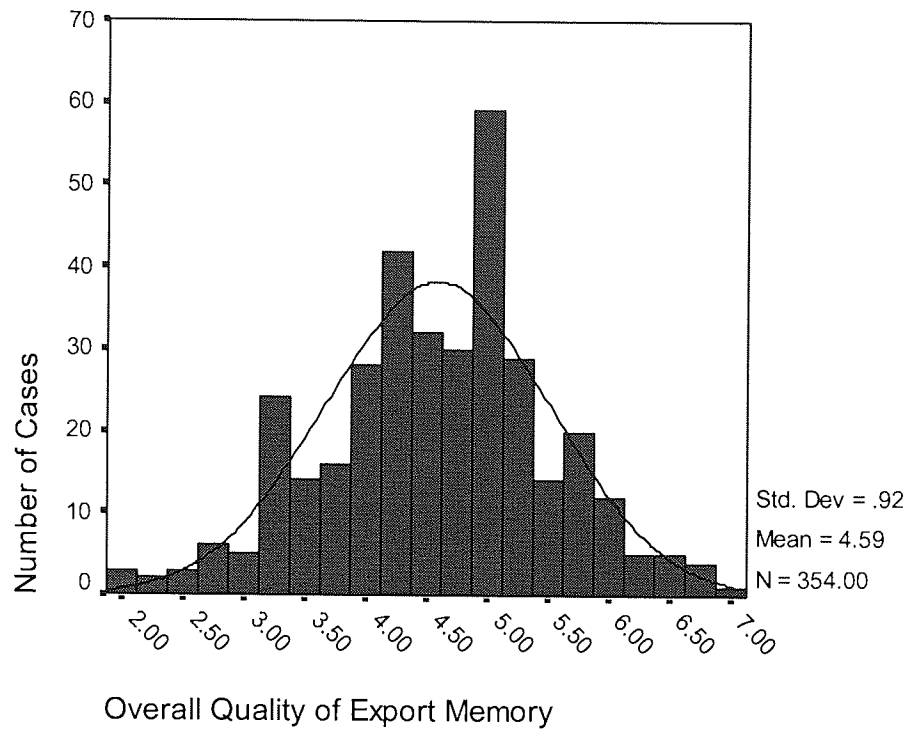
showed a high degree of correlation (see Appendix 7.3). It was then accepted that the index captures export memory quality adequately.

Discriminant validity is achieved when the measure has low correlation with other measures that are supposedly not measuring the same variable or concept” (Heeler and Ray 1972, p. 362).

Content validity assesses whether the construct being measured has been adequately captured by the measure (e.g., Dillon et al. 1990). The content validity of the scales is achieved by examining the sources of the items from which the present items were drawn from. As could be recalled, the items used in measuring export memory quality were all taken from either the literature (Chapter Two) or the qualitative study (Chapter Three) or from both (also see Table 7.1 and Chapter Five).

A variable has nomological validity when it “behaves as expected with respect to some other construct to which it is related” (Churchill 1991, p. 492). Anything that has been perceived to be of high quality has been valued and used. The construct export memory quality has been hypothesized to be positively related to the extent of export memory use. If export memory quality behaved as expected, then this would be an evidence of nomological validity. This will be addressed in Chapter Nine.

With a mean of 4.59 (standard deviation = .92) within a range from 1.98 to 6.9, one can see that the frequency distribution of the index (Figure 7.2) is normal. This is supported by a Kolmogorov-Smirnov test which suggests that the index’s distribution is normal (K-S Z = 1.027)

Figure 7.2. Overall quality of export memory.

<p style="text-align: center;">Overview of Chapter Eight: ANTECEDENTS TO EXPORT MEMORY QUALITY</p>
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Chapter Eight: ANTECEDENTS TO EXPORT MEMORY QUALITY

8.1. Key Antecedents to Export Memory Quality

8.1.1. Export Information Acquisition

8.1.1.1. Descriptive Analysis of Export Information Acquisition

8.1.1.2. Measure Development of Export Information Acquisition

8.1.2. Export Information Dissemination

8.1.2.1. Descriptive Analysis of Export Information Dissemination

8.1.2.2. Measure Development of Export Information Dissemination

8.1.3. Export Information Interpretation

8.1.3.1. Descriptive Analysis of Export Information Interpretation

8.1.3.2. Measure Development of Export Information Interpretation

8.1.4. Response to Export Information

8.1.4.1. Descriptive Analysis of Response to Export Information

8.1.4.2. Measure Development of Response to Export Information

8.1.5. Export Learning Orientation

8.1.5.1. Descriptive Analysis of Export Learning Orientation

8.1.5.2. Measure Development of Export Learning Orientation

8.1.6. Export Coordination

8.1.6.1. Descriptive Analysis of Export Coordination

8.1.6.2. Measure Development of Export Coordination

8.1.7. Integration into the Organizational System

8.1.7.1. Descriptive Analysis of Integration into the Organizational System

8.1.7.2. Measure Development of Integration into the Organizational System

8.1.8. Validity

8.2. Hypotheses Testing

8.2.1. Assumptions

8.2.2.1. Normality of Error Term Distribution

8.2.2.2. Linearity and Homoscedasticity

8.2.2.3. Independence of the Predictor Variables

8.2.2.4. Regression Results and Discussion

8.3. Discussion of Results

Chapter Eight: ANTECEDENTS TO EXPORT MEMORY QUALITY

After covering the concept and measurement of export memory quality in Chapter Seven, this chapter considers several relevant factors that may have an effect on the level of export memory quality. The chapter examines the relationship between each of the antecedent factors with the export memory quality itself.

Discussions in this chapter are divided into two main parts. The first part discusses the antecedents which are deemed to influence the development of an export memory quality. For each antecedent, there are two subsections. Initially, a descriptive component is presented, setting the scene for further analysis. Secondly, measures are developed for each corresponding construct on the basis of the corresponding items within the questionnaire. The second part presents the hypotheses testing through the use of the multiple regression method. The relationships between the different antecedents with quality export memory are examined. The results are discussed.

8.1. Key Antecedents to Export Memory Quality

The seven key antecedents to export memory quality are export information acquisition, export information dissemination, export information interpretation, response to export information, export learning orientation, export coordination, and integration into the organizational system. Each of these antecedents is now discussed successively in two subsections, namely, descriptive analysis and measure development.

8.1.1. Export Information Acquisition Quality

8.1.1.1. Descriptive Analysis of Export Information Acquisition Quality and Validating Items

Using a five-point Likert scale, six items were used for measuring acquisition of export information presented in Table 8.1. It should be noted that some maximum values go beyond five due to the missing value imputation. The Bonferroni test was used to determine the significance of the differences among the items. Appendix 8.1 shows the results of the test which found significant differences between certain items. The Table 8.1 shows that the following items, two and three, revealed the highest means among the items:

2. In this firm, we collect export information regularly to update our knowledge of the export market.
3. In this firm, we collect export market information about a variety of export market facts (e.g., customer needs, competitor actions, technological trends, political environments etc.)

Table 8.1. Acquisition of export information quality descriptive statistics.

Acquisition of Export Information Items	N	Min	Max	Mean	Std. Deviation
1. In this firm, we collect export market information from a wide variety of export market information sources.	354	1.00	5.27	3.9353	.8877
2. In this firm, we collect export information regularly to update our knowledge of the export market.	354	1.00	5.40	4.0163	.8438
3. In this firm, we collect export market information about a wide variety of export market facts (e.g., customer needs, competitor actions, technological trends, political environments, etc.	354	1.00	5.71	4.0059	.9037
4. In this firm, we collect export market information very quickly in response to changes in the export environment.	354	1.00	5.00	3.6575	.9650
5. In this firm, we collect export market information in a formalized manner.	354	1.00	5.00	3.2768	.9454
6. In this firm, we collect export market information in high quantities.	354	1.00	5.00	3.1804	1.0122
Valid N (listwise)	354				

This supports the qualitative study which revealed that Filipino exporters are concerned about regularly getting export market information. Importance given by exporters to adequate influx of export information is a logical disposition since export function involves an organizational learning process where firms acquire, analyze and evaluate acquired information (Johanson and Vahlne 1977; Morgan and Katsikeas 1998).

The regularity of getting information and the variety of information being gathered are bolstered by the fact that most of the respondents were export dependent. As presented in 6.2.6. Export Dependence in Chapter Six p. 273, 262 of the respondents are highly dependent on exports, based on Diamantopoulos and Inglis (1988) and Katsikeas' (1994) standard where a company is considered highly dependent on exports if export sales compose 50% of the total sales. In fact, export sales of these respondents exceed this standard, with as much as 80.4% export dependence.

Another factor that can explain the importance given to information is the exporters' awareness that the export market is more complicated than local ones (Wood and Robertson 2000). As "information plays a key role in export marketing" (Nijssen et al. 1999, p. 143), exporters focus more of their skills and resources for a "suitable core of marketing intelligence" (Morgan and Katsikeas 1998, p. 164) to be used for "relatively complex strategic planning assignments given today's rapidly shifting alternatives in terms of risk, stability, and potential returns inherent in the myriad markets around the world" (Wood and Robertson 2000, p. 34).

However, despite the fact that most respondents export only to five or fewer countries, they are still aware of the need to collect varied information and collect information on a regular basis. It can be expected that as exporters engage with more countries, the more they will need more information about those different countries. If the exporters deal with only a few countries, the need for regularity in information acquisition may not be felt as much. However, the great difference between the home country market characteristics and that of even a single export market destination may easily bring this realization (cf. Johanson and Vahlne; 6.2.5. Export Product or Service Complexity in Chapter Six, p. 274)

The items with the lowest means are items five and six:

6. In this firm, we collect export market information in high quantities.

5. In this firm, we collect export market information in a formalized manner.

Again, these results support the views of the exporters who took part in the qualitative study and who did not appear to be concerned about export information overload. This is consistent with the earlier findings of Bodur (1986) and Morgan and Katsikeas (1998) in that most export firms face a problem with lack of knowledge about overseas markets, rather than overload. Instead of being concerned about having high quantities of information, there was a feeling that there was not enough information to work on. Lord and Ranft (2000) also claim that "[e]ven relatively explicit forms of market knowledge can be difficult to obtain in many host countries because well-developed and widely-available sources of market information, produced by credible public and private sources, may not exist" (p. 576). Insufficient foreign market knowledge is a "major exporting problem area" (Reid 1984, p. 142).

However, even with the established importance of information acquisition for export operations, the respondents could not collect export information in high quantities as a result of limited sources of information or limited available information

Table 8.2 below shows the items used in coming up for the validating measure to export information acquisition. The differences in the means were significant as can be seen from Appendix 8.2.

Table 8.2. Export information acquisition quality descriptive statistics validating items

Items Validating Items	N	Min	Max	Mean	Std. Deviation
7. In this company, we collect export market information efficiently.	354	1.00	7.00	4.4037	1.24386
8. The quality of our export market information generation is outstanding.	354	1.00	7.00	4.0969	1.32780
9. We are very satisfied with our export market information generation efforts.	354	1.00	7.00	4.0013	1.29559
10. There is no room for improvement in the way we collect export information.	354	1.00	7.00	2.2496	1.18004
11. We are very effective in our export market information generation activities.	354	1.00	7.00	3.8044	1.29669

The first item, “In this company, we collect export market information efficiently” got the highest score while the item, “There is no room for improvement in the way we collect export information” got the lowest score.

8.1.1.2. Measure Development of Export Information Acquisition Quality and Validating Items

For the development of a measure for export information acquisition, a scale of export information acquisition was developed. The six items were factor analyzed and resulted

in a single factor with an eigenvalue of 3.825 and explained 63.8 percent of the variance (Table 8.2). See Appendix 8.3 for the output of the factor analysis.

Table 8.3. Dimensionality and reliability of export information acquisition quality.

Export Information Acquisition Quality Items			Factor Loadings	Item-Whole
In this firm, we collect export market information from a wide variety of export market information sources			.753	.690
In this firm, we collect export information regularly to update our knowledge of the export market			.783	.718
In this firm, we collect export market information about a wide variety of export market facts (e.g., customer needs, competitor actions, technological trends, political environment, etc.)			.815	.748
In this firm, we collect export market information very quickly in response to changes in the export environment			.782	.726
In this firm, we collect export market information in a formalized manner			.640	.612
In this firm, we collect export market information in high quantities			.736	.700
Eigenvalue			3.830	
Percentage of Variance Explained			63.827	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
22.0722	4.43386	.564	.885	354

Subsequently the reliability of the six items was assessed. The lowest item-whole correlation is .61, which is considered an acceptable value for inclusion of all the six items within the scale of export information acquisition quality (DeVellis 1991). Computation of Cronbach's alpha yielded a value of .8846. Nunnally (1978) considers scales attaining a coefficient alpha of at least .70 to be internally consistent.

The export information acquisition has a mean of 3.7 out of 5 and a standard deviation of .74. Respondents consider themselves to be, on average, doing well in acquiring export information. This means that most of the exporters who responded place an effort in acquiring export information by using a wide variety of export information sources, regularly updating their knowledge of the export market, collecting a wide variety of export market facts, quickly responding to changes in the environment, and collecting market information in a formalized way and in high quantities.

The histogram of this variable (Figure 8.1) confirms this point by highlighting a negatively skewed distribution with a high number of respondents agreeing to the item.

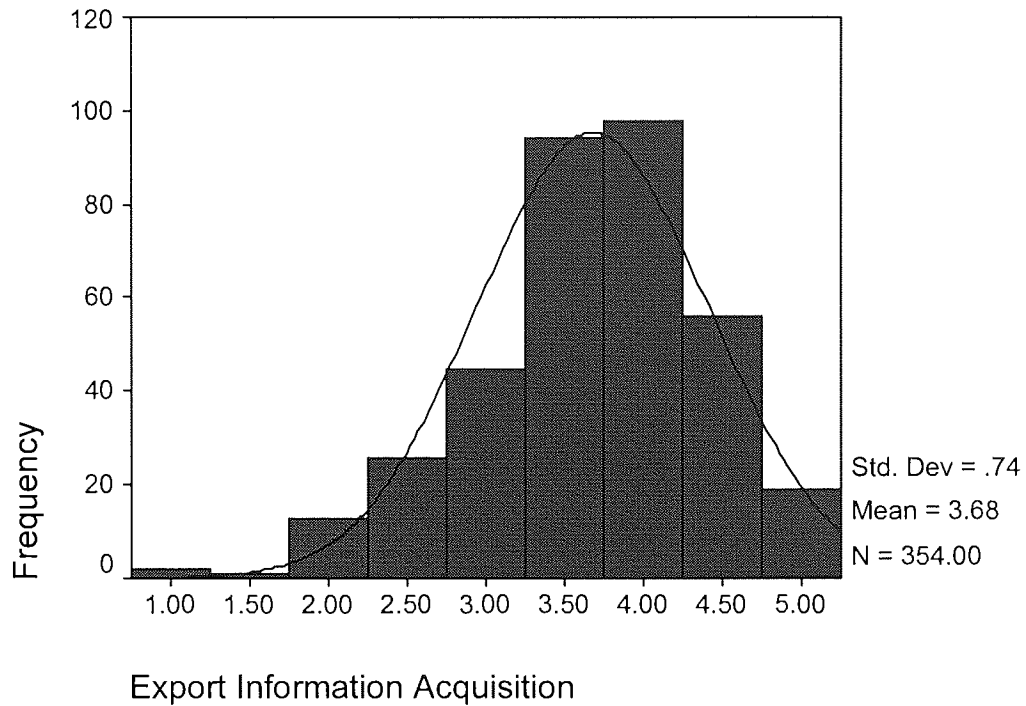
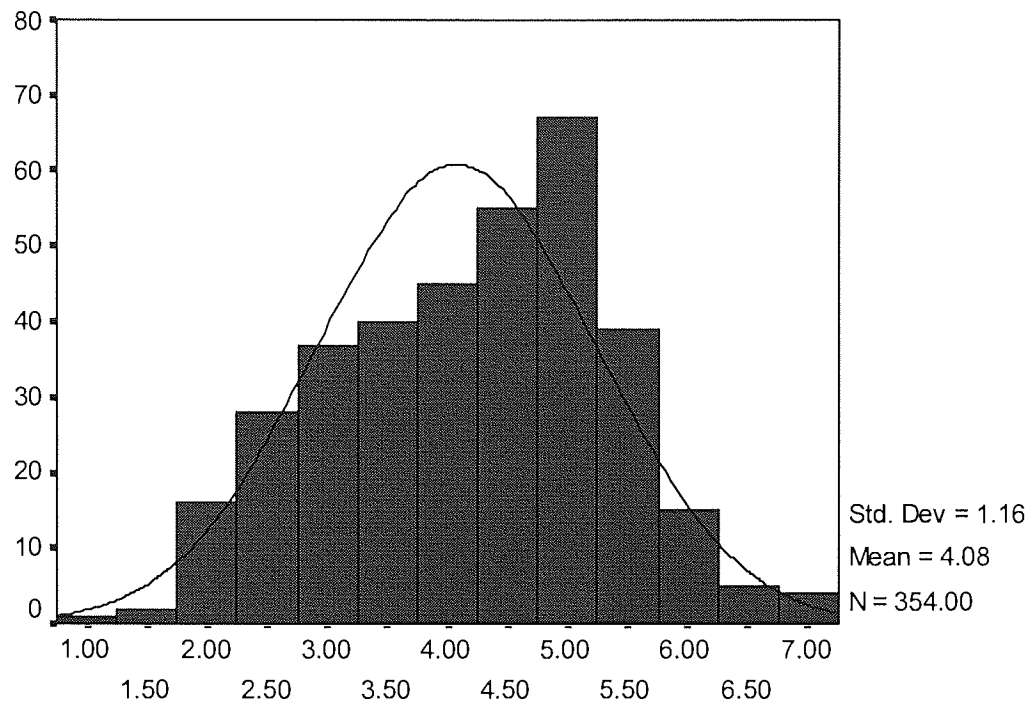
Figure 8.1. Histogram of export information acquisition. quality

Figure 8.2 presents the histogram for the validating measure of export information acquisition. Spearman's rho shows that there is a significant positive relationship between acquisition of export information and the validating variable (Table 8.4).

Figure 8.2. Histogram of export information acquisition quality validating.

Quality Export Information Acquisition Validating

In order to test the validity of the scale intending to capture quality of export information acquisition, the latter was correlated with a distinct method of assessing the quality of export information acquisition. Specifically, the “quality of export information acquisition” measure was correlated with the average of the five validating items of that section.

Table 8.4. Spearman’s rho test for correlation between acquisition of export information and validating variable.

Correlation between Acquisition of Export Information Quality and Validating Variable			AIVAL
Spearman’s rho	A1	Correlation Coefficient	.726**
		Sig. (1-tailed)	.000
		N	354

**, Correlation is significant at the 0.01 level (1-tailed).

8.1.2. Export Information Dissemination Quality

8.1.2.1. Descriptive Analysis of Export Information Dissemination Quality

Table 8.5 shows the items used in measuring export information dissemination quality. The differences in the mean scores among the items were significant as seen from Appendix 8.4.

Table 8.5. Export information dissemination quality descriptive statistics.

Distribution of Export Information Quality Items	N	Min	Max	Mean	Std. Deviation
1. In this firm, export market information is regularly disseminated to different departments.	354	1.00	5.00	3.4750	.9519
2. In this firm, export market information is speedily distributed across functional areas.	354	1.00	5.00	3.6393	.8759
3. In this firm, export market information never tends to get lost in the system.	354	1.00	5.00	3.3869	.8661
4. In this firm, export market information gets disseminated across departments in high quantities.	354	1.00	5.00	3.1429	.9180
5. In this firm, export market information is often summarized as it gets distributed.	354	1.00	5.00	3.4891	.8440
6. In this firm, export market information will rarely get distorted in the dissemination process.	354	1.00	5.00	3.3419	.8379
7. In this firm, export market information is often disseminated in a formal manner.	354	1.00	5.00	3.2880	.9167
8. In this firm, we treat export information as sensitive; only those who need to know receive them.	354	1.00	5.00	3.7699	1.01945
Valid N (listwise)	354				

The items with the highest mean scores are items two and five:

2. In this firm, export market information is speedily distributed across functional areas.

5. In this firm, export market information is often summarized as it gets distributed.

On the other hand, the items with the lowest mean scores are items 4 and 7:

4. In this firm, export market information gets disseminated across departments in high quantities.

7. In this firm, export market information is often disseminated in a formal manner.

It is interesting to note that the items that got the lowest scores in this section are related to the items that got the lowest scores in the previous section (i.e., “In this firm, we collect export market information in high quantities.” and “In this firm, we collect export market information in a formalized manner.”). It is possible that information is not distributed across departments in high quantities because there is not much information available to pass around in the first place (Johanson and Vahlne 1977; Reid 1984).

Validating measure for export information distribution quality was developed using the items shown in Table 8.6

Table 8.6 Export information dissemination quality validating items

Export Information Distribution Quality Validating Items	N	Min	Max	Mean	Std. Deviation
1. In this company, we distribute export market information efficiently.	354	1.00	7.00	4.4362	1.30027
2. The quality of our export market information dissemination is outstanding.	354	1.00	7.00	3.9600	1.32256
3. We are very satisfied with our export market information distribute efforts.	354	1.00	7.00	4.0053	1.37357
4. There is no room for improvement in the way we distribute export information.	354	1.00	7.00	2.3510	1.18590
5. We are very effective in our export market information distribution activities.	354	1.00	7.00	3.8807	1.29174

The differences in the means were found to be significant as could be seen from Appendix 8.5. The highest score was item number one, “In this company, we distribute export market information efficiently. While the lowest score was for item number four, “There is no room for improvement in the way we distribute export information”, which was a negatively worded statement.

8.1.2.2 Measure Development of Export Information Dissemination Quality

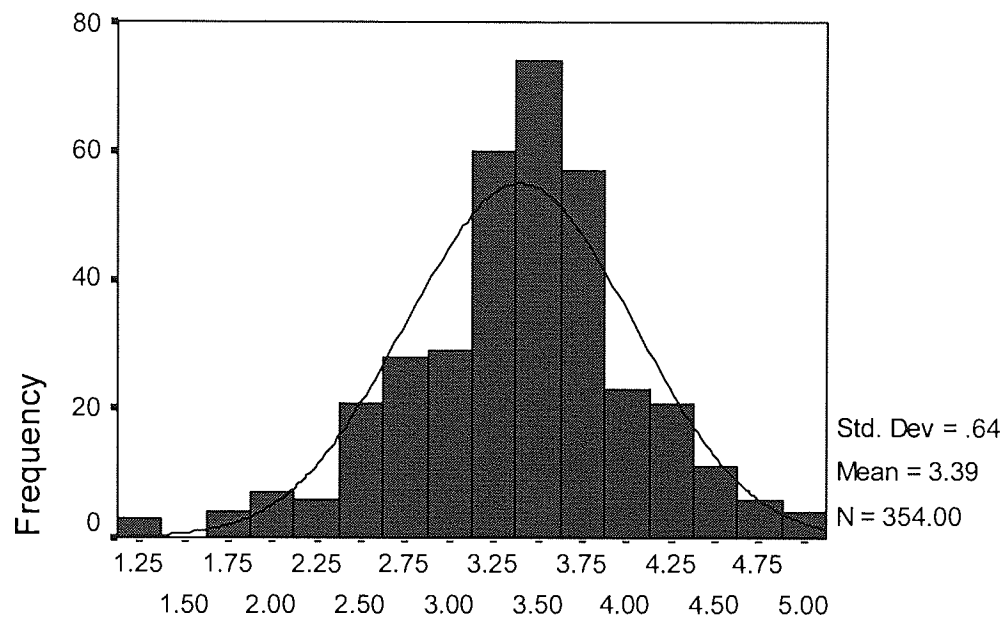
Export information distribution quality items were factor analyzed. The initial computation generated two factors but ended up producing only one factor (see Appendix 8.6 and Table 8.7). One item was eventually removed resulting in the final seven items. After careful examination of the second factor, it was decided that the second factor be withdrawn since it does not clearly express another dimension of export information distribution. The first factor has an Eigenvalue of 3.353 and explains 52.3 percent of the variance. Analysis of the distribution of export information items uncovered a minimum of item-whole correlation coefficient of .496. Cronbach’s alpha was also computed for export information interpretation and attained a value of .847 well above the accepted threshold for reliable scales advocated by Nunnally (1978). As a result all seven items are retained within the scale now deemed reliable.

Table 8.7. Dimensionality and reliability of export information distribution quality.

Export Information Distribution Quality			Rotated Factor Loadings	Item-Whole
In this firm, export market information is regularly disseminated to different departments			.728	.648
In this firm, export market information is speedily distributed across functional areas			.749	.672
In this firm, export market information never tends to get lost in the system			.581	.541
In this firm, export market information gets disseminated across departments in high quantities			.783	.704
In this firm, export market information is often summarized as it gets distributed			.644	.589
In this firm, export market information will rarely get distorted in the dissemination process			.532	.496
In this firm, export market information is often disseminated in a formal manner			.630	.580
Eigenvalue			3.664	
Percentage of Variance Explained			52.340	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
23.7632	4.48837	.440	.847	354

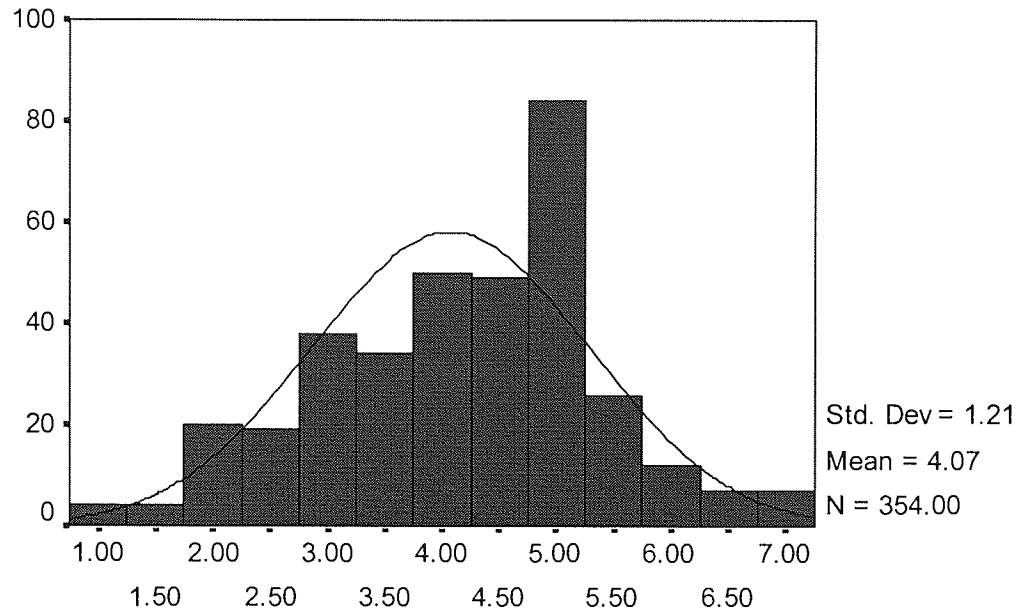
Quality of export distribution of export memory has a mean rating of 3.4 and a standard deviation of .13. Respondents tend to see themselves as having been able to distribute export information in a quality way. The histogram of this variable (Figure 8.3) confirms this point by highlighting the negatively skewed distribution with a high number.

Figure 8.3. Histogram of export information distribution quality.



Distribution of Export Information

The histogram for distribution of export information validating is presented in Figure 8.4. Table 8.8 shows the correlation between the measure of distribution of export information and the validating variable which is significant.

Figure 8.4. Histogram of Export information distribution quality validating.

Distribution of Export Information Validating

Table 8.8. Spearman's rho test for correlation between distribution of export information and validating variable.

Correlation between Distribution of Export Information Quality and Validating Variable			
			A2VAL
Spearman's rho	A2	Correlation Coefficient	.670**
		Sig. (1-tailed)	.000
		N	354

**. Correlation is significant at the 0.01 level (1-tailed).

8.1.3. Export Information Interpretation Quality

8.1.3.1. Descriptive Analysis of Export Information Interpretation Quality

Export information interpretation was measured using six items. Table 8.9 shows the mean score of each of the items. Appendix 8.7 shows that the differences in the mean were significant. Items three and one got the highest mean scores:

3. Our organization gains so much value in the way we interpret the export information we have.

1. The interpretation we make on the export market information we acquire reflects well what is happening in the export market.

The items with the lowest mean scores go to items two and six:

2. The interpretation of export market information provides us with a deep and unique understanding of the market which is not available to competitors.

6. We are very good in reading between lines especially with the raw export information we have.

Table 8.9. Export information interpretation quality descriptive statistics.

Export Information Interpretation Quality Items	N	Min	Max	Mean	Std. Deviation
1. The interpretation we make on the export market information we acquire reflects well what is happening in the export market.	354	1.00	5.00	3.7162	.7329
2. The interpretation of export market information provides us with a deep and unique understanding of the market which is not available to competitors.	354	1.00	5.00	3.3171	.8490
3. Our organization gains so much value in the way we interpret the export information we have.	354	1.00	5.00	3.7467	.7597
4. It is very easy for us to figure out the meaning of the export market information we get.	354	1.00	5.00	3.4616	.8032
5. We discover so much in the way we make sense of the export market information available to us.	354	1.00	5.00	3.6941	.7355
6. We are very good in reading between lines especially with the raw export information we have.	354	1.00	5.00	3.4334	.7615
Valid N (listwise)	354				

From these results, it would indicate that exporters find value in the knowledge base that they have acquired. However, it would seem that they gain market knowledge that is not exclusive to them but is also available to other exporters. This finding supports Maltz and Kohli's (1996) observation that "competing organizations increasingly have access to the same intelligence" (p. 47).

It may seem that it would take more efforts on their part to build an understanding of the market that is unique to them to have a competitive advantage. In a knowledge economy with abundant export information, "[c]ompetitive advantage is more likely to arise from a better understanding of the influences and outcomes of market situation interpretation" (White et al. 2003, p. 75). Thus, exporters should put more effort in gaining their unique understanding from commonly available export information in light of the fact that most of them often do not use their market knowledge (Maltz and Kohli 1996). In fact, Lord and Ranft (2000) suggest that "[e]xtensive market research statistics and published country reports might be helpful to a foreign firm, but cannot substitute for more finely-developed experience and skills regarding how to navigate the complexities of language, culture, politics, and society in what are often very unfamiliar host country economies" (p. 576). Export information interpretation supplies an exporter with a mechanism to maximize its export information, avoiding the problem of rejecting information, "not because it is unimportant, but because the organization lacks the ability (i.e. knowledge) to make sense of it" (Selnes and Sallis 2003, p. 82).

The validating items for export information are shown in Table 8.10. Appendix 8.8 shows the differences in the mean scores were significant.

Table 8.10: Descriptives for export information interpretation quality validating items.

Export Information Interpretation Quality Validating Items	N	Min	Max	Mean	Std. Deviation
1. In this company, we interpret export market information efficiently.	354	1.00	7.00	4.4413	1.17977
2. The quality of our export market information interpretation is outstanding.	354	0.96	7.00	4.0212	1.23747
3. We are very satisfied with our export market information interpretation efforts.	354	1.00	7.00	4.0560	1.26046
4. There is no room for improvement in the way we interpret market information.	354	1.00	6.00	2.2705	1.03083
5. We are very effective in our export market information interpretation activities.	354	1.00	7.00	3.9013	1.19234

The item with the highest score is item number one, “In this company we interpret market information efficiently”. The item with the lowest score is item number four, “There is no room for improvement in the way we interpret market information” which is a negatively worded statement.

8.1.3.2. Measure Development of Export Information Interpretation Quality

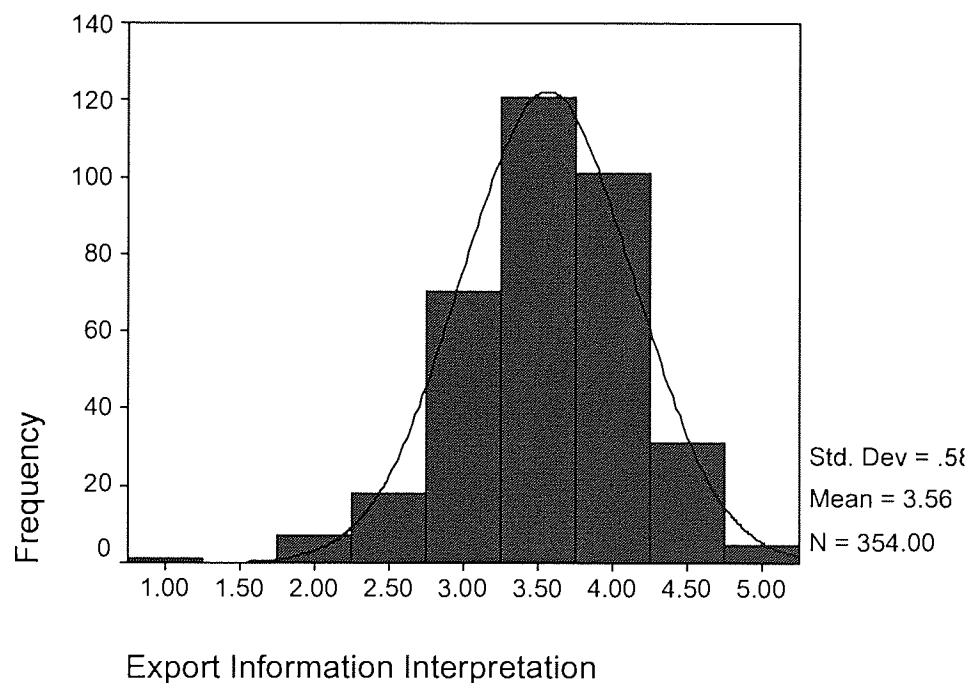
Export information interpretation quality items were factor analyzed (see Appendix 8.9). The initial computation generated one factor (Table 8.11) which explains 55.8 percent of the variance. Eigenvalue is at 3.353. Analysis of the export information interpretation quality items uncovered a minimum of item-whole correlation coefficient of .519. Cronbach’s alpha was also computed for export information interpretation quality and attained a value of .839 well above the accepted threshold for reliable scales advocated by Nunnally (1978). As a result all six items are retained within the scale now deemed reliable.

Table 8.11. Dimensionality and reliability of export information interpretation quality.

Export Information Interpretation Quality Items			Factor Loadings	Item-Whole
The interpretation we make on the export market information we acquire reflects well what is happening in the export market			.604	.551
The interpretation of export market information provides us with a deep and unique understanding of the market which is not available to competitors			.568	.519
Our organization gains so much value in the way we interpret the export information we have			.770	.693
It is very easy for us to figure out the meaning of the export market information we get			.746	.668
We discover so much in the way we make sense of the export market information available to us			.741	.663
We are very good in reading between lines especially with the raw export information we have			.677	.608
Eigenvalue			3.353	
Percentage of Variance Explained			55.877	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
21.3691	3.45799	.467	.839	354

Figure 8.5 presents the histogram of export information interpretation.

Figure 8.5. Histogram of export information interpretation quality.



Histogram of export information validating is presented in Figure 8.6. Figure 8.12 presents the correlation between measure of information interpretation and the validating variable which is significant.

Figure 8.6. Histogram of export information interpretation quality validating.

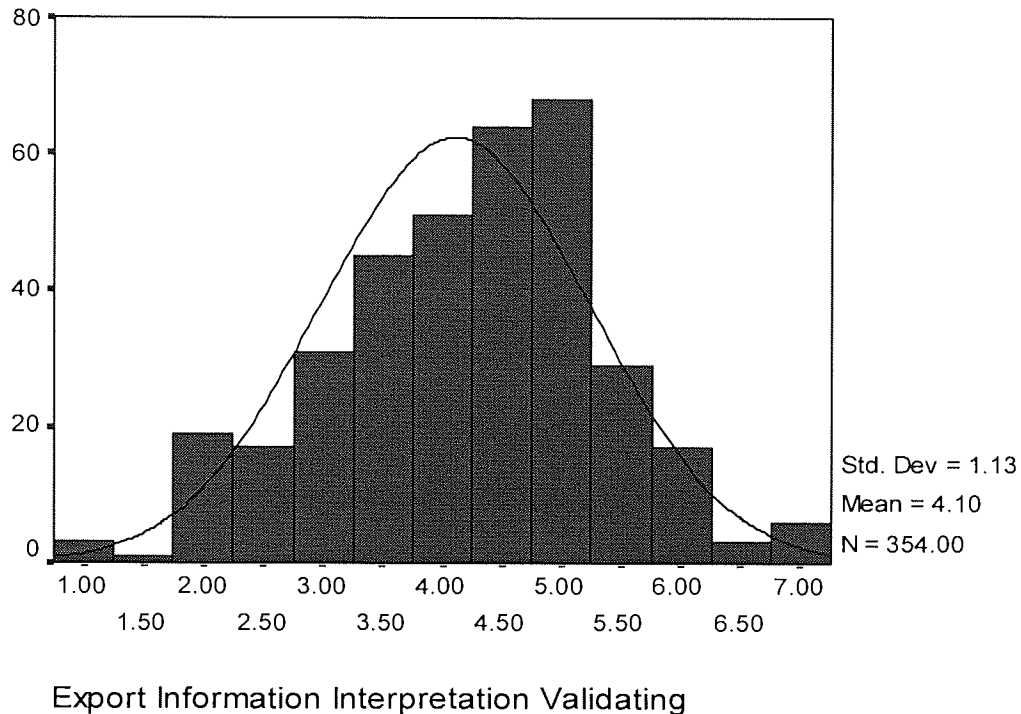


Table 8.12. Spearman's rho test for correlation between export information interpretation quality and validating variable.

Correlation between Export Information Interpretation Quality and Validating Variable			
			A3VAL
Spearman's rho	A3	Correlation Coefficient	.715**
		Sig. (1-tailed)	.000
		N	354

**. Correlation is significant at the 0.01 level (1-tailed).

8.1.4. Response to Export Information Quality

8.1.4.1. Descriptive Analysis of Response to Export Information Quality

The quality of response to export information was measured using three items (Table 8.13). The difference in the mean score between item one and two was significant as seen in Appendix 8.10. Among the three items, item one got the highest mean score:

1. If a major competitor were to launch an intensive campaign targeted at our export customers, we would implement a response immediately.

Item number two got the lowest mean score:

2. We are quick to respond to significant changes in our competitors' price structures in foreign markets.

Table 8.13. Response to export information quality descriptive statistics.

Response to Export Information Quality Items	N	Min	Max	Mean	Std. Deviation
1. If a major competitor were to launch an intensive campaign targeted at our export customers, we would implement a response immediately.	354	1.00	5.00	3.9177	.9358
2. We are quick to respond to significant changes in our competitors' price structures in foreign markets.	354	1.00	5.00	3.7501	.8841
3. We rapidly respond to competitive actions that threaten us in our export markets.	354	1.00	5.55	3.8452	.9131
Valid N (listwise)	354				

From the above, exporters seem to respond immediately to competitive moves. This finding corroborates Cadogan's (1995) findings that "...responsiveness was seen to be high when export dependence was high and, thus, the latter may influence the need to respond *quickly* in the firms export markets. This in turn, may encourage decision makers to adopt more proactive approaches to market changes and to rely less on reactive response behaviors." (emphasis made in the original) (Cadogan 1995, p. 78).

From this it could be said that since most respondents are export dependent (6.2.6. export dependence of Chapter Six), export responsiveness would naturally be high.

However, the findings of this study suggest that exporters would be specifically slower in responding to price changes coming from competitors (Table 8.13). It might be difficult to respond to price changes due to cost factors and economies of scale. As mentioned in the qualitative interview, many exporters are wary about the competition from Chinese exporters who offer much cheaper prices due to economies of scale (Chapter Three).

Table 8.14 shows the scores for the validating items used for response to export information. The differences in the mean scores were significant as presented in Appendix 8.11.

Table 8.14. Descriptives for Response to Export Information Quality Validating Items

Response to Export Information Quality Validating Items	N	Min	Max	Mean	Std. Deviation
1. In this company, we respond to export market information efficiently.	354	1.00	7.00	4.5799	1.14413
2. The quality of our response to export market information is outstanding.	354	1.00	7.00	4.2005	1.26367
3. We are very satisfied with the way in which we respond to export market information.	354	1.00	7.00	4.1329	1.25971
4. There is no room for improvement in the way we respond to export market information.	354	1.00	6.00	2.3467	1.11298
5. We are very effective in the way we respond to export market information.	354	1.00	7.00	4.0432	1.22283

The item with the highest score is item one, “In this company, we respond to export market information efficiently”, while the item with the lowest score is item four, “There is no room for improvement in the way respond to export market information.”

8.2.4.2. Measure Development of the Response to Export Information Quality

A measure of the quality of response to export information is constructed by first factor analyzing the three responses to export information items (see Appendix 8.12 and Table 8.15). The factor analysis resulted to one factor and explained 80.4 percent of the variance. The eigenvalue is 2.413. When assessing the reliability of the three items, a minimum item-whole correlation coefficient of .729 was yielded, and a Cronbach's alpha of .878 was obtained. These are all deemed acceptable value to retain all five items in the analysis and to consider the response to export information scale to be reliable.

Table 8.15. Dimensionality and reliability of response to export information quality.

Quality of Response to Export Information			Factor Loadings	Item-Whole
If a major competitor were to launch an intensive campaign targeted at our export customers, we would implement a response immediately			.787	.729
We are quick to respond to significant changes in our competitors' price structures in foreign markets			.841	.765
We rapidly respond to competitive actions that threaten us in our export markets			.895	.799
Eigenvalue			2.413	
Percentage of Variance Explained			80.443	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
11.5130	2.45061	.706	.878	354

Figure 8.7 presents a histogram for quality of response to export information.

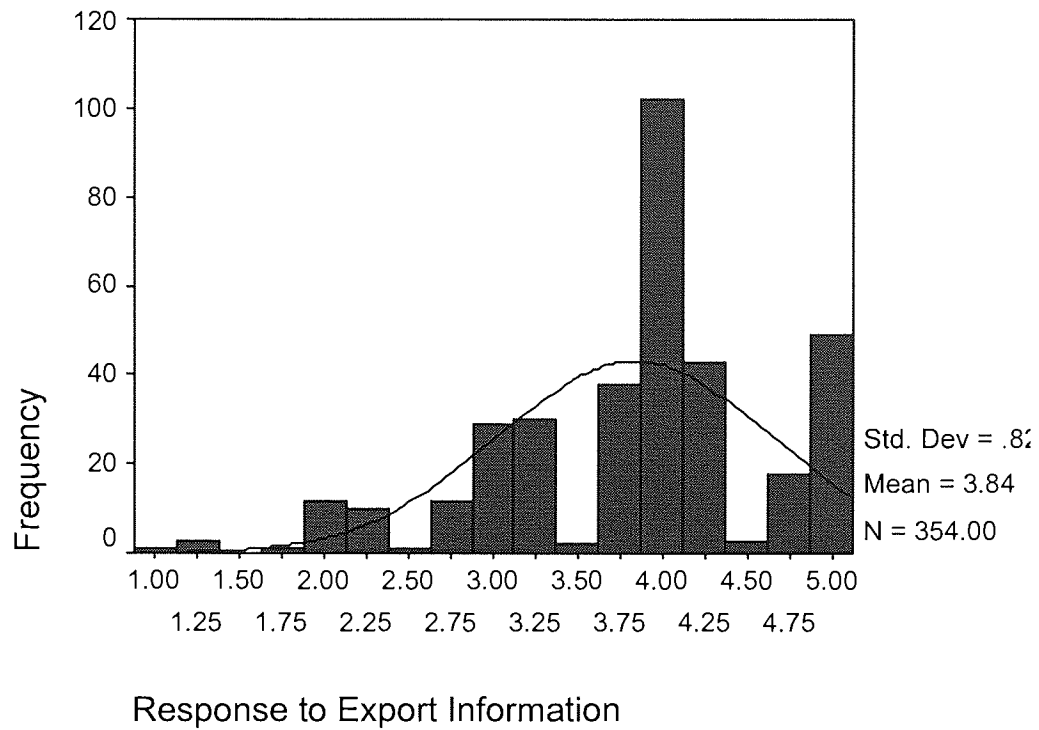
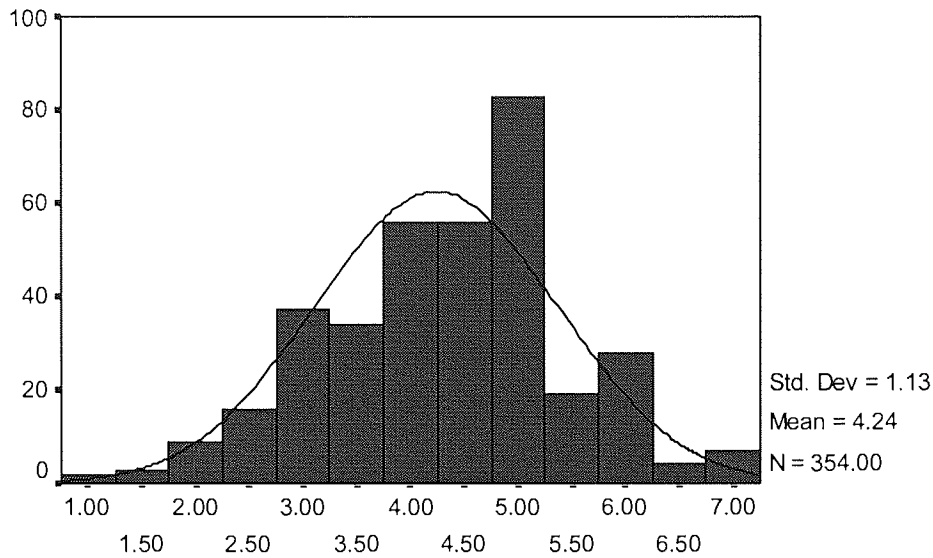
Figure 8.7. Histogram for quality of response to export information.

Figure 8.8 contains the histogram for the quality of response to export information validating. Result of the Spearman's rho test shows that there is significant relationship between response to export information and the validating variable.

Figure 8.8. Histogram for response to export information validating.

Response to Export Information Validating

Table 8.16. Spearman's rho test for correlation between the quality of response to export information and validating variable.

Correlation between Response to Export Information and Validating Variable			
			A4VAL
Spearman's rho	A4	Correlation Coefficient	.546**
		Sig. (1-tailed)	.000
		N	354

**. Correlation is significant at the 0.01 level (1-tailed).

8.1.5. Export Learning Orientation

8.1.5.1. Descriptive Analysis of Export Learning Orientation

Four items were used to measure export learning orientation (Table 8.17). Differences in item mean scores were significant (Appendix 8.13). Mean score for each item was

relatively high running from 4.1 to 4.3. Exporting companies see themselves to be valuing export learning, which could be attributed to viewing learning as benchmark for export development and increasing commitment to foreign markets (Balabanis and Katsikea 2004). Exporters value learning orientation even more because it has been found to contribute to export performance (Yeoh 2000). Such appreciation for learning is justified by the vital role it plays in the effective absorption and dissemination of new knowledge [see 8.2.2. export information dissemination] within an organization, and in management capability-building (Lou 2000; Balabanis and Katsikea).

Table 8.17. Export learning orientation descriptive statistics.

Export Learning Orientation Items	N	Min	Max	Mean	Std. Deviation
1. Managers basically agree that our export function's ability to learn is the key to our competitive advantage in the export market.	354	2.00	5.00	4.1903	.7106
2. The basic values of this export function include learning as key to improvement.	354	2.00	5.00	4.3572	.6081
3. The sense around here is that export employee learning is an investment, not an expense.	354	1.00	5.00	4.2399	.7377
4. Learning in our export operation is seen as a key commodity necessary to guarantee organizational survival.	354	1.00	5.00	4.2368	.7210
5. We are not afraid to reflect critically on the shared assumptions we have made about our export customers	354	1.00	5.00	3.8984	.70280
6. Personnel in this enterprise realize that the very way they perceive the export marketplace must be continually questioned	354	1.00	5.00	3.7106	.75769
Valid N (listwise)	354				

8.1.5.2. Measure Development of Export Learning Orientation

A measure of export learning orientation is constructed by first factor analyzing the six responses to export learning orientation items (see Appendix 8.14). The factor analysis resulted to one factor and explained 72.6 of the variance (Table 8.17). The eigenvalue is 2.907. When assessing the reliability of the six items, a minimum item-whole correlation coefficient of .696 was yielded, and a Cronbach's alpha of .872 was obtained after removing two items. These are all deemed acceptable value to retain all remaining four items in the analysis and to consider the export learning orientation scale to be reliable.

Table 8.18. Dimensionality and reliability of export learning orientation.

Export Learning Orientation Items			Factor Loadings	Item-Whole
Managers basically agree that our export function's ability to learn is the key to our competitive advantage in the export market.			.759	.696
The basic values of this export function include learning as key to improvement.			.807	.739
The sense around here is that export employee learning is an investment, not an expense.			.798	.730
Learning in our export operation is seen as a key commodity necessary to guarantee organizational survival.			.825	.754
Eigenvalue			2.907	
Percentage of Variance Explained			72.663	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
17.0243	2.36772	.635	.872	354

Considering the four items which were retained, it would seem that the learning orientation construct is now measuring single loop learning since the two items indicating double loop learning were removed from the pool of items measuring learning orientation to increase the reliability of the measure. The two items removed were: (1) "We are not afraid to reflect critically on the shared assumptions we have made about our export customers." and (2) "Personnel in this enterprise realize that the very way they perceive the export marketplace must be continually questioned." However, it could not be definitely ascertained whether the items used for export learning orientation (Table 8.18) only measures single-loop learning, since organizational learning could be single-loop, double-loop, or deutero learning (Argyris and Schön 1978; Örtengren 2004).

Figure 8.9 presents a histogram of export learning orientation while the histogram in Figure 8.10 contains the histogram for export learning orientation validating. Spearman's rho test in Table 8.19 shows that there is a significant correlation between export learning orientation and the validating variable.

Figure 8.9. Histogram of export learning orientation.

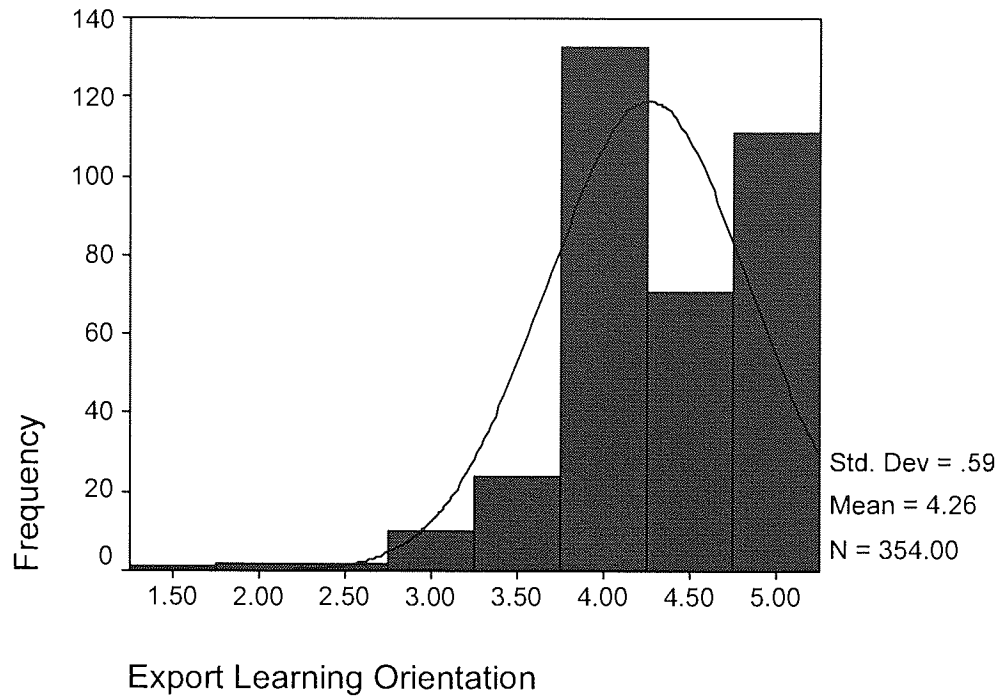


Figure 8.10. Histogram of export learning orientation validating.

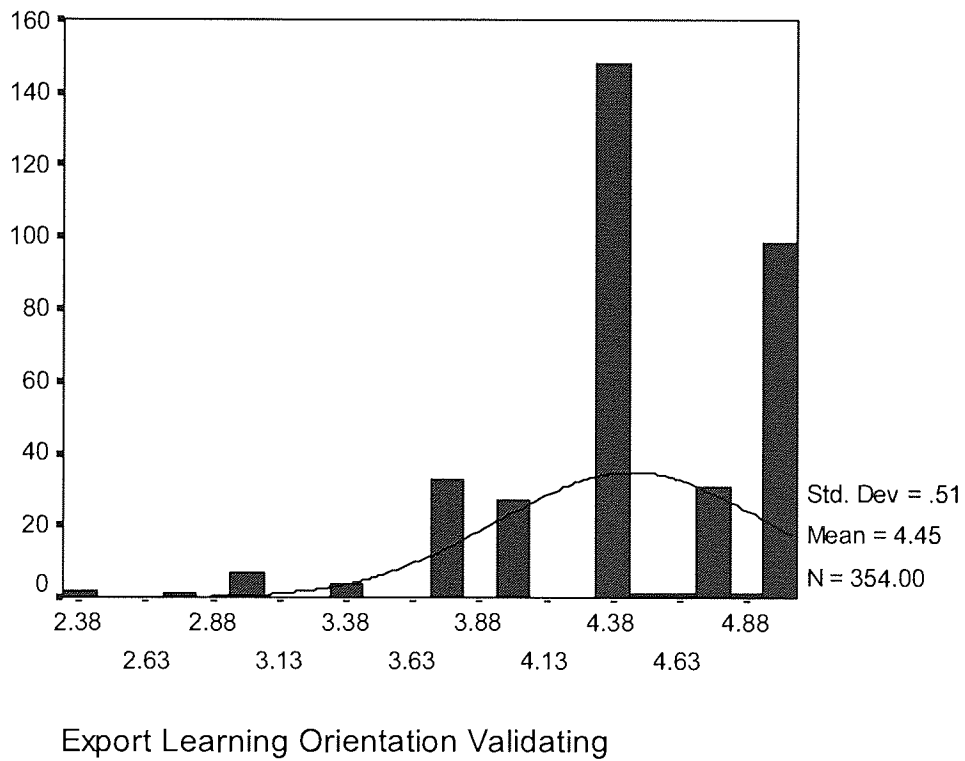


Table 8.19. Spearman's rho correlation between export learning orientation and validating variable.

Correlation between Export Learning Orientation and Validating Variable			Q5.12
Spearman's rho	A5EL	Correlation Coefficient	.600**
		Sig. (1-tailed)	.000
		N	354

** . Correlation is significant at the 0.01 level (1-tailed).

8.1.6. Export Coordination

8.1.6.1. Descriptive Analysis of Export Coordination

Export coordination was measured using three items (Table 8.20). The differences in item mean scores were significant (Appendix 8.15). Mean scores for all three items are relatively high. Figure 8.11 presents the histogram of export coordination. This could be read within the context that most respondents are export dependent, and thereby would be more concerned about efficient and effective export coordination (6.2.6. export dependence of Chapter Six).

Table 8.20. Export coordinating descriptive statistics.

Export Coordination Items	N	Min	Max	Mean	Std. Deviation
1. There is a commonality of purpose in my export operation.	354	1.00	5.00	3.8871	.68485
2. There is total agreement on our export vision across all levels, functions and divisions	354	1.00	5.00	3.8467	.79252
3. All export employees are committed to the goals of this organization.	354	1.00	5.00	4.1249	.7715
4. Export employees view themselves as partners in charting the direction of the organization.	354	1.00	5.00	4.1004	.8273
5. There is a real 'esprit-de-corps' within our export function.	354	1.00	5.01	3.9682	.7460
Valid N (listwise)	354				

8.1.6.2. Measure Development of Export Coordination

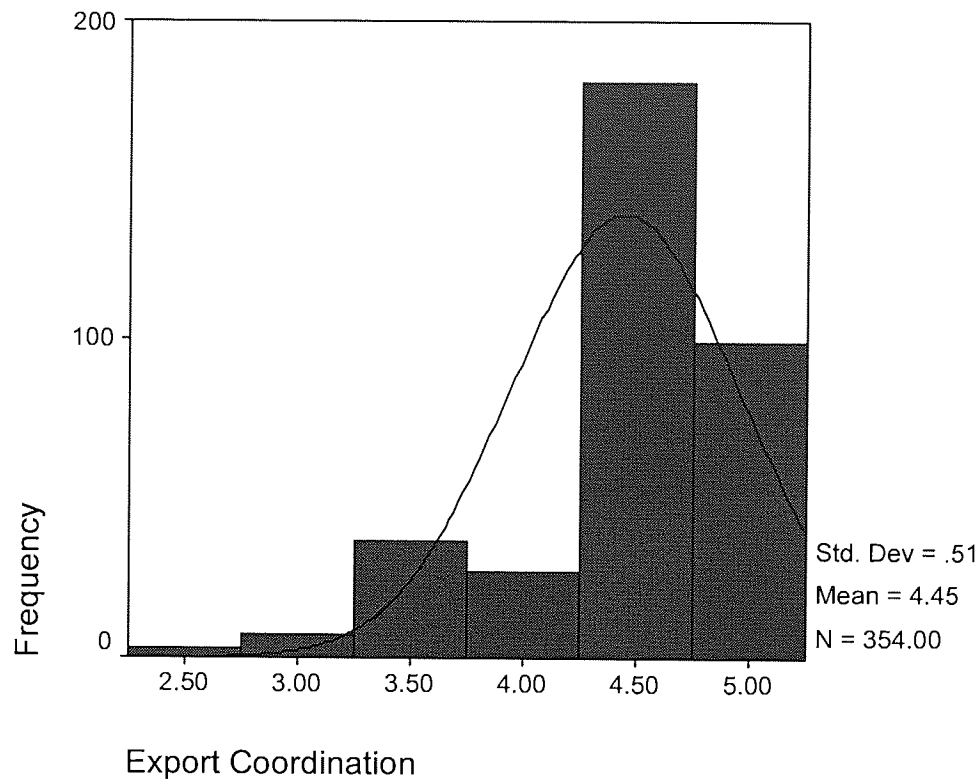
A measure of export learning orientation is constructed by first factor analyzing the five export coordination items (see Appendix 8.16 and Table 8.21). The factor analysis resulted to one factor which explained 82.5 percent of the variance. The eigenvalue is 2.475. When assessing the reliability of the five items, a minimum item-whole correlation coefficient of .744 was yielded, and a Cronbach's alpha of .894 was obtained after removing two items. These are all deemed acceptable value to retain all three items in the analysis and to consider the export coordination scale to be reliable.

The two items removed from the measure were (1) There is a commonality of purpose in my export operation and (2) There is total agreement on our export vision across all levels, functions and divisions.

Table 8.21. Dimensionality and reliability of export coordination.

Export Coordination Items			Factor Loadings	Item-Whole
All export employees are committed to the goals of this organization			.876	.806
Export employees view themselves as partners in charting the direction of the organization			.914	.828
There is a real 'esprit-de-corps' within our export function			.788	.744
Eigenvalue			2.475	
Percentage of Variance Explained			82.501	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
12.1934	2.13112	.737	.894	354

Figure 8.11. Histogram of export coordination.



8.1.7. Quality of the Integration into the Organizational System

8.1.7.1. Descriptive Analysis of the Quality of the Integration into the Organizational System

Eight items were used to measure the quality of the integration into the organizational system (Table 8.22). Differences in the mean scores among the items were significant (Appendix 8.17) From the Table, it could be seen that items one and two got the highest mean scores:

1. Our organization encourages everyone to keep a written record of all export market information and transactions.
2. People in the organization spend the necessary time to keep an updated record of export market information and transactions.

Conversely, items eight and seven had the lowest mean scores:

8. We organize training sessions as a means to transfer export knowledge.
7. Everyone has time to write down things they learn about the export market.

Table 8.22. Integration into the organizational system descriptive statistics.

Quality of the Integration into the Organizational System Items	N	Min	Max	Mean	Std. Deviation
1. Our organization encourages everyone to keep a written record of all export market information and transactions.	354	1.00	5.00	3.9162	.9108
2. People in the organization spend the necessary time to keep an updated record of export market information and transactions.	354	1.00	5.00	3.8411	.8727
3. Our organization spends enough money on making export record keeping both efficient and effective (e.g. investing on information technology).	354	1.00	5.00	3.6567	.9126
4. There is lot of documentation occurring in our export market operation.	354	2.00	5.00	3.7852	.8540
5. People in the organization never have a difficult time recalling important information about the export market.	354	1.00	5.00	3.5036	.8281
6. We have a formal procedure for documenting export market information.	354	1.00	5.00	3.6988	.9251
7. Everyone has time to write down things they learn about the export market.	354	1.00	5.00	3.4130	.8935
8. We organize training sessions as a means to transfer export knowledge.	354	1.00	5.00	3.3079	1.0138
Valid N (listwise)	354				

From the results it could be seen that companies encourage their employees to keep a written record of market information and transaction. This strategy could be the companies' way of storing learning outcomes and past experiences (Goh 1998). Such a "people-to-documents" approach would allow people within an organization to access codified knowledge without the hassle of contacting the makers of such knowledge – leading to more frequent "knowledge re-use" (Teare and Rayner 2002, p. 355).

However, it seems that employees find it difficult to find time to do this task. It may imply that organizations may understand the importance of the process of integrating market knowledge. Unfortunately, not everyone gets the time to do it. As Teare and Rayner (2002) noted before, "[f]rom an organizational perspective, the creation and maintenance of knowledge databases is time-consuming, labour intensive, and costly" (p. 355). Nevertheless, exporters' could justify their investments for integration into

the organizational system if their value proposition would outweigh these costs (O'Dell and Grayson 1999).

Table 8.23 presents the descriptive for the items used in validating the measure of the quality of the integration into the organizational system. The differences in the means were significant (Appendix 8.18).

Table 8.23 Descriptive for integration into the organization system validating items

Integration Into the Organization System Validating Items	N	Min	Max	Mean	Std. Deviation
1. In this company, we store export market information efficiently.	354	1.00	7.00	4.5180	1.22363
2. The quality of our export market information storage is outstanding.	354	1.00	7.00	4.0677	1.29018
3. We are very satisfied with our export market information storage efforts.	354	1.00	7.00	3.9787	1.32472
4. There is no room for improvement in the way we store export information.	354	1.00	7.00	2.3561	1.16277
5. We are very effective in our export information storage activities.	354	1.00	7.00	3.9148	1.29452

Item one, “In this company, we store export market information efficiently”, got the highest score while item four, “There is no room for improvement in the way we store export information”, got the lowest score.

8.1.7.2. Measure Development of the Quality of the Integration into the Organizational System

A measure of the quality of the integration into the organizational system is constructed by first factor analyzing the three export coordination items (see Appendix 8.19). The factor analysis resulted to one factor which explained 56.8 percent of the variance (Table 8.24). The eigenvalue is 4.554. When assessing the reliability of the three items, a minimum item-whole correlation coefficient of .558 was yielded, and a Cronbach's alpha of .890 was obtained. These are all deemed acceptable value to retain all three items in the analysis and to consider the integration into the organizational system scale to be reliable.

Table 8.24. Dimensionality and reliability of integration into the organizational system.

Quality of Integration into the Organizational System Items			Factor Loadings	Item-Whole
Our organization encourages everyone to keep a written record of all export market information and transactions			.679	.628
People in the organization spend the necessary time to keep an updated record of export market information and transactions			.808	.751
Our organization spends enough money on making export record keeping both efficient and effective (e.g. investing on information technology)			.794	.745
There is a lot of documentation occurring in our export market operation			.594	.558
People in the organization never have a difficult time recalling important information about the export market			.633	.594
We have a formal procedure for documenting export market information			.792	.742
Everyone has time to write down things they learn about the export market			.736	.695
We organize training sessions as a means to transfer export knowledge			.644	.604
Eigenvalue			4.550	
Percentage of Variance Explained			56.871	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
29.1224	5.42412	.503	.890	354

Figures 8.12 and 8.13 show the histogram of integration into the organizational system validating.

Figure 8.12. Histogram of quality of the integration into the organizational system.

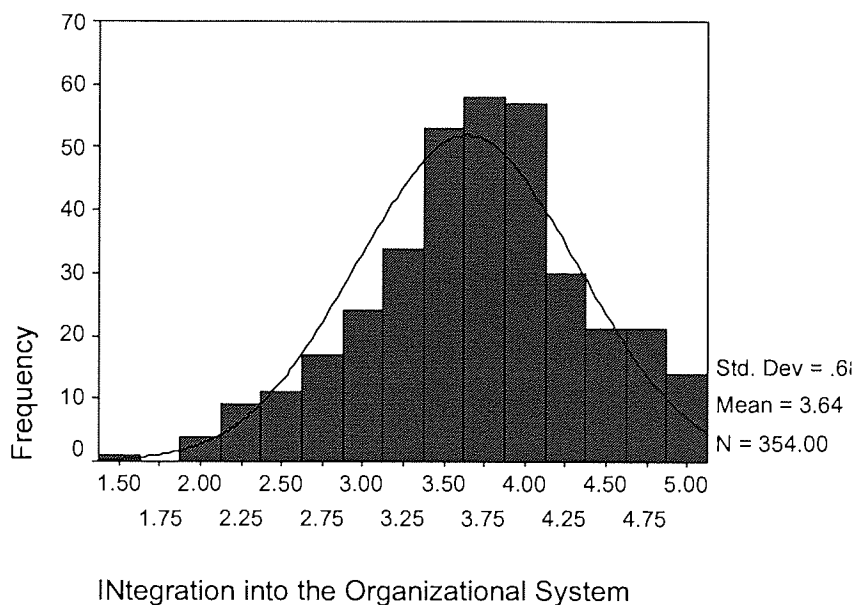


Figure 8.13. Histogram of quality of integration into the organizational system.

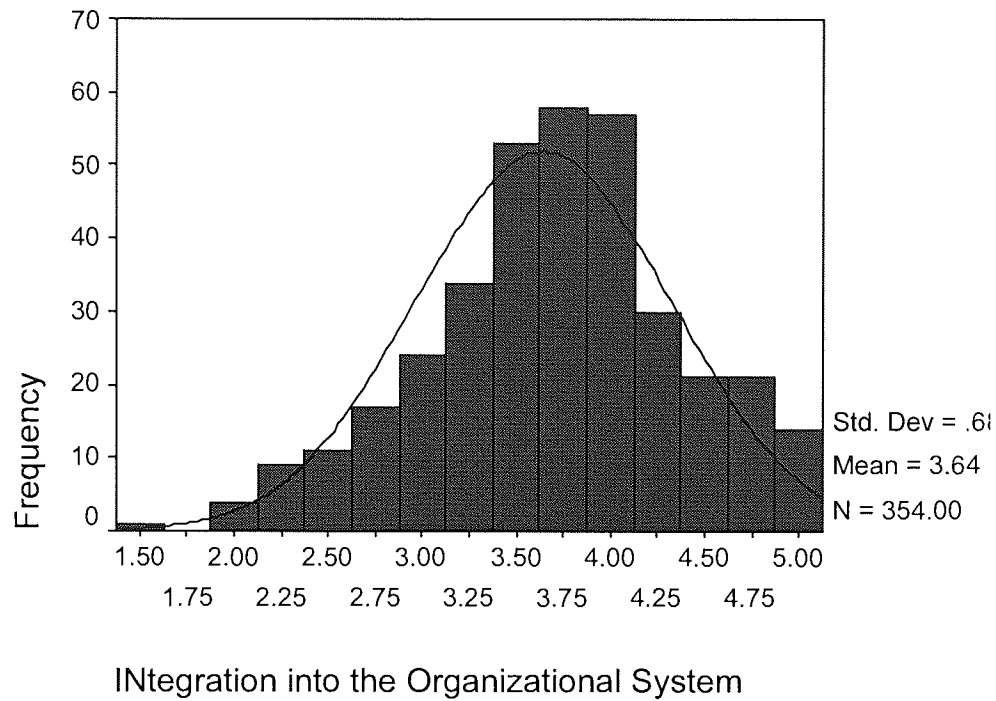
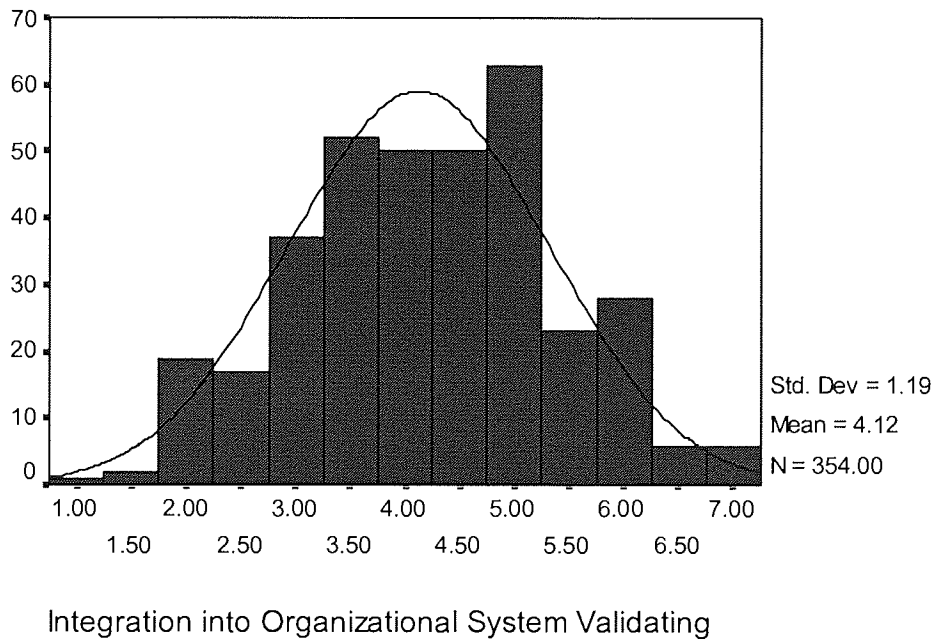


Figure 8.13. Quality of Integration into the organizational system validating.



The Spearman's rho test shows that there is a significant relationship between quality of the integration into the organizational system and the validating variable (Table 8.25).

Figure 8.19. Spearman's rho correlation between integration into the organizational system and validating variable.

Correlation between Quality of Integration into the Organizational System and Validating Variable

			A6VAL
Spearman's rho	A6	Correlation Coefficient	.772**
			Sig. (1-tailed)
			.000
			N
			354

** . Correlation is significant at the 0.01 level (1-tailed).

8.1.8. Validity

The constructs presented in this chapter achieved content validity since the items used in measuring them were derived from the literature (Chapter Two) and the Qualitative Study.

From Appendix 8.20 could be seen that the constructs also achieved both discriminant and convergent validities. Furthermore, the use of validating items earlier provided support for their convergent validity.

Lastly, the hypotheses in the following section would test the nomological validity of the constructs.

8.2. Hypotheses Testing

The effects of antecedent factors to quality export memory are tested by a multiple regression equation. Specifically, eight dependent variables are examined (i.e., acquisition of export information quality, distribution of export information quality, export information interpretation quality, quality of response to export information, export learning orientation, export coordination, quality of integration into the organizational system, and export experience).

8.2.1. Assumptions

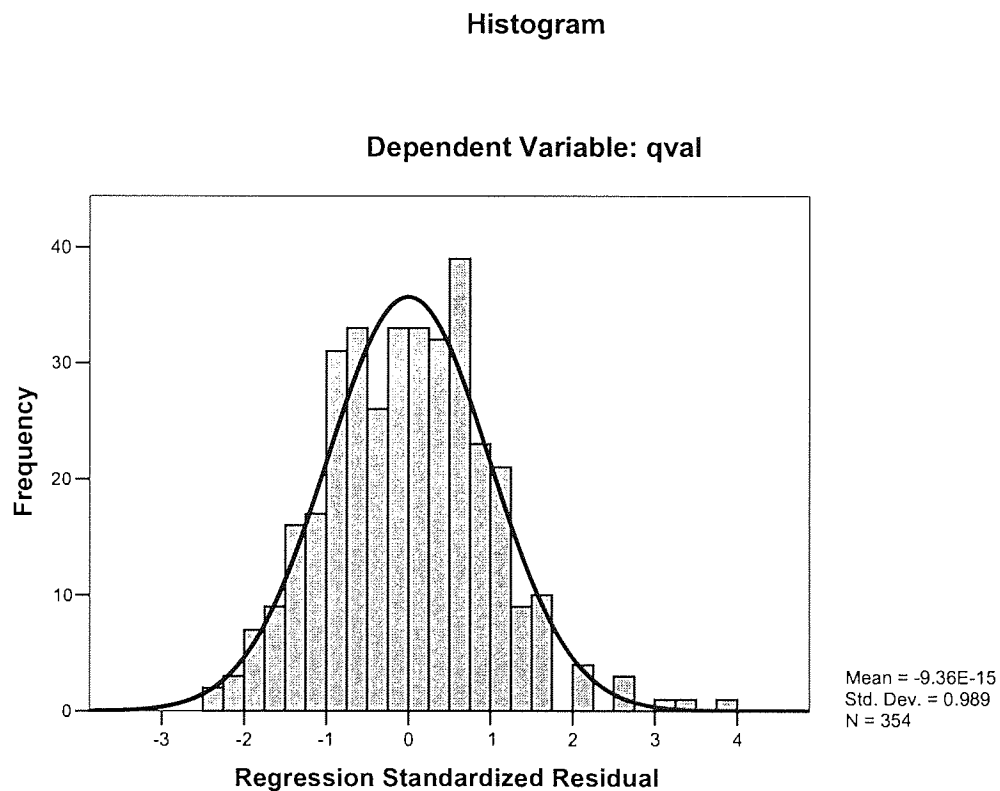
8.2.2.1 Normality of Error Term Distribution

A test of normality of the error term distribution was first conducted using the Shapiro-Wilk test which showed that the distribution was not normal (see Table 8.25 and Figure 8.14).

Table 8.25. Shapiro-Wilk test for regression export memory quality (initial test)

		Shapiro-Wilk Test	
	Statistic	df	Sig.
ZRE-qval	.989	354	.011

Figure 8.14. Histogram for regression export memory quality (initial test)



Before proceeding to test the other assumptions, the regression residuals were analyzed in terms of outliers. An effort to see the effect of removing the outliers one by one was made. The first to go was the item which was most extreme. After just the first item (data 330) was removed, the regression achieved normality as could be seen in Table 8.26 and Figures 8.15 and 8.16.

Table 8.26. Shapiro-Wilk test for export memory quality (final test)

		Shapiro-Wilk Test	
	Statistic	df	Sig.
ZRE-qval	.994	353	.172

Figure 8.15. Histogram for regression export memory quality (final test)

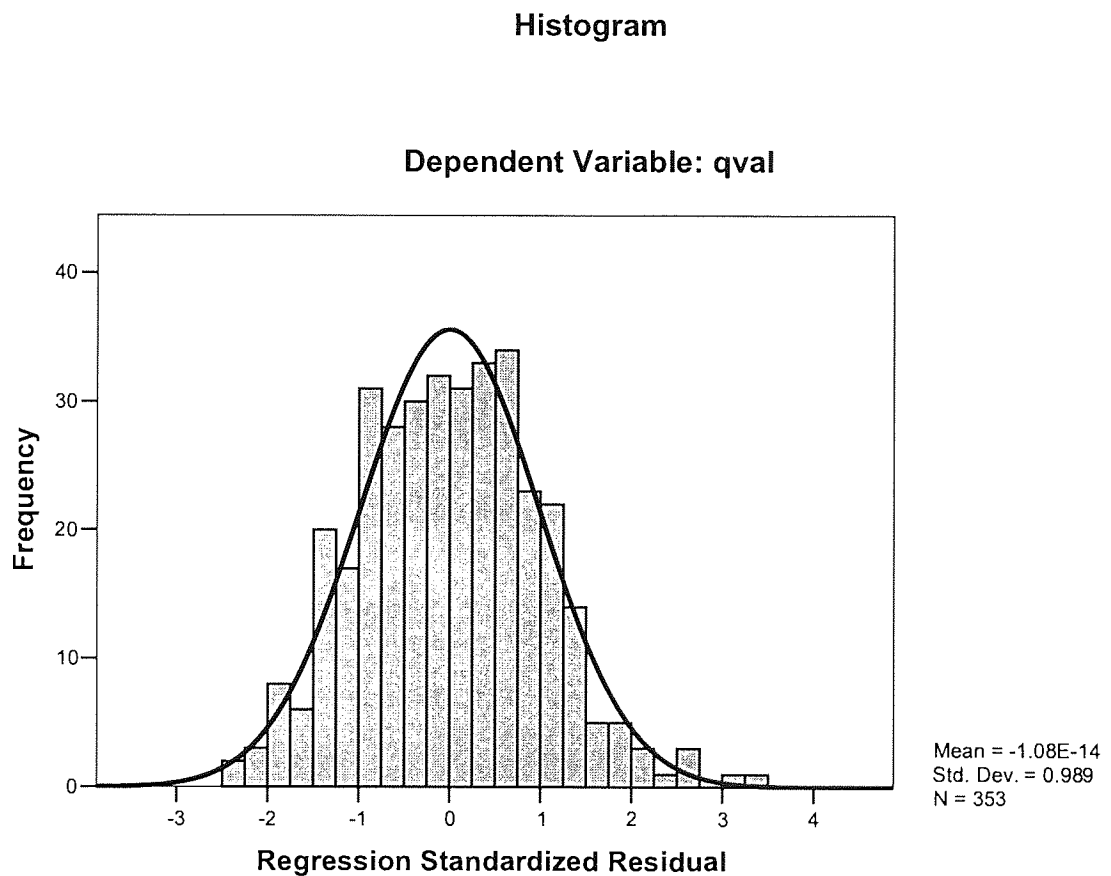
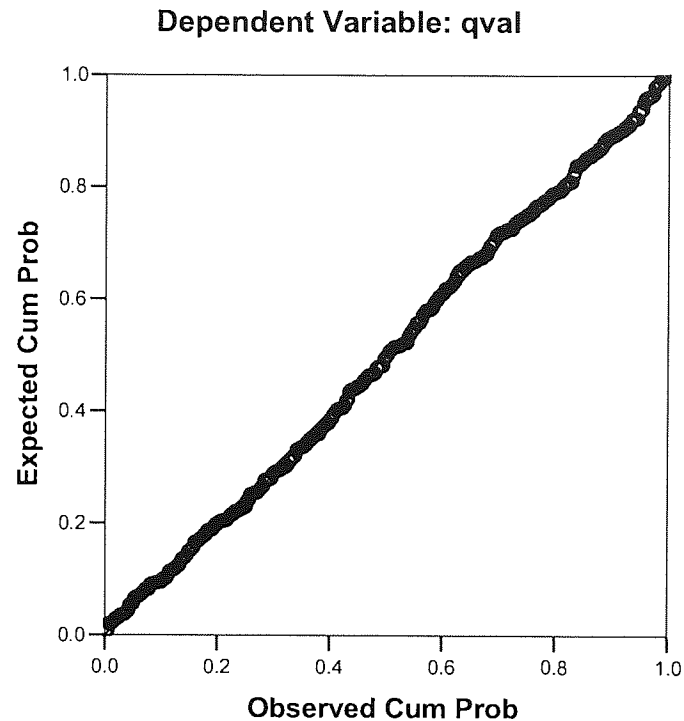


Figure 8.16. Export memory quality normal p-p plot of regression

Normal P-P Plot of Regression Standardized Residual



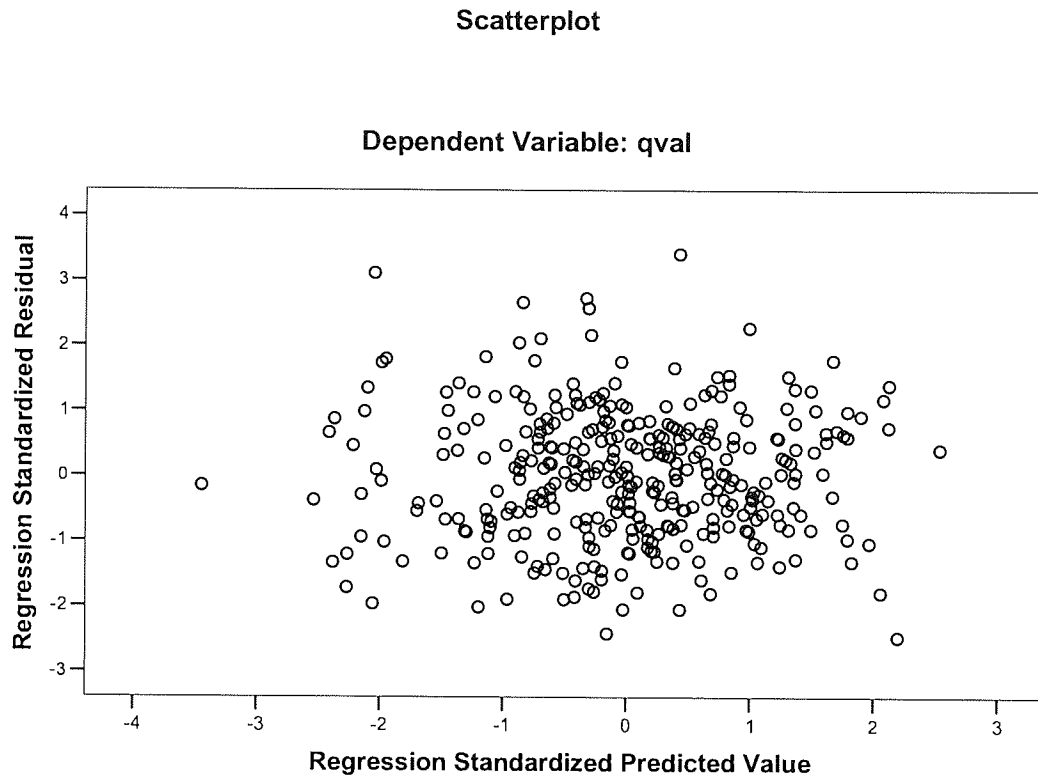
Testing the rest of the assumptions in a regression followed right after achieving normality in the distribution of the residuals.

8.2.2.2 Linearity and Homoscedasticity

The study adopted the methodology of Hair et al (1992) involving the residual plot. By such method, the relationship between the independent and exogenous variables of the study to the other variables in the study, individually taken, is measured. The predicted value of the dependent variable is plotted against the studentised residual values for the regression equation.

The results are presented in Figure 8.17. As could be seen, the graph resembles the null plot, thus linearity and homoscedasticity assumptions are confirmed.

Figure 8.17. Scatterplot regression standardized predicted residual export memory quality



8.2.2.3. Independence of the Predictor Variables

Following Walpole and Myers (1978), the value of multicollinearity is determined through the correlation matrices of the predictor variables and the tolerance value of individual predictor variables. Also from Figure 8.17, the absence of multicollinearity could be concluded.

8.2.2.4 Regression Results and Discussion

The independent variables were treated to have produced effects on each of the other variables in equal value. F-statistic value of $p = .05$ was the value for testing the overall significance.

The value for the overall equation (Appendix 8.21) takes into account the possible significant relationships that could not be measured by less powerful statistical tests (Hinton 1995).

Eight variables were hypothesized as having positive effect on export memory quality, namely, acquisition of export information quality (H1), export information distribution quality, (H2), export information interpretation (H3), quality of response to export information (H4), export learning orientation (H5), export coordination (H6), quality of integration into the organizational system (H7), and experience (H8).

A multiple regression equation was run. The initial results are presented in Table 8.27.

Table 8.27. Initial regression results for export memory quality.

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square = 56%	
			B	Std. Error	Beta			Tolerance	VIF
1	(Constant)		-.602	.311		-1.938	.053		
a1	Export Information Acquisition Quality	H1	.122	.059	.101	2.084	.038	.536	1.866
a2	Export Information Distribution Quality	H2	.086	.070	.062	1.225	.221	.487	2.051
a3	Export Information Interpretation	H3	.320	.075	.208	4.287	.000	.536	1.865
a4	Quality of Response to Export Information	H4	.057	.046	.053	1.253	.211	.708	1.412
a5el	Export Learning Orientation	H5	-.031	.073	-.021	-.430	.668	.531	1.885
a5ec	Export Coordination	H6	.336	.079	.192	4.250	.000	.616	1.623
a6	Quality of Integration into the Organizational System	H7	.477	.067	.363	7.076	.000	.477	2.098
q11.1	Export Experience	H8	-.005	.003	-.049	-1.358	.175	.977	1.023

Results of the final regression with only significant variables are shown on Table 8.28.

Table 8.28. Final regression results for export memory quality.

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square = 56%	
			B	Std. Error	Beta			Tolerance	VIF
1	(Constant)		-.664	.300		-2.216	.027		
a1	Export Information Acquisition Quality	H1	.149	.055	.123	2.699	.007	.607	1.648
a3	Export Information Interpretation	H3	.360	.070	.234	5.132	.000	.608	1.644
a5ec	Export Coordination	H6	.347	.072	.198	4.804	.000	.744	1.343
a6	Quality of Integration into the Organizational System	H7	.500	.065	.381	7.695	.000	.516	1.938

Quality of export information acquisition, quality of export information interpretation, export coordination, and quality of integration into the organizational system are found to be positively related to export memory quality. However, acquisition of export information, distribution of export information, response to export information, export learning orientation, and experience are found to be unrelated to export memory quality. It follows that H1, H3, H6, and H7 are supported and H2, H4, H5, and H8 are not supported. Table 8.29 shows the results of the ANOVA test while Table 8.30 shows the model summary confirming that there is no significant change between the adjusted R square of the first regression and the adjusted R square of the final regression.

Table 8.28. ANOVA test for regression on export memory quality.

ANOVA ^c						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	155.313	4	38.828	111.157	.000 ^a
	Residual	121.560	348	.349		
	Total	276.873	352			
2	Regression	157.155	8	19.644	56.446	.000 ^b
	Residual	119.718	344	.348		
	Total	276.873	352			

a. Predictors: (Constant), a6, a5ec, a3, a1

b. Predictors: (Constant), a6, a5ec, a3, a1, q11.1, a4, a5el, a2

c. Dependent Variable: qval

Table 8.29. Model summary for regression on export memory quality.

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.749 ^a	.561	.556	.59103	.561	111.157	4	348	.000
2	.753 ^b	.568	.558	.58993	.007	1.323	4	344	.261

a. Predictors: (Constant), a6, a5ec, a3, a1

b. Predictors: (Constant), a6, a5ec, a3, a1, q11.1, a4, a5el, a2

c. Dependent Variable: qval

The independent variables explain 56% of the variation in export memory quality. The beta shows that the greatest relationship among the significant factors and export memory quality is the one of that with integration into the organizational system, followed by export information interpretation and export coordination.

8.3. Discussion of Results

Table 8.31 shows the summary of the hypotheses and the individual results.

Table 8.31.. Summary of hypotheses and individual results.

Export Memory Quality			
Independent Variable	Hypothesis Number	Postulated Linkage	Finding
Acquisition of Information Quality	H1	+	+
Distribution of Export Information Quality	H2	+	ns
Export Information Interpretation Quality	H3	+	+
Response to Export Information Quality	H4	+	ns
Export Learning Organization	H5	+	ns
Export Coordination	H6	+	+
Integration into the Organizational System Quality	H7	+	+
Export Experience	H8	+	ns

Results show that the quality of acquisition of information, information interpretation quality, export coordination, and the quality of the integration into the organizational system are seen to be directly determining export memory quality. This could be related to findings of Inkpen and Dinur (1998), Simonin (1999), and Liyanage and Barnard (2003) that “other factors such as methods of integrating new knowledge with prior knowledge, a firm’s absorptive capacity in terms of the ability to assimilate new knowledge and knowledge distance or familiarity with incumbent new knowledge are also important determinants in building a firm’s capability” (p. 86). Relating these findings with that of this research, it could be said that one of these firm capabilities enhanced by the quality of export information acquisition, quality of information interpretation, export coordination, and the quality of integration of knowledge within an organization is the development of export memory quality.

The quality of export information acquisition has a positive relation to the quality of export memory (cf., Inkpen and Dinur 1998; Simonin 1999; Souchon et al. 2003). Since the information acquired actually becomes the raw material of export memory, it is expected that it would actually be positively related to the resulting quality of export memory.

If the interpretation of export information is of good quality, then the export memory quality is heightened (cf., Cohen and Levinthal 1990; Szulanski 1996). It is important to note that what is crucial is the interpretation of the information because it is the interpreted information which is considered when export memory is used.

Export coordination's significance may imply exporters' high orientation towards exporting, and export function's highly interdependent nature with other functional areas in the organization. This finding supports Cadogan's (1995) finding that: "In those firms where export dependence was high, there was a much greater sense of acceptance of exporting, and the realization of its importance to the firm was more widespread. As a result, value systems in export-dependent organizations were export-oriented, and coordination was high" (p. 78). The findings of this study suggest that high export-orientation would result to high coordination. With the high level of coordination, the eventual quality of export memory is high because the people in the organization who share and agree on the importance of the export operation will consider with care all the export information that they see and will evaluate them according to their ability to enhance the export operation. Thus, export information will be considered with due diligence and this contributes to the building up of an export memory quality.

Distribution of export information quality did not show a significant linkage to export memory quality. It is possible that this may be caused by the nature of the sample which is mostly small and medium enterprises. In such cases, the decision makers are only made up of a few people where, in some cases, the owner-manager makes most of the decisions (cf., Rothwell and Zegveld 1982; Myers 1997). In this case, the distribution of information quality may not play a significant factor in developing export memory quality. However, this does not mean that this factor is not important. It is may also be possible that other factors like export coordination have already the variance in export memory quality.

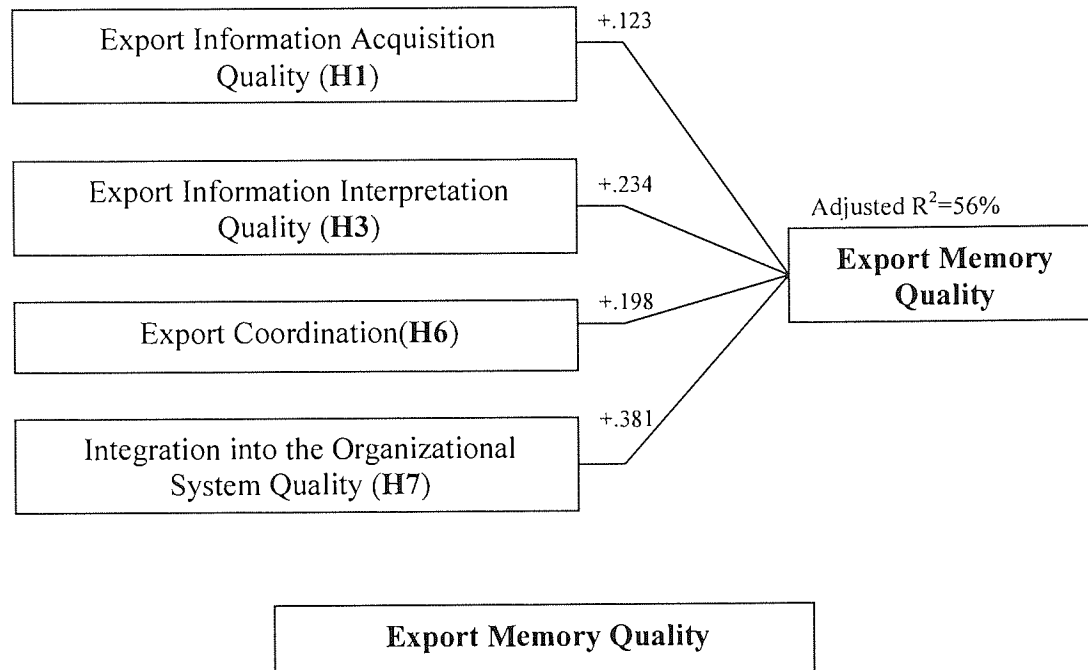
Response to export memory was seen not to be significantly linked to export memory quality. It is possible that the items used in measuring the response construct were not able to fully capture the important dimensions of a response factor.

Export learning orientation did not have significant link to export memory quality maybe because the items used in measuring export learning orientation only measured a single loop rather than a double loop learning orientation (Argyris and Schon 1978). The item covering for a double-loop learning was removed from the set of items meant for measuring export learning orientation during the process of purifying the items. A single loop learning may not be able to help bring forth a higher quality memory since it may only provide continuity to what has already been known. There may not be much value-added coming from it.

Export experience was not also significantly linked to export memory quality. The item used in measuring experience (number of years exporting) may not have been sufficient to capture the whole richness of the construct. This means that number of years exporting does not directly indicate the quality of export experience that organization has. For example, a company with a few years of exporting experience but has been exporting to many countries and also pro-actively engaging into it may have a richer export experience compared to a company which has been exporting for many more years but only to a single country in a passive way. Thus, the relationship between export experience and export memory quality was not properly tested. However, it may also be possible that due to the limited exposure of the respondents to a wider scope of exporting business, which means most of the exporters actually export only to a few countries (see Chapter 6, p. 274) the value of experience as a source of enhancing the quality of export memory is diminished.

Figure 8.18 shows the final model that summarizes the results about the antecedents to export memory quality.

Figure 8.18. Final model of the antecedents to export memory quality.



8.4. Summary

From among the eight possible antecedents to export memory quality, four of them namely, information acquisition quality, export information interpretation quality, integration into the organizational system quality, and export coordination were found to be significantly related to export memory quality.

The next chapter will present the different dimensions of export memory use and will examine the relationships of some factors on the use of export memory.

Overview of Chapter Nine: EXPORT MEMORY USE

Chapter Nine: EXPORT MEMORY USE

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9.1.2. Types of Export Memory Use

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9.1.2.2.1. *Descriptive Analysis of Conceptual Use*

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9.1.2.3.2.1. *Descriptive Analysis of Export Memory Manipulation*

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9.2. Descriptive Analysis and Measure Development of Export Memory Overload

9.2.1. Descriptive Analysis of Export Memory Overload

9.2.2. Measure Development of Export Memory Overload

9.2.3. Nomological Validity

9.3. Hypotheses Testing

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9.3.1.4. *Regression Results and Discussions*

9.3.2. Instrumental Use of Export Memory

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- 9.3.3. **Conceptual Use of Export Memory**
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9.5. Discussion of Results

Chapter Nine: EXPORT MEMORY USE

This chapter is organized into four parts. The first part provides descriptive analyses of export memory use items, as well as, measures of export memory use developed along the same lines as those already described in section 8.1. Measurement Development Procedures (Chapter Eight). It also proposes scales for each of the export memory use dimensions (i.e., extent of memory use and types of export memory use including instrumental, conceptual and symbolic use).

The second section presents the descriptive analysis and measure development of export memory overload which is one of the antecedents considered to export memory use.

The third section covers the measure development for environmental turbulence which is another antecedent to export memory use, as well as a moderating factor to the relation between export memory use and export performance.

The fourth section of the chapter is devoted to hypotheses testing and their results. The hypotheses regarding export memory use are tested via a series of regression equations.

The fifth section discusses the results of the regression tests.

9.1. Descriptive Analysis and Measure Development of Export Memory

Use of export memory can be viewed in two ways. The first perspective is the extent to which export memory is used by exporters (cf., Weiss 1977). Export memory use can be seen as taking [stored export information] into account during decision making (Barabba 1983; Diamantopoulos and Souchon 1999; Moorman et al 1992; Vyas and Souchon 2003; Weiss and Bucuvalas 1977).

The second perspective is the type of export memory application consisting of instrumental, conceptual, and symbolic uses, which were adapted from information use dimensions outlined by Souchon and Diamantopoulos (1996).

9.1.1. Extent of Memory Use

9.1.1.1. Descriptive Analysis of Extent of Memory Use

The extent of use and the applications of use are measured with multiple items in order to create scales of the constructs. Measure development followed the procedures suggested by Churchill (1979), Carmines and Zeller (1979), Zeller and Carmines (1980), DeVellis (1991), Spector (1992) and Nunnally and Bernstein (1994).

The three items used in measuring the extent of memory use are shown in Table 9.1. Item three is a negatively worded item meant to check the respondents's answers. The differences in the mean scores among the items were significant (see Appendix 9.1). Item three has the lowest mean of 3.32 out of 5 while item one has the highest mean of 3.79 out of 5.

Table 9.1. Extent of memory use descriptive statistics.

Extent of Export Memory Use Items	N	Min	Max	Mean	Std. Deviation
1. We make a conscious effort to use most of our export memory.	354	1.00	5.00	3.7969	.6858
2. We utilize most of the export memory we have.	354	1.00	5.00	3.7535	.7203
3. In this company, the majority of export memory we have is not used.	354	1.00	5.00	3.3231	.83834
Valid N (listwise)	354				

9.1.1.2. Measure Development of Extent of Memory Use

A common factor analysis (principal axis factoring) was run on the three items intended for extent of memory use, in order to assess the dimensionality of the scale. This resulted in a one factor solution. As can be seen from Appendix 9.2, the highest loading was .839

and the lowest was .408. It can be noted that the item with the lowest loading is a negatively worded (though reverse coded) item (O'Muircheartaigh et al. 2000)

Reliability testing was conducted on the items. A higher alpha was achieved when one of the items was removed, namely "In this company, the majority of export memory we have is not used." With its removal, the Cronbach's Alpha increased from .6445 to .7152 for the remaining two items (Table 9.2), which according to Nunnally (1978) is an acceptable value for a scale to be considered reliable. Before the removal of the single item, the average inter-item correlation coefficient was .3899. After removal of this item, this correlation increased to .557.

Table 9.2. Dimensionality and reliability of extent of memory use.

Extent of Memory Use Items			Factor Loadings	Item-Whole
We make a conscious effort to use most of our export memory			.746	.557
We utilize most of the export memory we have			.746	.557
Eigenvalue			1.557	
Percentage of Variance Explained			77.867	
Summary Statistics				
Mean	Std. Dev.	Inter-Item	Alpha	# Cases
7.5504	1.24086	.557	.715	354

9.1.2. Types of Export Memory Use

This subsection contains the descriptive analysis and measure development for export memory use categorized into instrumental, conceptual and symbolic use.

Initially, all items covered under the use of information were all subjected into one big factor analysis which resulted to several factors. However, the factors that were produced did not actually mean much (see Appendix 9.3). So a decision was made to use items which were supposed to be related to one factor, based on previous studies (e.g., Souchon and Diamantopoulos 1996) and on the qualitative study, and apply factor analysis to it.

9.1.2.1. Instrumental Use of Export Memory

9.1.2.1.1. Descriptive Analysis of Instrumental Use

Table 9.3 shows the 11 items used for measuring instrumental use of export memory with their corresponding mean scores. The differences in the mean scores among the items were significant (see Appendix 9.4).

Table 9.3. Instrumental use of export memory descriptive statistics.

Instrumental Use of Export Memory Items	N	Min	Max	Mean	Std. Deviation
1. In this firm, we plan our response to export memory formally.	354	1.00	5.00	3.2962	.7797
2. In this firm, we always rely on export memory when making export decisions.	354	1.00	5.00	3.2358	.8086
3. Uncertainty associated with the export market environment is greatly reduced by using export memory.	354	2.00	5.00	3.6304	.6722
4. Export memory is generally used to make a particular decision.	354	1.00	5.00	3.6991	.7282
5. Export memory is actively sought out in response to a specific decision at hand.	354	2.00	5.00	3.5886	.6994
6. Our confidence in making decisions is normally increased as a result of using export memory.	354	1.00	5.00	3.8423	.6782
7. Export memory is usually translated into significant practical action.	354	1.00	5.00	3.6199	.6742
8. Decisions based on export memory are generally more accurate than instinctive ones.	354	1.00	5.00	3.6373	.7158
9. Without export memory, decisions made would be very different.	354	1.00	5.00	3.5376	.7684
10. No decision would be made without relevant export market memory.	354	1.00	5.00	3.2401	.88628
11. Export memory commonly has little decision relevance.	354	1.00	5.00	3.3109	.80065
Valid N (listwise)	354				

Items 6 and 4 got the highest mean scores:

6. Our confidence in making decisions is normally increased as a result of using export memory.
4. Export memory is generally used to make particular decision.

Items two and one received the lowest mean scores.

2. In this firm, we always rely on export memory when making export decisions.
1. In this firm, we plan our response to export memory formally.

9.1.2.1.2. Measure Development of Instrumental Use

A common factor analysis was run for the items related to instrumental use of export memory (see Appendix 9.5). After two runs, the following two items were removed since they did not load on the factor:

- Export memory commonly has little decision relevance (reverse coded).
- No decision would be made without relevant export memory.

Reliability test followed. It showed an average inter-item correlation of .3845 and a Cronbach's Alpha of .8474. The dimensionality and reliability of remaining items for instrumental use of export memory is presented in Table 9.4.

Table 9.4. Dimensionality and reliability of instrumental use of export memory.

Instrumental Use of Export Memory Item			Factor Loadings	Item-Whole
In this firm, we plan our response to export memory formally.			.556	.512
In this firm, we always rely on export memory when making export decisions.			.614	.571
Uncertainty associated with the export market environment is greatly reduced by using export memory.			.538	.489
Export memory is generally used to make a particular decision.			.706	.636
Export memory is actively sought out in response to a specific decision at hand.			.667	.606
Our confidence in making decisions is normally increased as a result of using export memory.			.615	.560
Export memory is usually translated into significant practical action.			.719	.655
Decisions based on export memory are generally more accurate than instinctive ones.			.609	.557
Without export memory, decisions made would be very different.			.560	.508
Eigenvalue			4.097	
Percentage of Variance Explained			45.522	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
32.0873	4.38738	.385	.847	354

9.1.2.2. Conceptual Use of Export Memory

9.1.2.2.1. Descriptive Analysis of Conceptual Use

Table 9.5 shows the items used to capture conceptual use of export memory with the corresponding mean scores earned by each item. The differences in mean scores were found to be significant (see Appendix 9.6). Items one and two earned the highest mean scores:

1. Export memory is generally used to provide us with concepts about our export market.
2. Export memory is generally used to provide us with theories about the export market.

Items seven and eight got the lowest mean scores:

7. It is often through our export memory that we set our key priorities.
8. We often use our export memory to formulate problems about our export market.

Table 9.5. Conceptual use of export memory descriptive statistics.

Conceptual Use of Export Memory Items	N	Min.	Max.	Mean	Std. Deviation
1. Export memory is generally used to provide us with concepts about our export market.	354	2.00	5.00	3.9539	.5843
2. Export memory is generally used to provide us with theories about the export market.	354	2.00	5.10	3.8492	.6419
3. The same piece of export memory is usually used for more than one decision.	354	2.00	5.00	3.6875	.6862
4. Export memory is preserved specifically so that it can be used by individuals other than the person/s from whom it originated.	354	1.00	5.00	3.6617	.7332
5. Export memory is generally used to provide us with assumptions about the export market.	354	2.00	5.00	3.7979	.6810
6. Export memory is generally used to provide us with a model about our export market.	354	2.00	5.00	3.7622	.6335
7. It is often through our export memory that we set our key priorities.	354	2.00	5.00	3.5698	.7696
8. We often use our export memory to formulate problems about our export market.	354	1.00	5.00	3.5798	.7441
9. We generally use our export memory to come up with a range of solutions to our problems.	354	2.00	5.00	3.7191	.7155
10. Export memory often helps us to set criteria in choosing a solution to our problem.	354	1.00	5.00	3.7934	.6412
11. Export memory generally broadens our managerial knowledge base without serving any one particular project.	354	1.00	5.00	3.5465	.72627
Valid N (listwise)	354				

9.1.2.2.2. Measure Development of Conceptual Use

As with previous analysis, the items initially grouped under conceptual use were factor analyzed and resulted in one factor (see Appendix 9.6). The item below was eventually removed since it did not load:

Export memory generally broadens our managerial knowledge base without serving any one particular project.

Reliability test followed wherein all the remaining items were retained. The average inter-item correlation was .4354. Cronbach's Alpha was .8832.

The dimensionality and reliability of the remaining items of conceptual use of export memory can be seen in Table 9.6.

Table 9.6. Dimensionality and reliability of conceptual use of export memory.

Conceptual Use of Export Memory Items			Factor Loadings	Item-Whole
Export memory is generally used to provide us with concepts about our export market			.555	.521
Export memory is generally used to provide us with theories about the export market			.703	.659
The same piece of export memory is usually used for more than one decision			.595	.557
Export memory is preserved specifically so that it can be used by individuals other than the person/s from whom it originated			.570	.535
Export memory is generally used to provide us with assumptions about the export market			.758	.704
Export memory is generally used to provide us with a model about our export market			.748	.699
It is often through our export memory that we set our key priorities			.681	.638
We often use our export memory to formulate problems about our export market			.529	.493
We generally use our export memory to come up with a range of solutions to our problems			.708	.657
Export memory often helps us to set criteria in choosing a solution to our problem			.757	.709
Eigenvalue			4.966	
Percentage of Variance Explained			49.660	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
37.3744	4.78479	.435	.883	354

9.1.2.3. Symbolic Use of Export Memory

Principal axis factoring procedure was used in developing the measures for symbolic use of export memory. A three-factor solution was initially generated (see Appendix 9.7). The first factor contained items pertaining to legitimizing use of export memory. The second factor contained items related to the manipulating use of export memory. The third factor with just one item was on the use of instinct in combination with the use of export memory in making decisions. Further factor analyses resulted in a two factor solution. In the process, the following items were removed based on poor loadings:

The export memory we have gathered in the past is often not considered in the making of decisions for which they were initially acquired.

Instinct is often combined with export memory when making a decision.

We often turn to our export memory after decisions have been made.

The two factors for symbolic use of export memory can be labeled, “legitimizing use of export memory” (9.1.2.3.1. Legitimizing Use of Export Memory), and “export memory manipulation” (9.1.2.3.2. Export Memory Manipulation). A bifocal approach to symbolic use may assist in clarifying earlier findings in information use studies involving the justification of intuition-based decisions (Knorr 1977) and information distortion (Goodman 1993).

9.1.2.3.1. Legitimizing Use of Export Memory

9.1.2.3.1.1. Descriptive Analysis of Legitimizing Use of Export Memory

Since the items for this first factor revolve around the idea of justifying or reinforcing some ideas or expectations, this factor has been termed the legitimizing use of export memory.

Ten items were used in measuring the legitimizing use of export memory (Table 9.7).

Table 9.7. Legitimizing use of export memory descriptive statistics.

Legitimizing Use of Export Memory Items	N	Min	Max	Mean	Std. Deviation
1. Export memory is often used to justify decisions already made.	354	1.00	5.00	3.6102	.7509
2. Export memory often supports decisions made on other grounds.	354	1.00	5.00	3.6706	.7086
3. Export memory is commonly used to reinforce expectations.	354	2.00	5.00	3.6222	.6551
4. Export memory is usually taken into account to justify the cost and/or effort of having acquired it.	354	1.00	5.00	3.4553	.7572
5. Export memory is often used to back up hunches, prior to the implementation of an export decisions.	354	2.00	5.00	3.5978	.6971
6. Export memory is often used to justify decisions really made on the basis of personal instinct.	354	1.00	5.00	3.5846	.8081
7. The export memory we have gathered in the past is often not considered in the making of decisions for which they were initially acquired.	354	1.00	5.00	2.7484	.91016
8. If export memory is difficult to retrieve, guesses are made instead.	354	1.00	5.00	2.8127	.89098
9. We often turn to our export memory after decisions have been made.	354	1.00	5.00	3.1786	.81237
10. Instinct is often combined with export memory when making decisions.	354	1.00	5.00	3.7450	.69046
Valid N (listwise)	354				

A Bonferroni test was conducted for the items used in legitimizing use which showed that the differences among the items were significant (see Appendix 9.8)

From these items, two and three got the highest mean scores:

2. Export memory often supports decisions made on other grounds.

3. Export memory is commonly used to reinforce expectations.

Items four and six got the lowest mean scores:

4. Export memory is usually taken into account to justify the cost and/or effort of having acquired it.
6. Export memory is often used to justify decisions really made on the basis of personal instinct.

Organizations may be inclined to make decisions based on reasons other than what their available information in their memory would suggest. This conclusion is supported by findings in information use literature implying that legitimizing use is the foremost way of using information (Sabetier 1978) in an export setting (Leonidou and Katsikeas 1997) where quick decision are required (Crossan and Sorrenti 1997). However, this propensity for legitimizing use has a check: “more often than not, boards of directors will warrant that the decisions made are also supported by information, rather than resting merely on the decision makers’ sense of intuition (Diamantopoulos and Souchon 1996)” (Vyas and Souchon 2003, p. 76).

9.1.2.3.1.2. Measure Development of Legitimizing Use of Export Memory

The reliability test for this factor showed an average inter-item correlation of .387. The Cronbach’s Alpha is .7883, which, again, is deemed an acceptable figure by Nunally’s (1978) standard (Table 9.8).

Table 9.8. Dimensionality and reliability of legitimizing use.

Legitimizing Use Items			Factor Loadings	Item-Whole
Export memory is often used to justify decisions already made.			.702	.610
Export memory often supports decisions made on other grounds.			.675	.583
Export memory is commonly used to reinforce expectations.			.638	.548
Export memory is usually taken into account to justify the cost and/or effort of having acquired it.			.608	.529
Export memory is often used to back up hunches, prior to the implementation of an export decision.			.614	.536
Export memory is often used to justify decisions really made on the basis of personal instinct.			.501	.444
Eigenvalue			2.948	
Percentage of Variance Explained			49.139	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
21.5407	3.05762	.387	.788	354

9.1.2.3.2. Export Memory Manipulation

9.1.2.3.2.1. Descriptive Analysis of Export Memory Manipulation

Export memory manipulation is measured by two items with mean scores below three (Table 9.9).

Table 9.9. Export memory manipulation descriptive statistics.

Export Memory Manipulation Items	N	Min	Max	Mean	Std. Deviation
1. Export memory is often distorted in decision-making.	354	1.00	5.00	2.6666	.7925
2. Key executives often distort export memory in passing it on.	354	1.00	5.00	2.7621	.7589
Valid N (listwise)	354				

The low mean scores of the items means that the exporters do not see themselves likely to manipulate the knowledge base they have. This is consistent to the findings of Williams (2003, p. 51): “Instrumental/conceptual information use is more frequent than symbolic use, nevertheless encouraging, assuming that the former type of use is more likely to lead to better export performance.”

9.1.2.3.2.2. Measure Development of Export Memory Manipulation

A reliability test was conducted with three items. The following item was removed since it could increase the Cronbach's Alpha from .6686 to .6953:

- If export memory is difficult to retrieve, guesses are made instead.

After the removal, the average inter-item correlation was increased from .4094 to .536. Since the nature of the items that remained involves the idea of export memory distortion (Table 9.10), the factor is termed export memory manipulation.

Table 9.10. Dimensionality and reliability of export memory manipulation.

Export Memory Manipulation Items			Factor Loadings	Item-Whole
Export memory is often distorted in decision-making			.731	.536
Key executives often distort export memory in passing it on			.731	.536
Eigenvalue			1.536	
Percentage of Variance Explained			76.792	
Summary Statistics				
Mean	Std. Dev.	Average Inter-Item	Alpha	# Cases
5.4286	1.35961	.536	.697	354

9.2. Descriptive Analysis and Measure Development of Export Memory Overload

9.2.1. Descriptive Analysis of Export Memory Overload

Six items were used to measure export memory overload (Table 9.11). A Bonferroni test was conducted for the items under export memory overload which found the difference among the items to be significant (see Appendix 9.9). All items have mean scores below three except for item one which has a score of 3.0. This is consistent with the interviews (Chapter 3) conducted in the Qualitative Study which found that all those interviewed did not seem to have a problem handling too much information. Previous studies pointed out that most companies suffer from lack of knowledge about overseas markets (Bodur 1986; Morgan and Katsikeas 1998; Williams 2003) due to the large resources required in export information acquisition which most exporters cannot afford (Belich and Dubinsky 1999).

The findings of this study pertaining to the low perception of export memory overload would be useful in striking the balance between information supply and use which is “considered critical to successful decision outcomes” (Williams 2003, p. 52).

Table 9.11. Export memory overload descriptive statistics.

Export Memory Overload Items	N	Min	Max	Mean	Std. Deviation
1. The export memory we have often exceeds the capacity of our systems to process them into usable information.	354	1.00	5.00	3.0191	.8412
2. We usually find ourselves with more export memory than what we could efficiently handle.	354	1.00	5.00	2.9641	.7707
3. We experience difficulties in planning adequately due to an overload of memory.	354	1.00	5.00	2.6574	.7796
4. We have so much export memory, we encounter problems in dealing with it all.	354	1.00	5.00	2.7025	.7464
5. The amount of export memory we have is more than what we could actually use.	354	1.00	5.00	2.8969	.7838
6. We have too much export memory that hamper quick decisions and cause numerous organizational problems.	354	1.00	5.00	2.6557	.7720
Valid N (listwise)	354				

9.2.2. Measure Development of Export Memory Overload

Export memory overload items were factor analyzed initially resulting in a three factor solution (see Appendix 9.10). Further factor analysis removed the following items arranged according to sequence of deletion based on their loadings. The item with the lowest loading was the one eliminated after every factor analysis.

1. We often find ourselves with less export memory than what we actually need.
2. We never find ourselves overloaded with export memory.
3. We usually have just the right amount of export memory in our organization.
4. We find it easy to handle all the export memory that we have.
5. We normally have more export memory than what we actually need.
6. We feel overwhelmed by the amount of export memory we have.

Following reliability testing, the following item was also removed:

- Decision making can become difficult as a result of too much export memory.

After the deletion, the Cronbach's Alpha was raised from .8671 to .8781. The average inter-item correlation increased also from .4936 to .548. Dimensionality and reliability of items for export memory overload are in Table 9.12.

Table 9.12. Dimensionality and reliability of export memory overload.

Export Memory Overload Items				Factor Loadings	Item-Whole
The export memory we have often exceeds the capacity of our systems to process them into usable information				.658	.613
We usually find ourselves with more export memory than what we could efficiently handle				.801	.743
We experience difficulties in planning adequately due to an overload of memory				.758	.698
We have so much export memory, we encounter problems in dealing with it all				.748	.691
The amount of export memory we have is more than what we could actually use				.758	.702
We have too much export memory that hamper quick decisions and cause numerous organizational problems				.719	.665
Eigenvalue				3.745	
Percentage of Variance Explained				62.411	
Summary Statistics					
Mean	Std. Dev.	Average Inter-Item		Alpha	# Cases
16.8957	3.70205	.548		.878	354

Validation

Content Validity

Content validity is concerned with whether or not the domain at hand is adequately captured by the measure (e.g., Dillon et al. 1987). Content validity of the scales is established by the origin of the pool of items from which the remaining items are drawn. Specifically, each item was taken from the literature on information use or the interviews with exporters conducted in the qualitative phase of the research. The items used in the scales were all derived from the literature (see Chapter Two) and/or from the Qualitative Study (see Chapter Three).

Convergent and Discriminant Validity

Convergent validity ascertains that the measure of the construct correlates with other measures of the same construct while discriminant validity ensures that the measure of the construct does not correlate highly with measures for which it is supposed to differ (Churchill 1991). Correlation test was done using validating items of the different export memory use constructs (see Appendix 9.12).

Nomological Validity

Nomological validity is achieved when the construct behaves as expected vis-à-vis other factors. In past studies, the different ways of using information had been tested for its relation to export performance. Within the same framework this present study will also test the relation of export memory uses to export performance. This will be presented in Chapter Ten. However, within this chapter, the relationship of certain factors as antecedents to export memory use is being investigated. For example, the symbolic use of export memory is expected to behave in a certain way in the face of export memory overload. The results are used to also test the nomological validity of the export memory use constructs.

9.3 Hypotheses Testing

The hypotheses pertaining to antecedents and outcomes of export memory use were tested through a series of regression equations. The assumptions of linearity and homoscedasticity, normality of error term distribution and independence of predictor variables are presented in the following sub-sections.

9.3.1. Extent of Export Memory Use

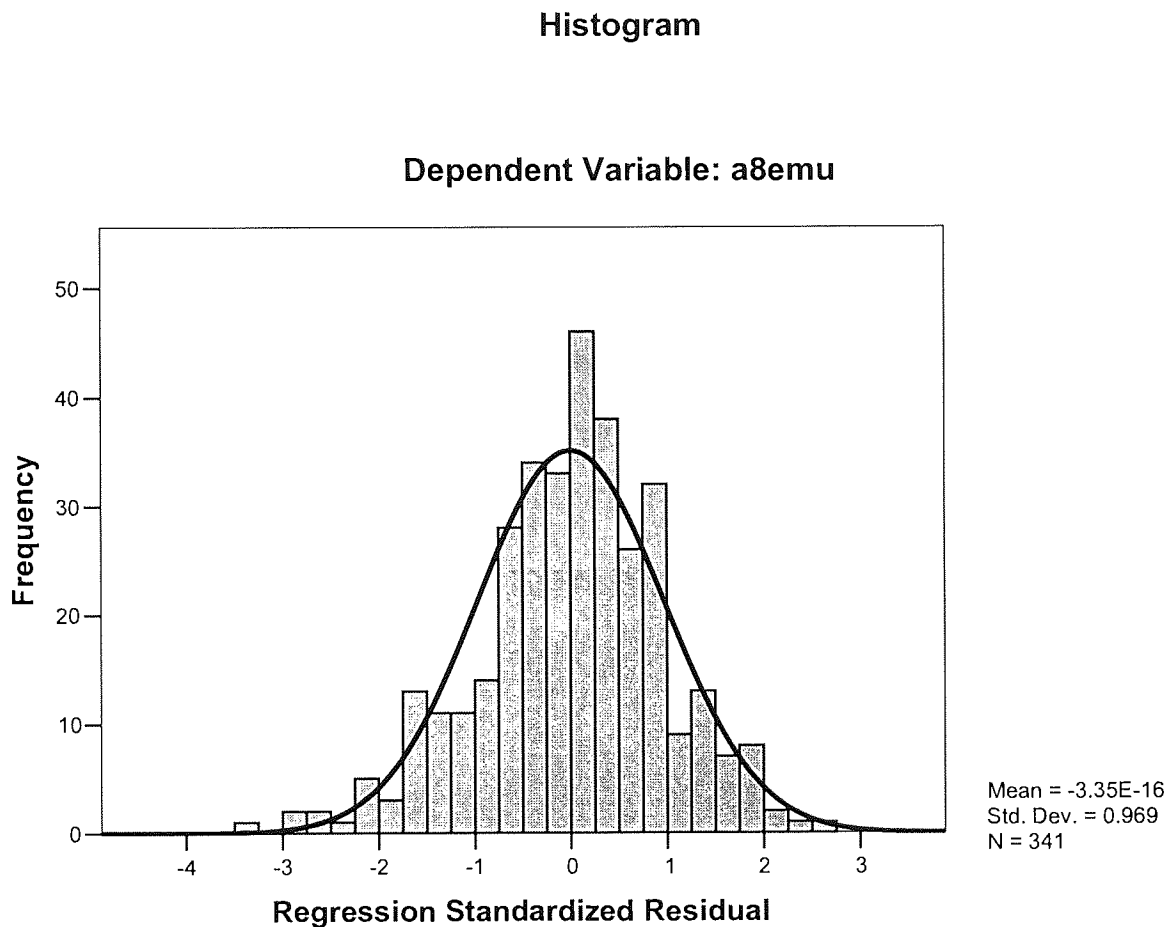
9.3.1.1. Normality of Error Term Distribution

Table 9.19. Extent of memory use – Shapiro-Wilk test (initial test)

		Shapiro-Wilk Test	
	Statistic	df	Sig.
ZRE-qval	.988	341	.006

A Shapiro-Wilk test was conducted in order to test the normality of the error term distribution. As shown in Table 9.19, the distribution was not normal. This could also be seen in the histogram below, Figure 9.19.

Figure 9.3. Histogram of extent of memory use regression (initial test)



Further analysis had to be undertaken. Outliers were eliminated one at a time until normality was achieved. A total of two outliers that were removed. The first one was data number 81 and then followed by data 330. The Shapiro-Wilk test eventually showed a normal error term distribution (see Table 9.20).

Table 9.20. Extent of memory use – Shapiro-Wilk test (final test)

		Shapiro-Wilk Test	
	Statistic	df	Sig.
ZRE-qval	.992	339	.061

Figure 9.4 shows the histogram of the extent of memory use residual plot while figure 9.5 shows the normal Q-Q plot of standardized residual

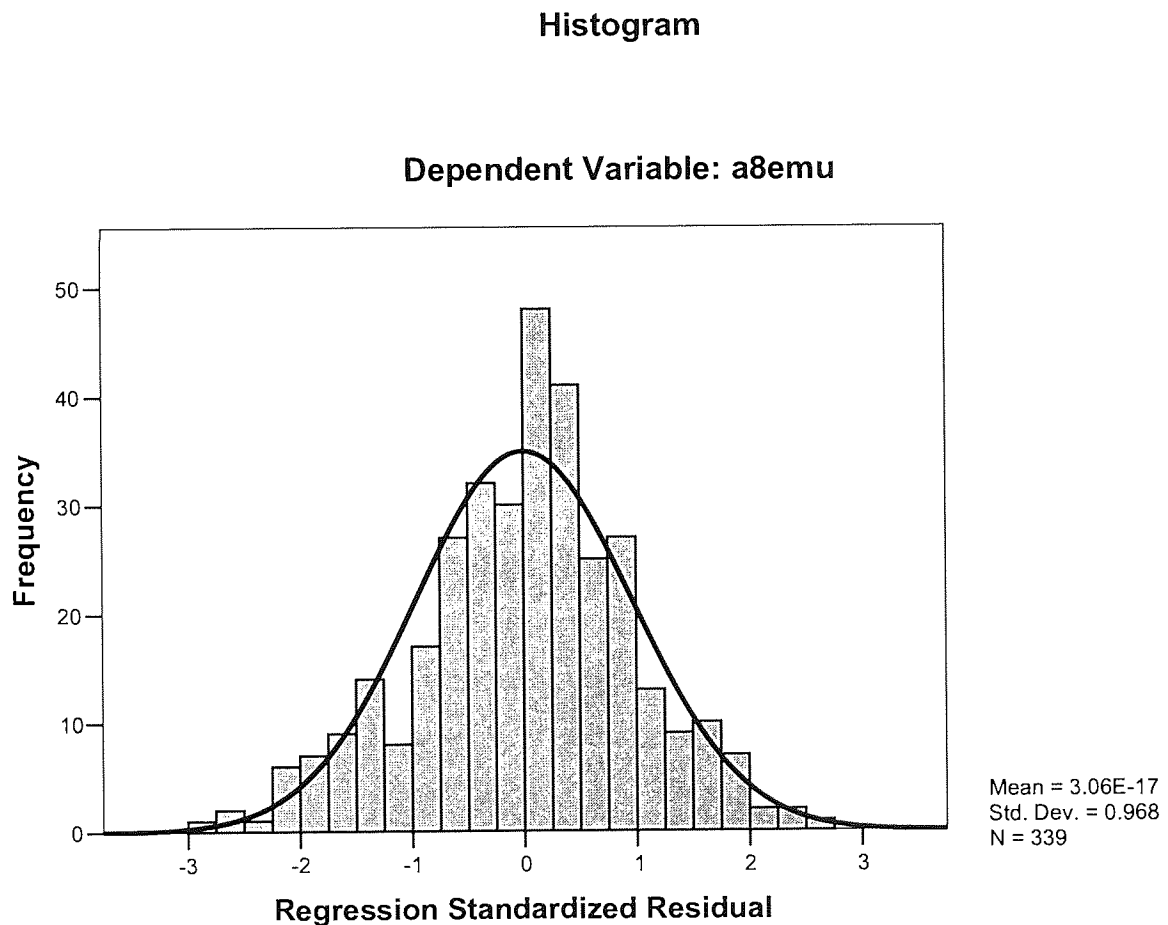
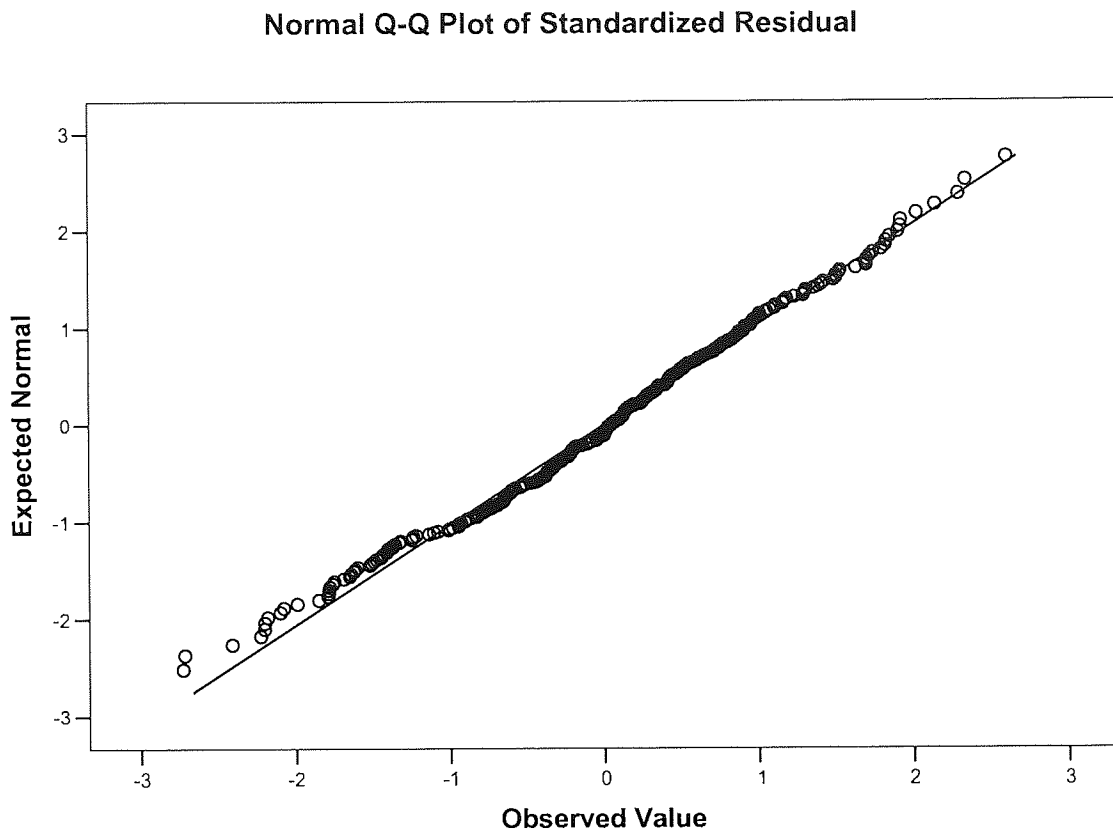
Figure 9.4. Histogram of extent of memory use regression (final test)

Figure 9.5. Extent of memory use - normal Q-Q plot of regression standardized residual

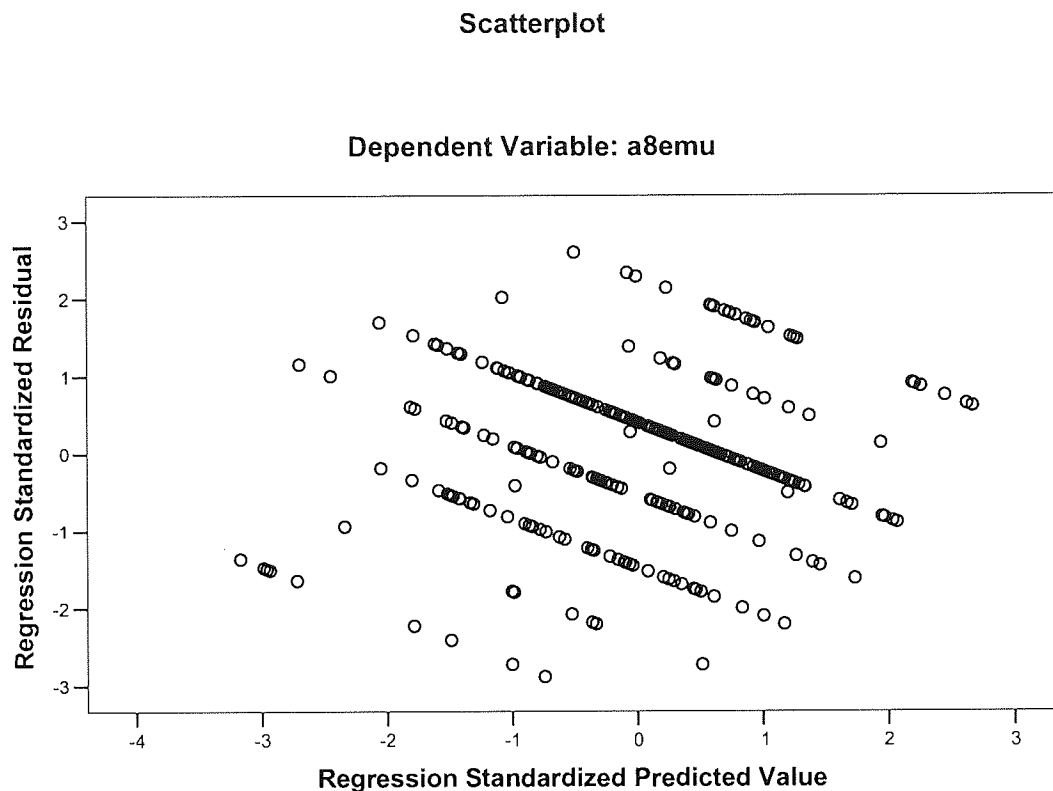


9.3.1.2. *Linearity and Homoscedasticity*

To assess the linearity of the relationships between the extent of use with the independent variables, the predicted values of the extent of use are plotted against the studentised residual values. These plots can be seen in Figure 9.6. They show no evidence of non-linearity since no specific (e.g., curvilinear) patterns emerge.

Homoscedasticity (i.e., constant variance of residuals) is assessed using the same residual plots. Given that the patterns appear to be similar to the null plot (see Hair et al. 1992), constant variance of error terms is accepted.

Figure 9.6. Scatterplot for extent of memory use



9.3.1.3 Independence of Predictor Variables

First, the correlations matrix (Appendix 9.14) does not reveal any correlation coefficients larger than .90. Since the accepted threshold for multicollinearity is a coefficient equal to or greater than .90 (Hair et al. 1992), the first step appears to indicate absence of multicollinearity within the regression equation pertaining to the inter-functional use of export memory.

Second, the tolerance values for each predictor variable in the equation are calculated and are reported in Table 9.21. These tolerance values are all large (i.e., relatively close to one) which provides additional evidence to suggest that multicollinearity is not an issue in the regression equations presented here.

9.3.1.4. Regression Results and Discussions

As shown by the initial regression results (Table 9.21), quality of export information acquisition and export memory quality are both positively related to the extent of memory use. The adjusted R square was 30% .

Table 9.21. Summary of initial regression results for extent of export memory use.

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square = 25%	
			B	Std. Error	Beta			Tolerance	VIF
1	(Constant)								
al	Acquisition of Information	H9	.162	.049	.193	3.303	.001	.651	1.537
env_com	Competitive Turbulence	H10	-.018	.057	-.018	-.314	.754	.656	1.525
env_tec	Technological Turbulence	H10	.063	.046	.076	1.381	.168	.742	1.348
env_cus	Market Turbulence	H10	-.008	.044	-.011	-.191	.849	.678	1.348
env_reg	Regulatory Turbulence	H10	-.014	.048	-.015	-.288	.774	.806	1.241
q11.1	Experience	H11	-.004	.003	-.067	-.1278	.202	.807	1.239
q11.15	Market Complexity	H12	.001	.003	-.093	-.1825	.069	.850	1.176
q11.7.2	Product / Service Complexity	H12	.001	.004	.018	.356	.722	.911	1.097
q11.9	Export Profit Dependence	H13	.001	.001	.037	.525	.600	.449	2.227
q11.8	Export Sales Dependence	H13	.001	.001	.058	.827	.409	.449	2.229
qval	Export Memory Quality	H14	.254	.042	.365	5.991	.000	.599	1.671
q8.51.1	Export Personnel Use	H15	.002	.033	.003	.051	.960	.659	1.517
q8.51.3	Finance/Accounting Personnel Use	H15	-.004	.031	-.008	-.128	.898	.584	1.713
q8.51.2	Marketing Personnel Use	H15	-.029	.036	-.050	-.824	.410	.592	1.688
q8.51.4	Production Personnel Use	H15	-.009	.032	-.017	-.264	.792	.533	1.878
q8.51.5	Research and Development Personnel Use	H15	.029	.028	.063	1.042	.298	.604	1.655
q8.51.6	Top Management Personnel Use	H15	.040	.035	.069	1.160	.247	.637	1.569

Table continues on next page.

q11.3	Specificity	H16	-.045	.063	-.036	-.714	.476	.882	1.134
a80	Export Memory Overload	H17	.007	.052	.007	.137	.891	.800	1.250
Size	Size - Number of Employees	H18	-6.06E-005	.000	-.093	-1.825	.069	.850	1.176
q12.5	Size - Turnover	H18	.023	.017	.072	1.323	.187	.745	1.342

Final regression results with the significant factors are shown in on Table 9.22.

Table 9.22. Summary of final regression results for extent of export memory use.

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square = 26%	
			B	Std. Error	Beta			Tolerance	VIF
1	(Constant)		1.977	.170		11.621	.000		
a1	Acquisition of Information	H9	.162	.049	.193	3.303	.001	.651	1.537
qval	Export Memory Quality	H14	.254	.042	.365	5.991	.000	.599	1.671

Table 9.23 shows the ANOVA test results while Table 9.24 shows that there is no significant change between the adjusted R square of the initial regression and the adjusted R square of the final regression.

Table 9.23. ANOVA test for regression on extent of export memory use.

ANOVA^c

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.204	2	16.602	59.122	.000 ^a
	Residual	94.353	336	.281		
	Total	127.557	338			
2	Regression	37.693	21	1.795	6.331	.000 ^b
	Residual	89.865	317	.283		
	Total	127.557	338			

a. Predictors: (Constant), qval, a1

b. Predictors: (Constant), qval, a1, q11.9, q11.15, q8.51.4, q11.3, q11.7.2, size, q11.1, a80, env_cus, q8.51.1, env_reg, q12.5, env_tec, q8.51.2, env_com, q8.51.6, q8.51.5, q8.51.3, q11.8

c. Dependent Variable: a8emu

Table 9.24. Model summary of regression on extent of export memory use.

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.510 ^a	.260	.256	.52992	.260	59.122	2	336	.000
2	.544 ^b	.295	.249	.53243	.035	.833	19	317	.667

a. Predictors: (Constant), qval, a1

b. Predictors: (Constant), qval, a1, q11.9, q11.15, q8.51.4, q11.3, q11.7.2, size, q11.1, a8o, env_cus, q8.5' env_tec, q8.51.2, env_com, q8.51.6, q8.51.5, q8.51.3, q11.8

c. Dependent Variable: a8emu

Table 9.25 provides a summary of the hypotheses and the individual results

Table 9.25. Summary of hypotheses and individual results.

Extent of Memory Use			
Independent Variable	Hypothesis Number	Postulated Linkage	Finding
Acquisition of Information	H9	+	+
Competitive Turbulence	H10	-	ns
Market Turbulence	H10	-	ns
Regulatory Turbulence	H10	-	ns
Technological Turbulence	H10	-	ns
Experience	H11	+	ns
Export Complexity - Market	H12	+	ns
Export Complexity - Product/Service	H12	+	ns
Export Dependence - Profit	H13	+	ns
Export Dependence - Sales	H13	+	ns
Export Memory Quality	H14	+	+
Export Personnel Use	H15	+	ns
Finance/Accounting Personnel Use	H15	+	ns
Marketing Personnel Use	H15	+	ns
Production Personnel Use	H15	+	ns
Research and Development Personnel Use	H15	+	ns
Specificity	H16	+	ns
Export Memory Overload	H17	-	ns
Size - Employees	H18	+	ns
Size - Turnover	H18	-	ns

The results show that organizations that invest in export information acquisition would be more inclined to use the knowledge base that they developed. This supports the Qualitative Study, wherein exporters appreciated the importance of stored information in

export marketing, so much so that they could not seem to have enough of it. Thus, it would not be a surprise to see that those who place more effort in acquiring export information would be more inclined to use their export memory. Although the contrary argument might also seem convincing: that those who have put much effort in acquiring fresh export information would tend less to use their export memory since they would already have enough export information by then. This is consistent with the findings of Goldstein and Zack (1989) and Souchon et al. (2003) on the positive relation between intensity of information acquisition and the use of information. However, as has been mentioned earlier, the exporters interviewed generally found it difficult to acquire fresh information, making them bank more on their export memory.

Consistent with the literature (cf., Deshpande and Zaltman 1982; O'Reilly 1982; Menon and Varadarjan 1992; Low and Mohr 2001; Toften and Olsen 2004), export memory quality was positively related to the extent of export memory use. Exporters who perceived that they have quality export memory are also more inclined to use this knowledge base (cf., Souchon and Diamantopoulos 1997).

The rest of the independent variables were found not to be significantly related to extent of memory use.

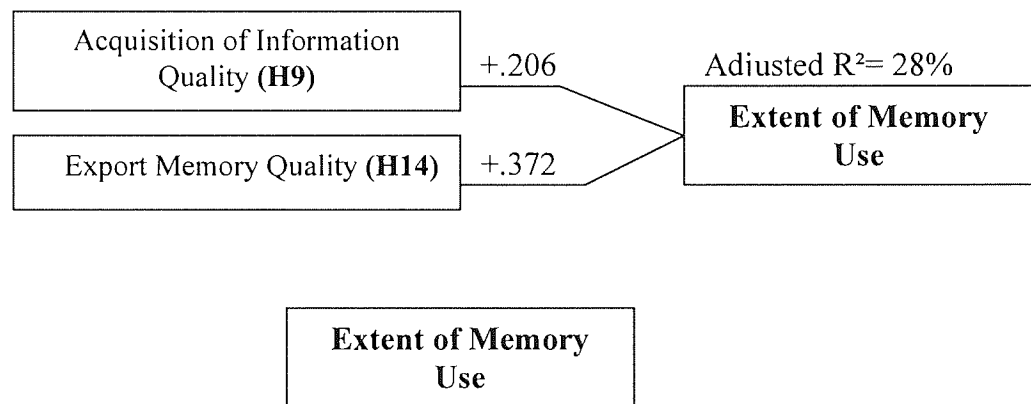
Smaller companies rely more heavily on their own accumulated experience in making decisions (Rice and Hamilton 1979; Pineda et al. 1998). However, results of this research revealed that there is no significant relation between experience and the extent of export memory use. It is possible that the measure used could not capture well the construct of experience. The number of years exporting may not be an adequate gauge of the actual richness of export experience of an organization. A younger organization may have a richer export experience than an organization with more years in exporting if the younger organization has actually been involved in more countries and business deals than the older company.

Environmental turbulence was thought to have a negative relation to the extent of export memory use since organizations in turbulent environments may prefer to use new

information rather than something from the past. However, it turned out that there was no significant relation between environmental turbulence and the extent of export memory use. Probably due to the dearth in export information experienced by the exporters as was seen in the Qualitative Study, which may have meant a dearth also in export memory, organizations may be left with no choice but to use whatever they have regardless of the environmental turbulence they were in. The same reason may apply to explain the nonsignificant relation of the rest of the independent variables with the extent of export memory use.

The final model of the antecedents to the extent of export memory use is in Figure 9.7.

Figure 9.7. Final model of the antecedents to the extent of export memory use.



9.3.2. Instrumental Use of Export Memory

9.3.2.1. Normality of Error Term Distribution

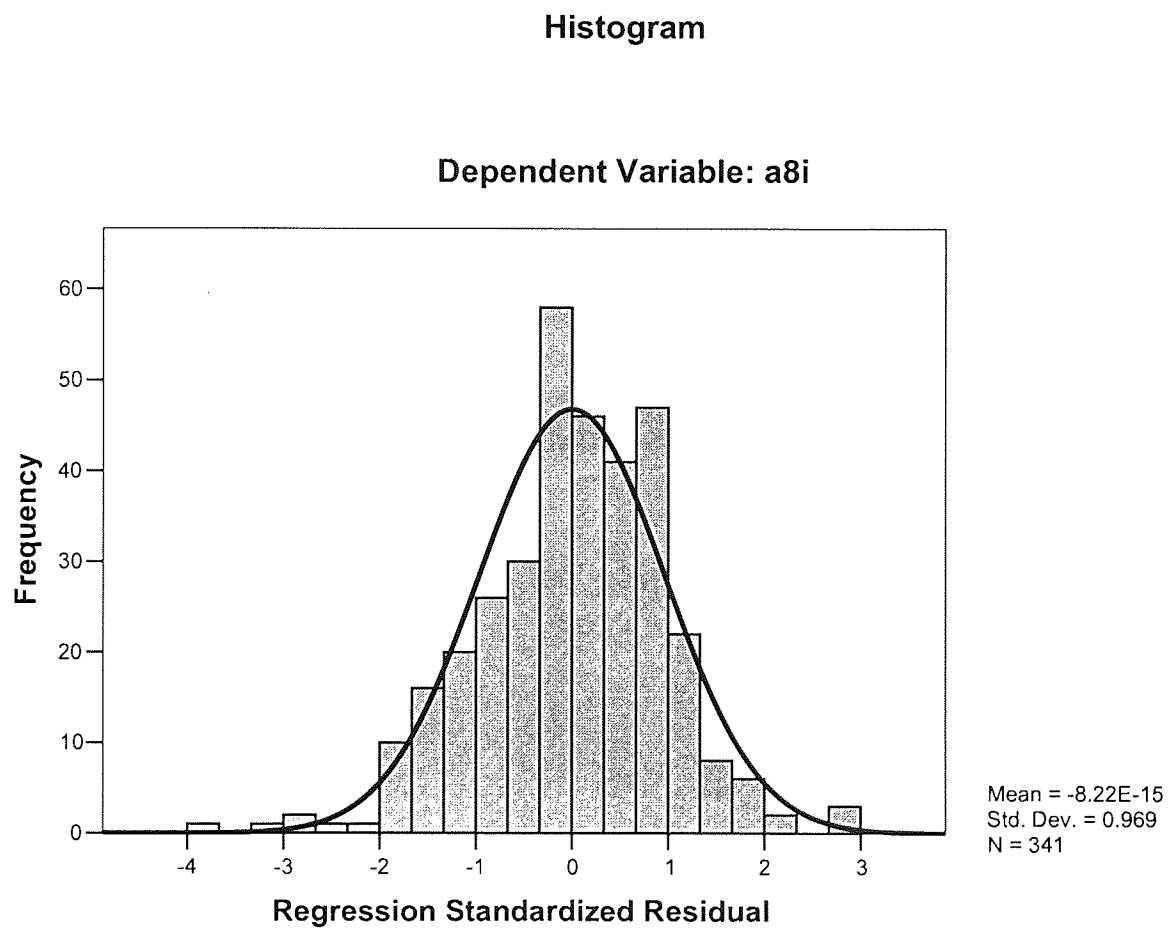
A Shapiro-Wilk test was conducted in order to test the normality of the error term distribution. As shown in Table 9.26, the distribution was not normal.

Table 9.26. Shapiro-Wilk test instrumental use

		Shapiro-Wilk Test	
	Statistic	df	Sig.
ZRE-qval	.987	341	.003

Figure 9.8 shows the histogram of the standardized residual for instrumental use of export memory.

Figure 9.8. Histogram of instrumental use (initial test)



Further analyses were therefore done. Outliers were taken out one at a time until normality was achieved. A total of two outliers were eventually removed. The first one was data number 310 and then data 230. The Shapiro-Wilk test eventually showed a normal error term distribution (see Table 9.27)

Table 9.27. Shapiro-Wilk test instrumental use (final test)

		Shapiro-Wilk Test	
	Statistic	df	Sig.
ZRE-qval	.992	339	.069

Figure 9.9. Histogram of instrumental use (final regression)

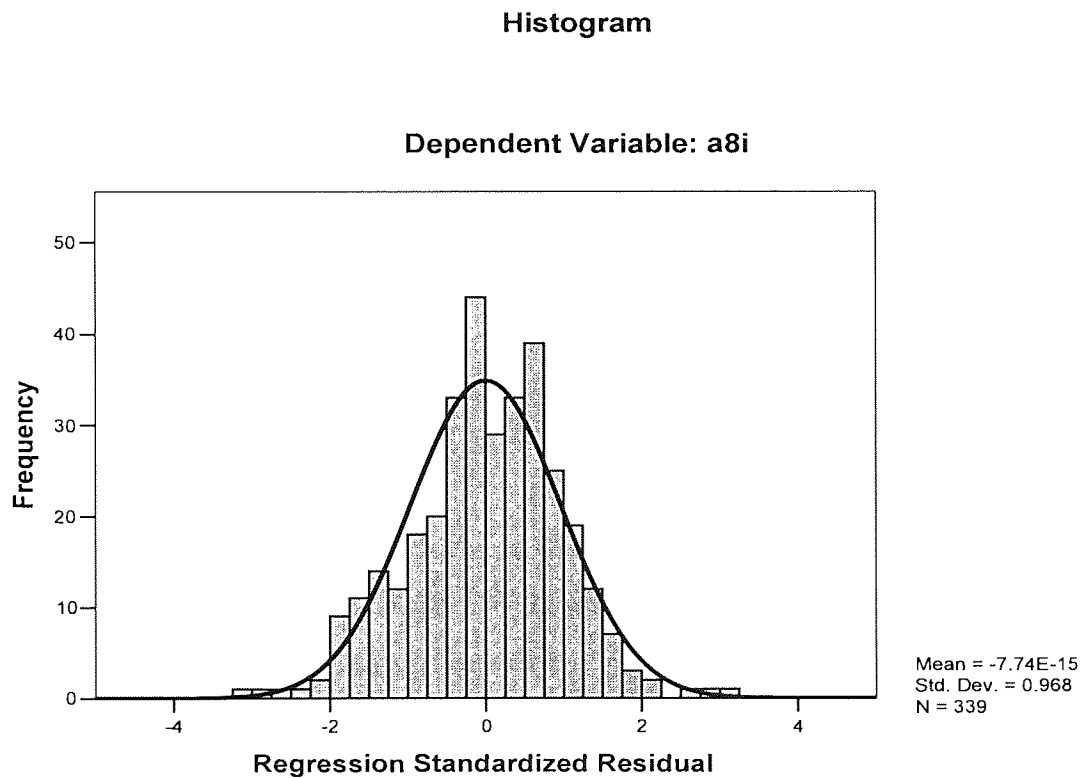
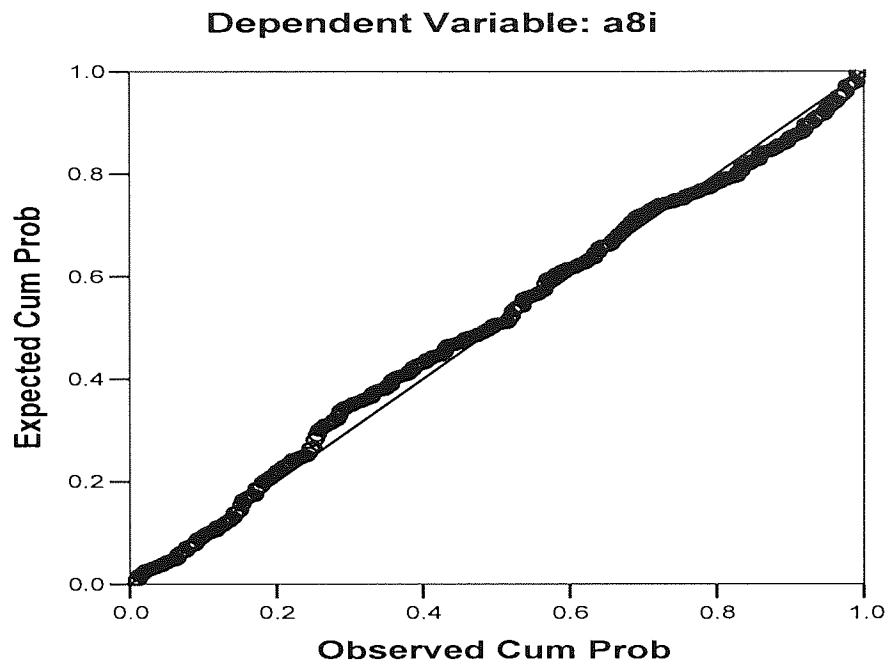


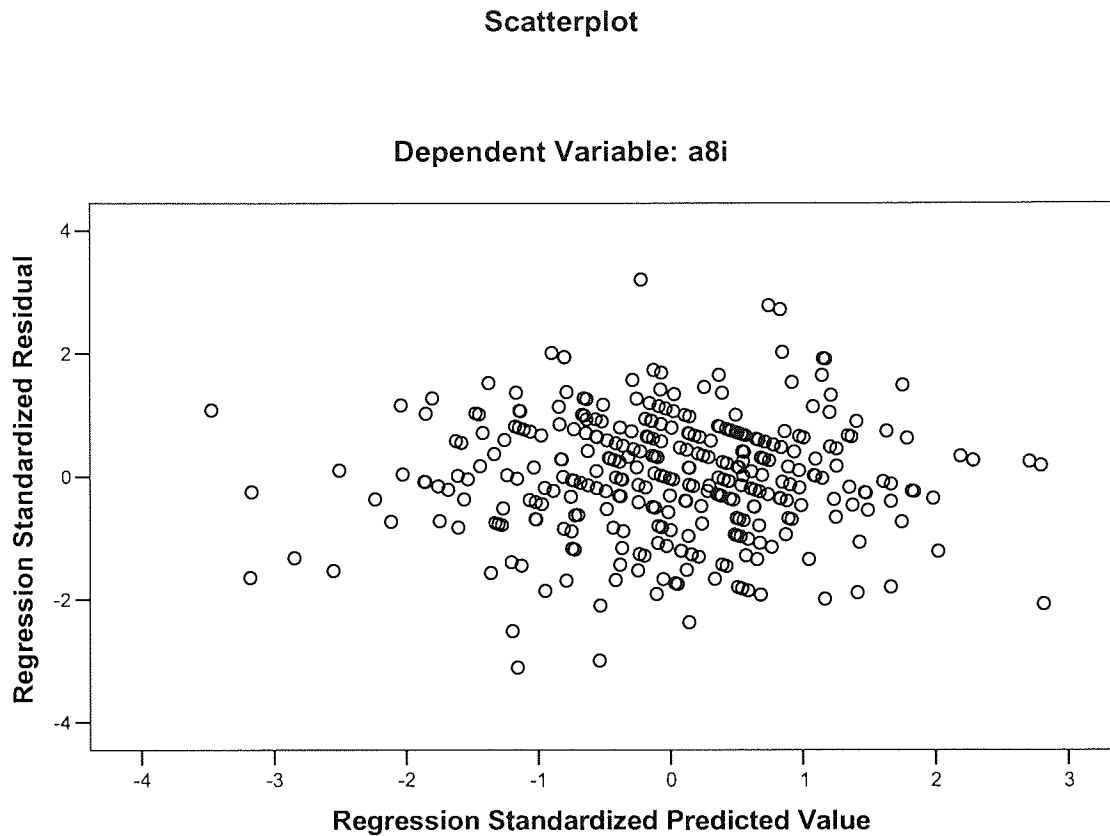
Figure 9.10. Normal P-P plot of regression standardized residual

Normal P-P Plot of Regression Standardized Residual**9.3.2.2. Linearity and Homoscedasticity**

To assess the linearity of the relationships between the instrumental use of export memory with the independent variables, the predicted values of, instrumental use of export memory are plotted against the standardized residual values. This plot can be seen in Figure 9.11. It shows no evidence of non-linearity since no specific (e.g., curvilinear) patterns emerge.

Homoscedasticity (i.e., constant variance of residuals) is assessed using the same residual plots. Given that the patterns appear to be similar to the null plot (see Hair et al. 1992), constant variance of error terms is accepted.

Figure 9.11. Scatterplot for regression instrumental use



9.3.2.3. *Independence of Predictor Variables*

First, the correlations matrix (Appendix 9.15) does not reveal any correlation coefficients larger than .90. Since the accepted threshold for multicollinearity is a coefficient equal to or greater than .90 (Hair et al. 1992), the first step appears to indicate absence of multicollinearity within the regression equation pertaining to the inter-functional use of export memory.

Second, the tolerance values for each predictor variable in the equation are calculated and are reported in Table 9.25. These tolerance values are all large (i.e., relatively close to one) which provides additional evidence to suggest that multicollinearity is not an issue in the regression equations presented here.

9.3.2.4. Regression Results and Discussions

Table 9.28 shows the results of the initial regression analyses on instrumental use of export memory.

Table 9.28. Summary of initial regression results for instrumental use of export memory.

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square = 29%	
			B	Std. Error	Beta			Tolerance	VIF
1	(Constant)		1.396	.221		6.302	.000		
al	Acquisition of Information	9(a)	.036	.036	.056	1.003	.317	.658	1.520
env_com	Competitive Turbulence	H10(a)	.050	.042	.066	1.179	.239	.646	1.548
env_cus	Market Turbulence	H10(a)	-.008	.033	-.013	-.246	.806	.675	1.483
env_reg	Regulatory Turbulence	H10(a)	.037	.036	.051	1.018	.309	.805	1.243
env_tec	Technological Turbulence	H10(a)	.102	.035	.154	2.924	.004	.730	1.371
q11.1	Experience	H11(a)	-.003	.003	-.057	-.134	.258	.808	1.238
q11.15	Market Complexity	H12(a)	-.005	.002	-.110	-.290	.023	.882	1.134
q11.7.2	Product/Service Complexity Diversified Product	H12(a)	-.001	.003	-.013	-.278	.781	.911	1.098
q11.9	Export Profit Dependence	H13(a)	.002	.001	.129	1.930	.054	.455	2.197
q11.8	Export Sales Dependence	H13(a)	-.001	.001	-.056	-.844	.399	.454	2.203
qval	Export Memory Quality	H14(a)	.169	.031	.312	5.411	.000	.608	1.646
q8.51.1	Export Personnel Use	H15(a)	.005	.025	.012	.210	.834	.660	1.514
q8.51.3	Finance/Accounting Personnel Use	H15(a)	.026	.023	.066	1.120	.264	.582	1.719
q8.51.2	Marketing Personnel Use	H15(a)	.033	.027	.073	1.244	.214	.593	1.686
q8.51.4	Production Personnel Use	H15(a)	-.047	.024	-.120	-.952	.052	.532	1.880
q8.51.5	Research and Development Personnel Use	H15(a)	.039	.021	.108	1.858	.064	.604	1.655
q8.51.6	Top Management Personnel Use	H15(a)	.067	.026	.144	2.563	.011	.641	1.561

Table continues on next page.

q11.3	Specificity	H16(a)	-.156	.046	-.158	- 3.307	.001	.884	1.131
a80	Export Memory Overload	H17(a)	.053	.039	.068	1.334	.183	.789	1.268
size		H18(a)	- 2.39E- 006	.000	-.005	-.097	.923	.850	1.176
q12.5	Turnover	H18(a)	.022	.013	.090	1.717	.087	.745	1.343

Table 9.29 shows the results of the final regression run for instrumental use of export memory. Four factors were found to be significantly related to the instrumental use of export memory.

Table 9.29. Results of final regression for instrumental use of export memory.

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square = 28%	
			B	Std. Error	Beta			Tolerance	VIF
1	(Constant)		1.786	.162		11.039	.000		
env_tec	Technological Turbulence	H10(a)	.146	.032	.218	4.512	.000	.910	1.099
qval	Export Memory Quality	H14(a)	.197	.027	.357	7.283	.000	.888	1.126
q8.51.6	Top Management Personnel Use	H15(a)	.094	.022	.200	4.256	.000	.969	1.032
q11.3	Specificity	H16(a)	-.148	.047	-.146	-3.110	.002	.970	1.031

Table 9.30 shows the ANOVA test for regression on instrumental use while Table 9.31 shows that there is no significant change between the adjusted R square of the initial regression run and adjusted R square of the final regression.

Table 9.30. ANOVA test for regression on instrumental use of export memory.

ANOVA^c

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.317	4	5.829	33.307	.000 ^a
	Residual	58.804	336	.175		
	Total	82.121	340			
2	Regression	27.636	21	1.316	7.705	.000 ^b
	Residual	54.485	319	.171		
	Total	82.121	340			

a. Predictors: (Constant), q11.3, q8.51.6, env_tec, qval

b. Predictors: (Constant), q11.3, q8.51.6, env_tec, qval, q11.7.2, q11.8, q11.15, size, a8o, q11.1, q8.51.3, env_cus, env_reg, q12.5, q8.51.5, a1, q8.51.1, env_com, q8.51.2, q8.51.4, q11.9

c. Dependent Variable: a8i

Table 9.31. Model summary of regression on instrumental use of export memory.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.533 ^a	.284	.275	.41835	.284	33.307	4	336	.000
2	.580 ^b	.337	.293	.41328	.053	1.488	17	319	.097

a. Predictors: (Constant), q11.3, q8.51.6, env_tec, qval

b. Predictors: (Constant), q11.3, q8.51.6, env_tec, qval, q11.7.2, q11.8, q11.15, size, a8o, q11.1, q8.51.3, q8.51.5, a1, q8.51.1, env_com, q8.51.2, q8.51.4, q11.9

c. Dependent Variable: a8i

Table 9.32 provides a summary of hypotheses and the individual results for instrumental use of export memory.

Table 9.32. Summary of hypotheses and individual results for instrumental use of export memory.

Instrumental Use of Export Memory			
Independent Variable	Hypothesis Number	Postulated Linkage	Finding
Acquisition of Information	H9(a)	+	ns
Competitive Turbulence	H10(a)	+	ns
Market Turbulence	H10(a)	+	ns
Regulatory Turbulence	H10(a)	+	ns
Technological Turbulence	H10(a)	+	+
Experience	H11(a)	+	ns
Export Complexity - Market	H12(a)	+	ns
Export Complexity - Product Lines	H12(a)	+	ns
Export Dependence - Profit	H13(a)	+	ns
Export Dependence - Sales	H13(a)	+	ns
Export Memory Quality	H14(a)	+	+
Export Personnel Use	H15(a)	+	ns
Finance/Accounting Personnel Use	H15(a)	+	ns
Marketing Personnel Use	H15(a)	+	ns
Production Personnel Use	H15(a)	+	ns
Research and Development Personnel Use	H15(a)	+	ns
Top Management Personnel Use	H15(a)	+	+
Specificity	H16(a)	+	-
Export Memory Overload	H17(a)	-	ns
Size	H18(a)	+	ns
Size – Market Employees	H18(a)	+	ns

The instrumental use of export memory is positively related to technological turbulence. The Qualitative Study revealed that in a highly competitive export market, especially in terms of pricing, the exporters use technology to either reduce their prices or improve on their product offerings. This explains why exporters are keener to use what they have in their export memory in a direct way since technology is a potent tool in addressing, for instance, price undercutting from low-cost competitors from China.

Another independent variable that is positively related to instrumental use of export memory is export memory quality. Again, this is consistent with the hypothesized relationship and with the findings in the literature (cf. Maltz et al. 2001; Toften and Olsen 2004).

The use of export memory by top management also has positive relation to instrumental use of export memory. Part of top management's role is to think and make decisions strategically (Athanassiou and Nigh 2000). Its understanding of the export market is based precisely on the export memory produced from the pooling of the people's tacit stock knowledge and the creation of a shared team perspective of the export market and its environments (cf., Athanassiou and Nigh 2000).

Also negatively related to instrumental use of memory is export specificity. Companies with more commitment to the export function (Aaby and Slater 1989), would more likely have an intensive information-seeking behavior (Samiee and Walters 2002). With relatively more resources for exporting at their disposal, export-specific organizations tend to prefer acquiring external information, such as having more interest in exporting education, (Samiee and Walters 2002) to using the export memory they have on hand.

The other environmental turbulences - competitive, market, and regulatory - did not come out as being significantly related to the instrumental use of export memory. This is consistent with the finding of Low and Mohr (2000) that saw technological turbulence being positively related to the use of memory but without any significant relation between customer turbulence and the use of memory. It is possible, like the case of Low and Mohr (2001), that the exporters were more profoundly affected by technological turbulence than by another dimension of environmental turbulence. Furthermore, technological improvements might be incremental, building on previous improvements.

Export experience was not significantly related to the instrumental use of export memory. As mentioned earlier, the measurement of export experience was not enough to fully capture the richness of the construct.

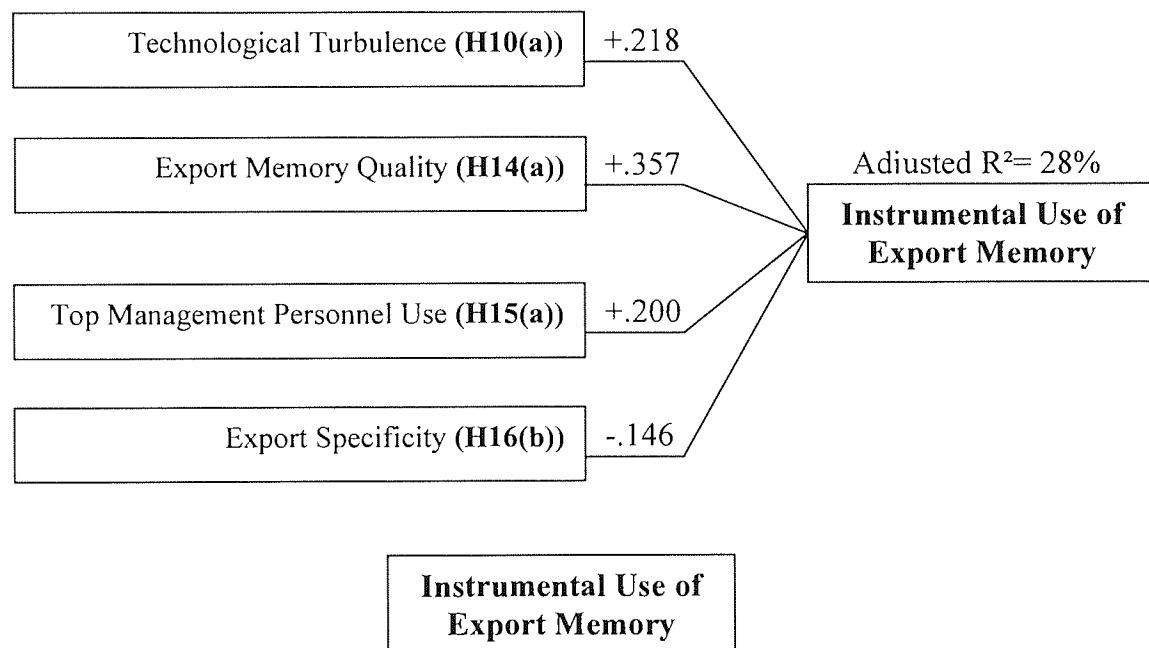
Use of export memory by other functional areas, except that of top management, was found not be significantly related to the instrumental use of export memory. This may be explained by the findings of Myers (1997) which showed that, in export operations, most marketing related decisions are handled by upper-level management, which allows coordination across markets.

Export memory overload was found not be significantly related to the instrumental use of export memory. In the study of Williams (2003), export information overload was positively related to instrumental/conceptual use of export information, contrary to the findings of Diamantopoulos and Souchon (1999). It is possible that in this study the exporters may not consider memory overload a big issue. As seen in the Qualitative Study, Philippine exporters are still not satisfied with the amount of information they actually have.

Size was found to have no significant relation with the instrumental use of export memory. This may be because most of the exporters surveyed were small and medium in size anyway. Any difference brought about by size would not have been detected in this sample.

Figure 9.12 provides the final model of the antecedents to instrumental use of export memory.

Figure 9.12. Final model of the antecedents to instrumental use of export memory.



9.3.3. Conceptual Use of Export Memory

9.3.3.1. Normality of Error Term Distribution

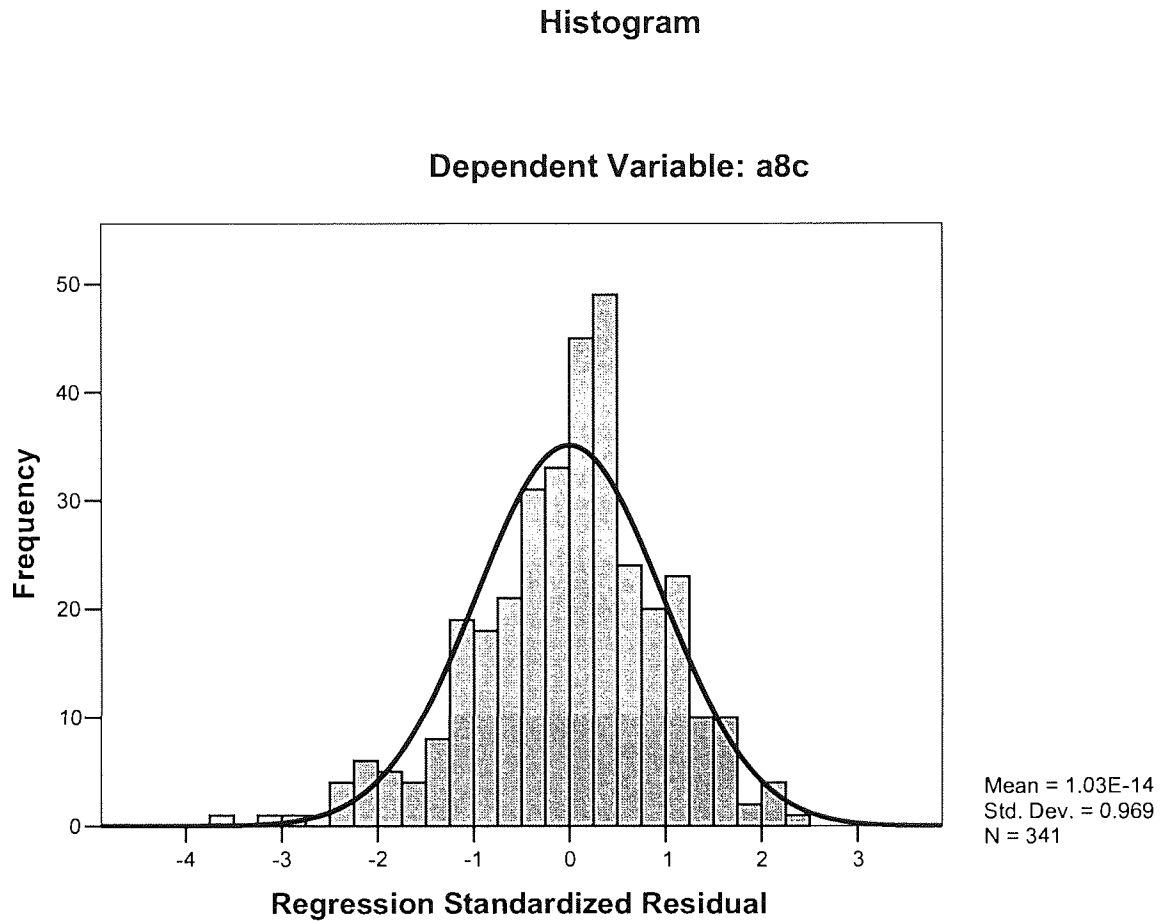
A Shapiro-Wilk test was conducted to test the normality of the error term distribution. As shown in Table 9.33, the distribution was not normal.

Table 9.33. Shapiro-Wilk test conceptual use (initial use)

		Shapiro-Wilk Test	
	Statistic	df	Sig.
ZRE-qval	.984	341	.001

Figure 9.13 shows the histogram of the regression standardized residual for conceptual use of export memory.

Figure 9.13. Histogram conceptual use (initial test)



This warranted further analysis. Outliers were taken out one at a time until normality was achieved. In total there were four outliers removed. The first one was data number 187, then 340 followed by 331. Lastly data 287 was removed. The Shapiro-Wilk test eventually showed a normal error term distribution (see Table 9.34 and also Figures 9.14 and 9.15).

Table 9.34. Shapiro-Wilk test conceptual use (final test)

		Shapiro-Wilk Test	
	Statistic	df	Sig.
ZRE-qval	.993	337	.100

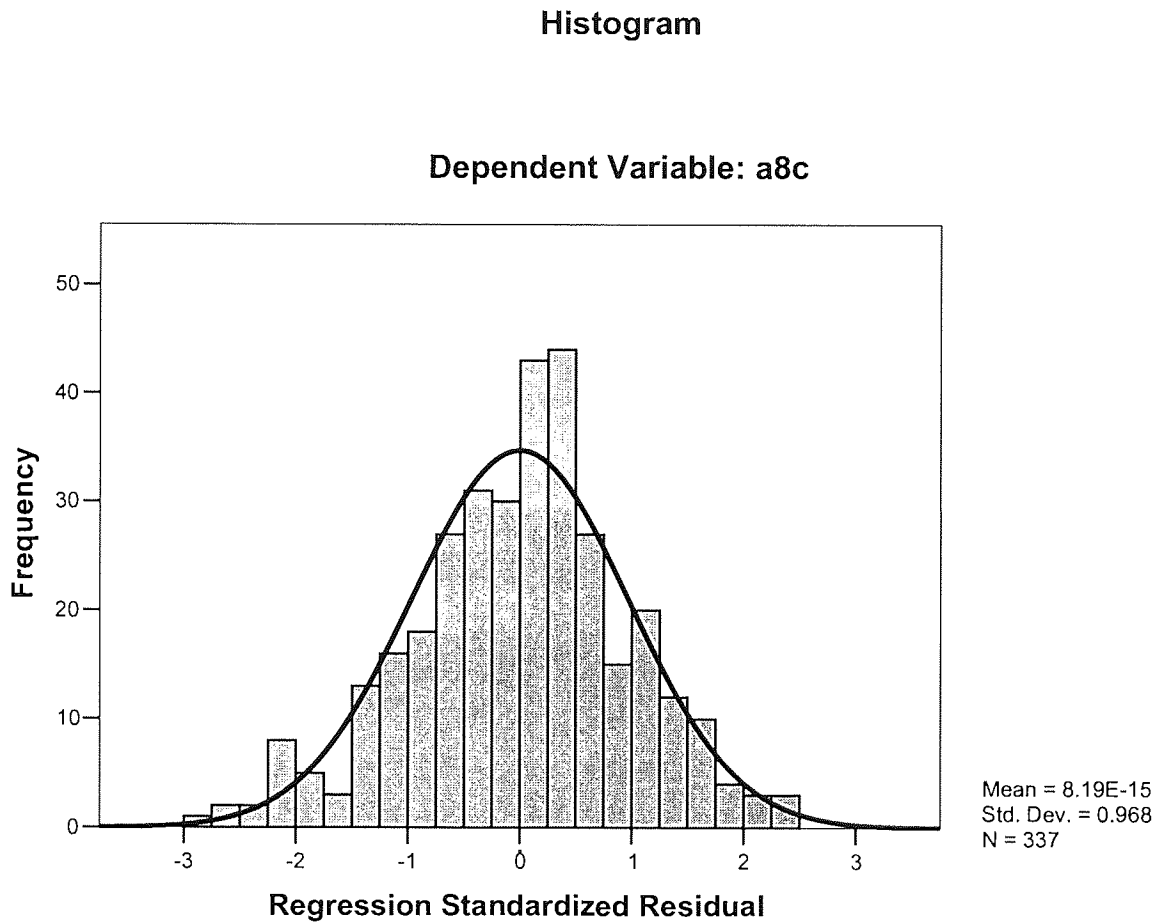
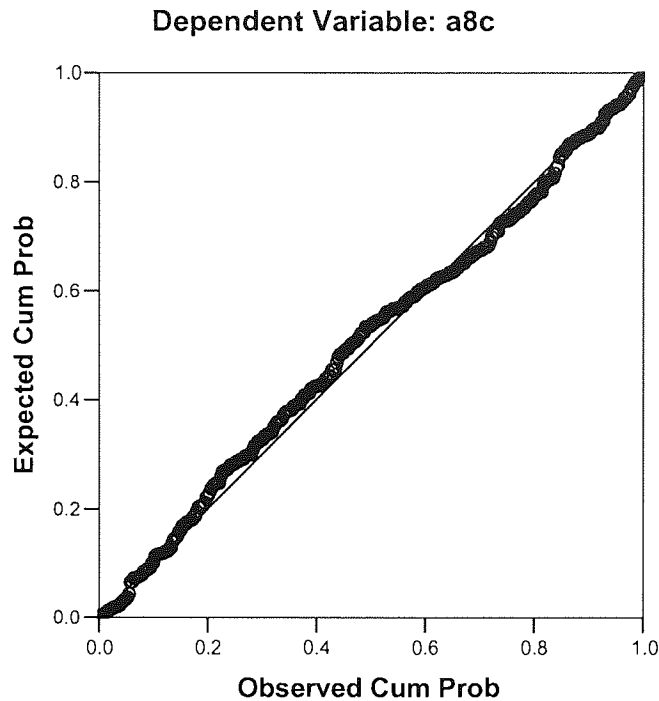
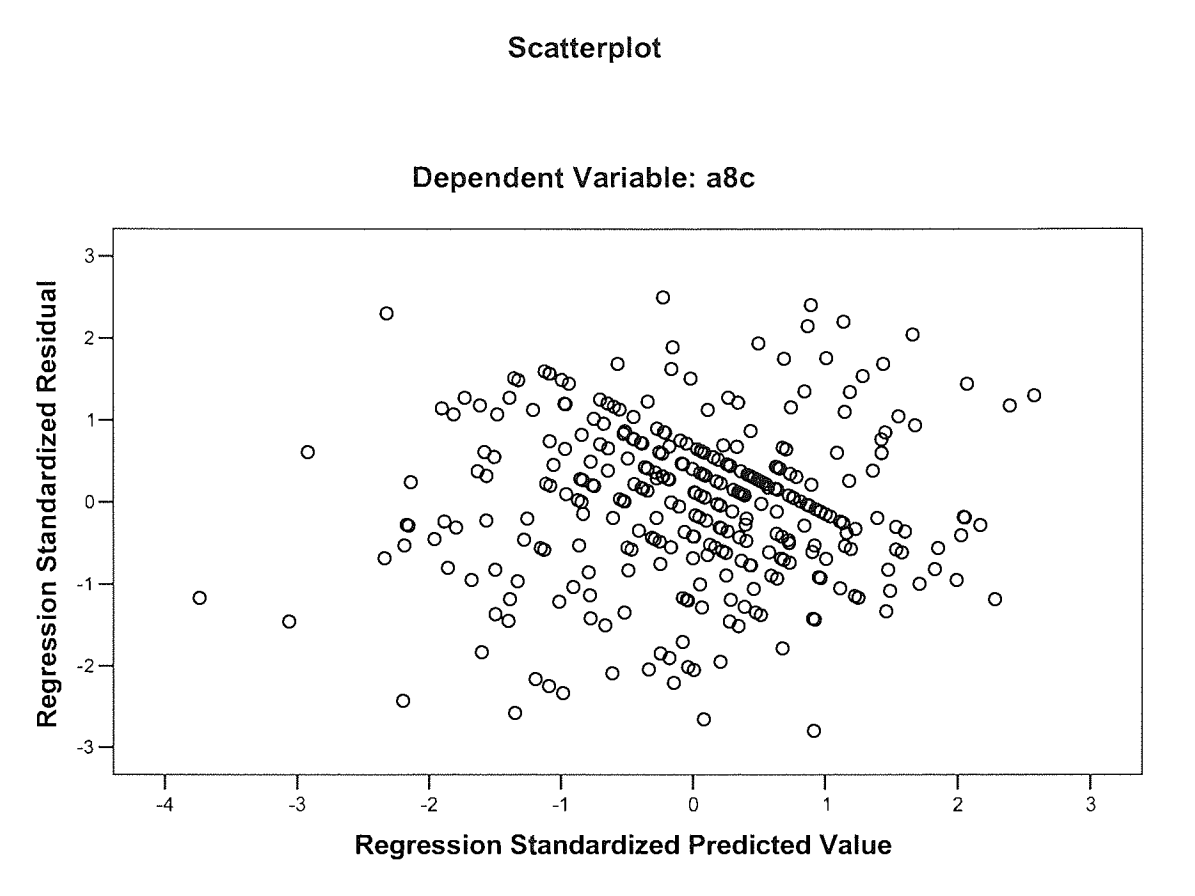
Figure 9.14. Histogram conceptual use (final test)

Figure 9.15. Normal P-P plot of regression standardized residual for conceptual use**Normal P-P Plot of Regression Standardized Residual****9.3.3.2. Linearity and Homoscedasticity**

To assess the linearity of the relationships between conceptual use of export memory with the independent variables, the predicted values of the conceptual use of export memory are plotted against the standardized residual values. This plot can be seen in Figure 9.16. It shows no evidence of non-linearity since no specific (e.g., curvilinear) patterns emerge.

Homoscedasticity (i.e., constant variance of residuals) is assessed using the same residual plots. Given that the patterns appear to be similar to the null plot (see Hair et al. 1992), constant variance of error terms is accepted.

Figure 9.16. Scatterplot for conceptual use



9.3.3.3. Independence of Predictor Variables

First, the correlations matrix (Appendix 9.16) does not reveal any correlation coefficients larger than .90. Since the accepted threshold for multicollinearity is a coefficient equal to or greater than .90 (Hair et al. 1992), the first step appears to indicate absence of multicollinearity within the regression equation pertaining to the inter-functional use of export memory.

Second, the tolerance values for each predictor variable in the equation are calculated and are reported in Table 9.29. These tolerance values are all large (i.e., relatively close to one) which provides additional evidence to suggest that multicollinearity is not an issue in the regression equations presented here.

9.3.3.4. Regression Results and Discussions

Table 9.35 shows the results of the regression with conceptual use of export memory as a dependent variable.

Table 9.35.. Summary of initial regression results for conceptual use of export memory

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square = 34%	
			B	Std. Error	Beta			Tolerance	VIF
1	(Constant)		1.404	.205		6.853	.000		
al	Acquisition of Information	H9(b)	.044	.033	.071	1.331	.184	.659	1.518
env_com	Competitive Turbulence	H10(b)	.101	.039	.139	2.583	.010	.645	1.552
env_tec	Technological Turbulence	H10(b)	.096	.032	.151	3.003	.003	.735	1.360
env_cus	Market Turbulence	H10(b)	.010	.030	.018	.346	.730	.680	1.470
env_reg	Regulatory Turbulence	H10(b)	-.015	.033	-.022	-.459	.646	.808	1.238
q11.1	Experience	H11(b)	-.002	.002	-.095	-.2070	.039	.884	1.131
q11.15	Market Complexity	H12(b)	-.004	.002	-.095	-.2070	.039	.884	1.131
q11.7.2	Product / Service Complexity	H12(b)	.002	.003	.024	.530	.597	.910	1.099
q11.9	Export Profit Dependence	H13(b)	.003	.001	.222	3.488	.001	.457	2.186
q11.8	Export Sales Dependence	H13(b)	-.001	.001	-.077	-.1210	.227	.456	2.192
Qval	Export Memory Quality	H14(b)	.173	.029	.331	5.978	.000	.605	1.654
q8.51.1	Export Personnel Use	H15(b)	.023	.023	.054	1.015	.311	.658	1.519
q8.51.3	Finance/Accounting Personnel Use	H15(b)	-.018	.022	-.047	-.833	.406	.579	1.728
q8.51.2	Marketing Personnel Use	H15(b)	.039	.025	.088	1.575	.116	.589	1.697
q8.51.4	Production Personnel Use	H15(b)	.011	.023	.029	.495	.621	.527	1.897

Table continues on next page.

q8.51.5	Research and Development Personnel Use	H15(b)	.007	.019	.021	.382	.703	.606	1.651
q8.51.6	Top Management Personnel Use	H15(b)	.059	.024	.131	2.435	.015	.640	1.564
q11.3	Specificity	H16(b)	-.098	.044	-.102	-2.230	.026	.883	1.133
a80	Export Memory Overload	H17(b)	.041	.036	.055	1.146	.253	.796	1.256
	Size	H18(b)	-2.91E-005	.000	-.060	-1.275	.203	.850	1.176
q12.5	Turnover	H18(b)	.017	.012	.071	1.433	.153	.746	1.341

Table 9.36 provides a summary of the results of the final regression on conceptual use of export memory.

Table 9.36. Summary results of final regression on conceptual use of export memory

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square = 34%	
			B	Std. Error	Beta			Tolerance	VIF
1	(Constant)		1.586	.171		9.261	.000		
env_com	Competitive Turbulence	H10(b)	.118	.037	.155	3.223	.001	.843	1.186
env_tec	Technological Turbulence	H10(b)	.097	.032	.148	3.044	.003	.829	1.206
q11.9	Export Profit Dependence	H13(b)	.002	.001	.133	2.981	.003	.985	1.015
Qval	Export Memory Quality	H14(b)	.201	.026	.370	7.843	.000	.877	1.140
q8.51.6	Top Management Personnel Use	H15(b)	.088	.021	.189	4.142	.000	.935	1.070
q11.3	Specificity	H16(b)	-.106	.045	-.107	-2.383	.018	.969	1.032

Table 9.37 shows the results of the ANOVA test for the regression on conceptual use of export memory while Table 9.38 confirms that there is no significant difference between the adjusted R square of the initial regression and the adjusted R square of the final regression.

Table 9.37. ANOVA test for the regression on conceptual use of export memory.

ANOVA ^c						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.539	6	4.590	29.777	.000 ^a
	Residual	51.483	334	.154		
	Total	79.021	340			
2	Regression	30.351	21	1.445	9.473	.000 ^b
	Residual	48.670	319	.153		
	Total	79.021	340			

a. Predictors: (Constant), q11.3, q11.9, env_com, q8.51.6, qval, env_tec

b. Predictors: (Constant), q11.3, q11.9, env_com, q8.51.6, qval, env_tec, q11.15, q11.7.2, size, q11.1, q8.51.3, a8o, env_reg, q8.51.5, q12.5, env_cus, q8.51.1, a1, q8.51.2, q8.51.4, q11.8

c. Dependent Variable: a8c

Table 9.38. Model summary of regression for conceptual use of export memory.

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.590 ^a	.348	.337	.39261	.348	29.777	6	334	.000
2	.620 ^b	.384	.344	.39060	.036	1.229	15	319	.248

a. Predictors: (Constant), q11.3, q11.9, env_com, q8.51.6, qval, env_tec

b. Predictors: (Constant), q11.3, q11.9, env_com, q8.51.6, qval, env_tec, q11.15, q11.7.2, size, q11.1, q8.51.5, q12.5, env_cus, q8.51.1, a1, q8.51.2, q8.51.4, q11.8

c. Dependent Variable: a8c

Table 9.39 provides a summary of hypotheses and individual results for conceptual use of export memory.

Table 9.39. Summary of hypotheses and individual results for conceptual use of export memory.

Conceptual Use of Export Memory			
Independent Variable	Hypothesis Number	Postulated Linkage	Finding
Acquisition of Information	H9(b)	+	ns
Competitive Turbulence	H10(b)	+	+
Market Turbulence	H10(b)	+	ns
Regulatory Turbulence	H10(b)	+	ns
Technological Turbulence	H10(b)	+	+
Experience	H11(b)	-	ns
Export Complexity - Product/Service	H12(b)	+	ns
Export Complexity - Market	H12(b)	+	ns
Export Dependence - Profit	H13(b)	+	+
Export Dependence – Sales	H13(b)	+	ns
Export Memory Quality	H14(b)	+	+
Export Personnel Use	H15(b)	+	ns
Finance/Accounting Personnel Use	H15(b)	-	ns
Marketing Personnel Use	H15(b)	+	ns
Production Personnel Use	H15(b)	+	ns
Research and Development Personnel Use	H15(b)	+	ns
Top Management Personnel Use	H15(b)	+	+
Specificity	H16(a)	+	-
Export Memory Overload	H17(a)	+	ns
Size	H18(a)	+	ns
Size – Market Employees	H19(a)	+	ns

Acquisition of export information was found to be positively related to conceptual use of export memory. This is consistent with hypothesis H9[b].

Competitive and technological turbulences were both found to be positively related to conceptual use of export memory. Results imply that exporters may be inclined to use stored information to find an explanation for their present plight amidst seemingly dynamic changes in the environment (Low and Mohr 2001). This could be the case since even “though greater environmental instability will lead to greater use of information, managers are also more likely to be circumspect toward information because of changing situations” (Menon 1992, p. 63).

Export dependence was found to be positively related to conceptual use of export memory. This was consistent with the hypothesized relationship between export dependence and the conceptual use of export memory. When an organization depends on

its export operation, it would use information to reduce risks of making suboptimal decisions (Belich and Dubinsky; Souchon et al. 2003).

Export memory quality was found to be positively related to conceptual use of export memory. This is consistent with the hypothesized relationship between export memory quality and conceptual use of export memory and also the findings of previous studies (e.g., Jaworski and Kohli 1996; Low and Mohr 2001; Maltz et al. 2001).

Contrary to what was hypothesized in Chapter Four, the results revealed a negative relationship between export specificity and conceptual use of export memory. We expected that companies which are export specific (i.e., ones which have export department/unit) would be more involved in export planning, and thus make use of export information in a conceptual way (Souchon et al. 2003). The result to the contrary may be explained by a possible preference for new information by those who make the plans and the decisions. Those with export department may have more resources to allow them to acquire newer export information. Those who could not afford to do so would simply be satisfied with whatever they already have.

Top management use of export memory is positively related to conceptual use of export memory. The tacit stock of knowledge allow the top management to make sense of the attributes which make certain export activities similar to, different from, and interdependent with its other export activities in other countries (cf., Athanassiou and Nigh 2000). This also allows top management to comprehend better the different export information it receives from different sources.

The quality of acquisition of information did not relate significantly related to the conceptual use of export memory. This runs counter to what the literature suggests (e.g., Maltz et al. 2001). However, this does not mean that the quality of acquisition of information does not enhance the use of export memory in a conceptual way. It may be that the significant factors already explain the variation in use.

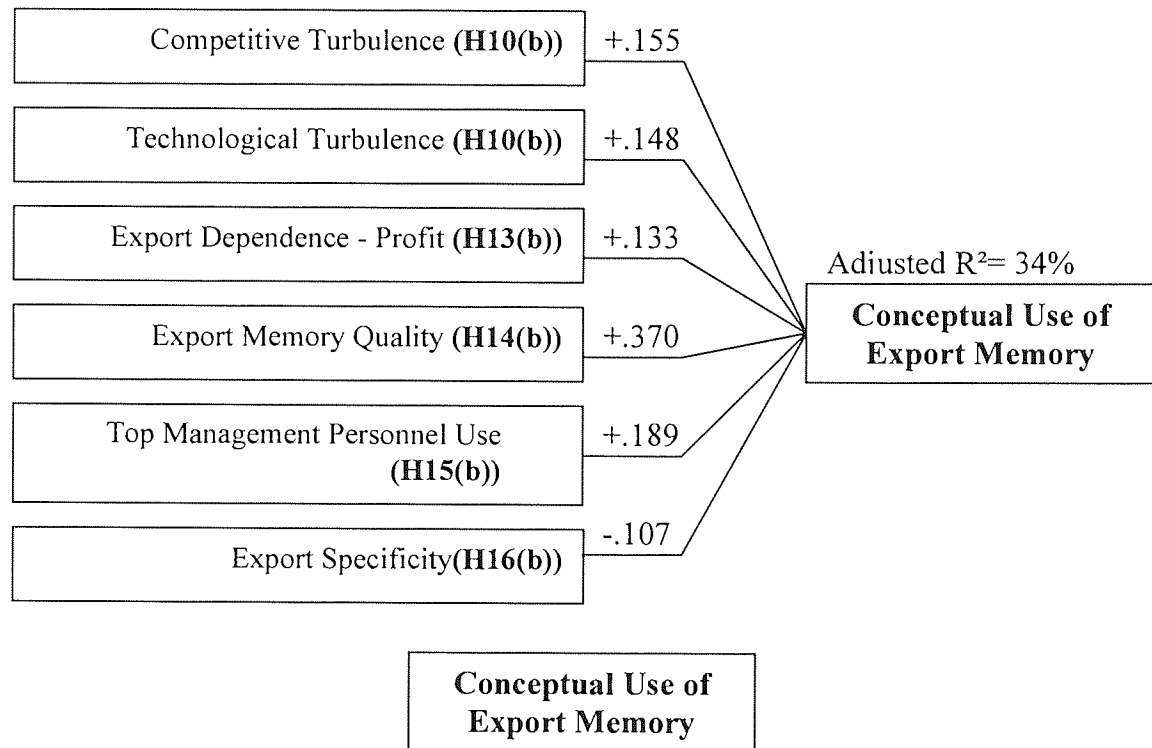
Market turbulence and regulatory turbulence did not show significant relation to the conceptual use of export memory. These two dimensions of environmental turbulence may not be strong enough to be an issue to the exporters (cf., Low and Mohr 2001).

Export memory overload did not also related significantly to the conceptual use of export memory. Similarly, the Qualitative Study found out that exporters even sensed that they do not have enough export information. Thus, the exporters may be using export memory with little difference whether they have an overload of it or not.

The use of export memory by all functional areas, except the use by top management, did not come out with a significant relation to the conceptual use of export memory. As Myers (1997) noted, in export operations, most decisions are made by upper-level management.

The final model of the antecedents to conceptual use of export memory is seen in Figure 9.17.

Figure 9.17. Final model of the antecedents to conceptual use of export memory.



9.3.4. Legitimizing Use of Export Memory

9.3.4.1. Normality of Error Term Distribution

A Shapiro-Wilk test was conducted in order to test the normality of the error term distribution. As shown in Table 9.40 and Figure 9.18, the distribution was normal.

Table 9.40. Shapiro-Wilk test legitimizing use

		Shapiro-Wilk Test	
	Statistic	df	Sig.
ZRE-qval	.994	341	.168

Figure 9.18 Histogram legitimizing use

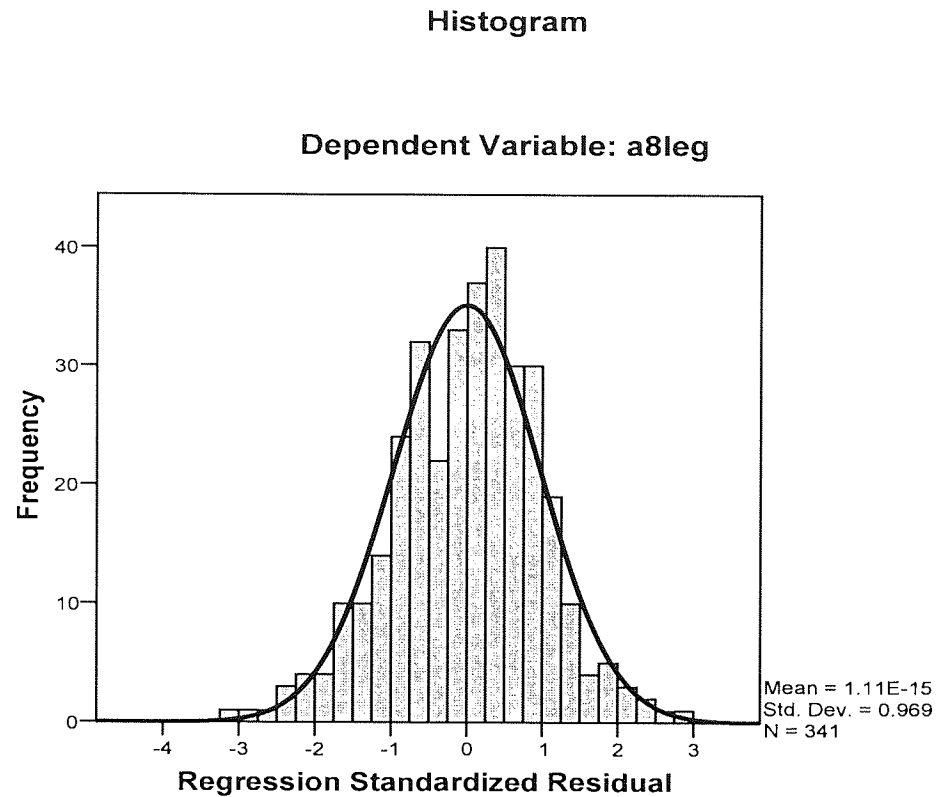
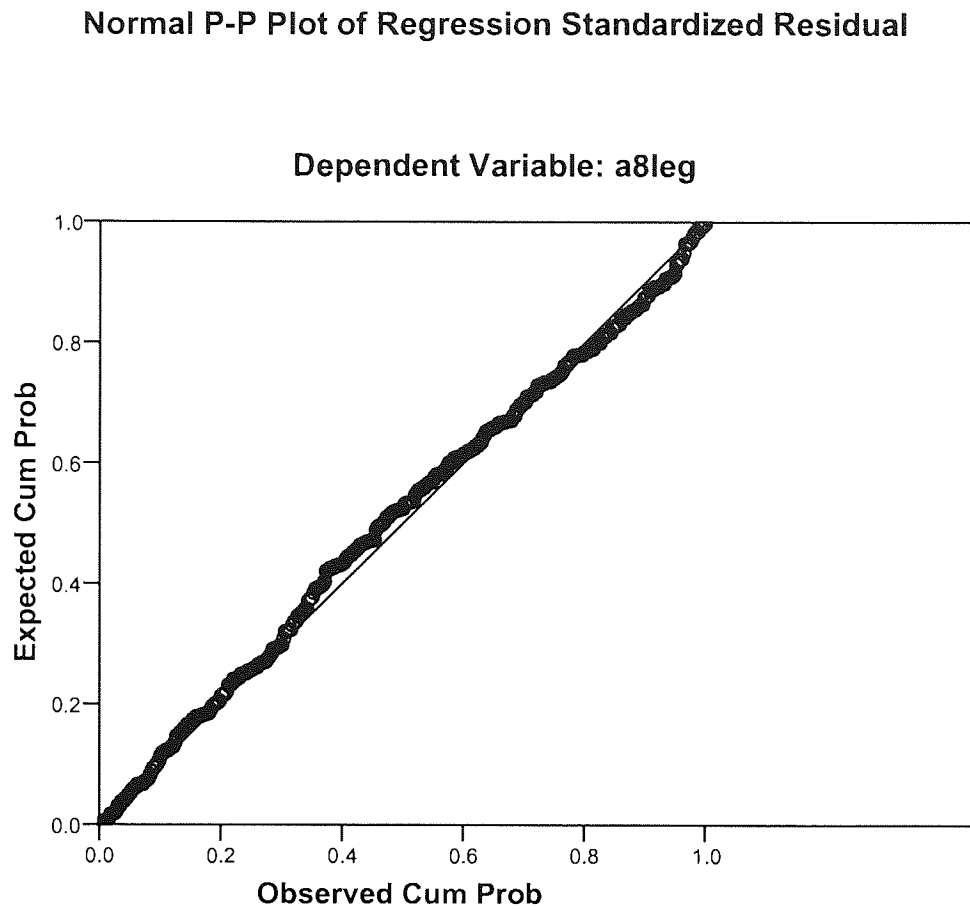


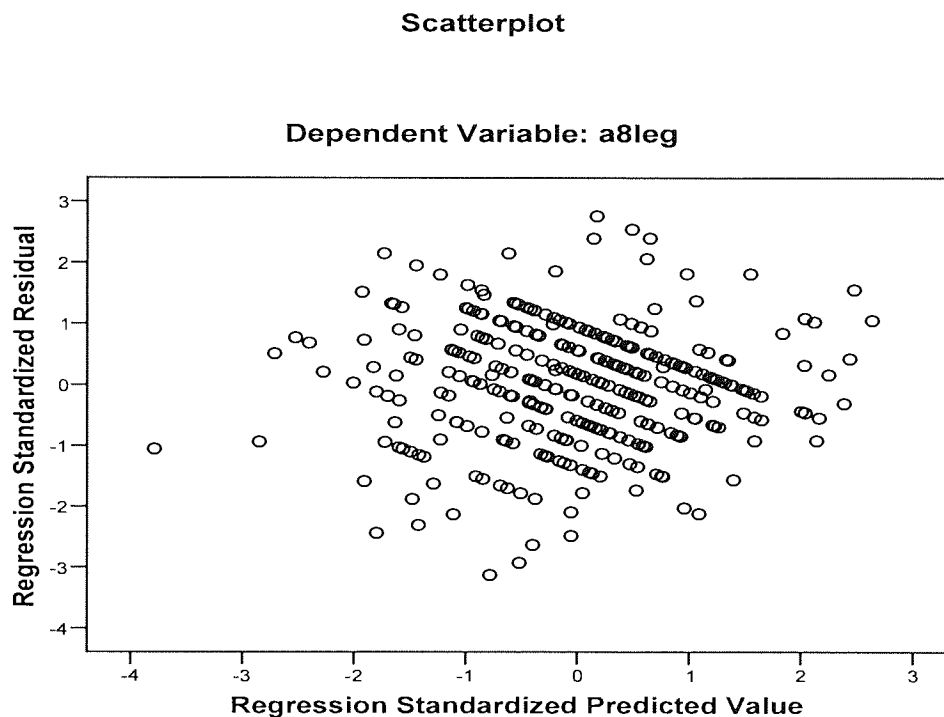
Figure 9.19 Normal P-P plot of regression standardized residual for legitimizing use

9.3.4.2. Linearity and Homoscedasticity

To assess the linearity of the relationships between the legitimizing use with the independent variables, the predicted values of the legitimizing use are plotted against the standardized residual values. These plots can be seen in Figure 9.20. They show no evidence of non-linearity since no specific (e.g., curvilinear) patterns emerge.

Homoscedasticity (i.e., constant variance of residuals) is assessed using the same residual plots. Given that the patterns appear to be similar to the null plot (see Hair et al. 1992), constant variance of error terms is accepted.

Figure 9.20. Scatterplot legitimizing use



9.3.4.3 Independence of Predictor Variables

The tolerance values for each predictor variable in the equation are calculated and are reported in Table 9.32. These tolerance values are all large (i.e., relatively close to one)

which provides additional evidence to suggest that multicollinearity is not an issue in the regression equations presented here.

9.3.4.4. Regression Results and Discussions

In the regression analysis (Table 9.41), five variables have been found to be significant factors related to the legitimizing use of export memory.

Table 9.41. Summary of regression results for legitimizing use of export memory

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square = 30%	
			B	Std. Error	Beta			Tolerance	VIF
1	(Constant)		1.130	.240		4.705	.000		
a1	Acquisition of Information	H9(c)	-.004	.039	-.006	-.103	.918	.660	1.516
env_com	Competitive Turbulence	H10(c)	.093	.046	.114	2.022	.044	.649	1.540
env_tec	Environmental Turbulence	H10(c)	.059	.037	.084	1.589	.113	.740	1.351
env_cus	Market Turbulence	H10(c)	.064	.035	.100	1.804	.072	.676	1.479
env_reg	Regulatory Turbulence	H10(c)	.002	.039	.002	.049	.961	.810	1.234
q11.1	Experience	H11(c)	.000	.003	.009	.170	.865	.804	1.243
q11.15	Market Complexity	H12(c)	-.002	.003	-.036	-.741	.459	.884	1.131
q11.7.2	Product / Service Complexity	H12(c)	-.003	.003	-.049	-1.022	.307	.910	1.099
q11.9	Export Profit Dependence	H13(c)	.002	.001	.149	2.210	.028	.454	2.202
q11.8	Export Sales Dependence	H13(c)	-.001	.001	-.078	-1.152	.250	.453	2.207
qval	Export Memory Quality	H14(c)	.156	.032	.279	4.828	.000	.620	1.612
q8.51.1	Export Personnel Use	H15(c)	.011	.027	.023	.407	.684	.658	1.519
q8.51.3	Finance/Accounting Personnel Use	H15(c)	.025	.025	.058	.971	.332	.583	1.716
q8.51.2	Marketing Personnel Use	H15(c)	.009	.029	.018	.306	.760	.591	1.691
q8.51.4	Production Personnel Use	H15(c)	-.024	.026	-.057	-.914	.361	.532	1.879
q8.51.5	Research and Development Personnel Use	H15(c)	.006	.023	.016	.280	.780	.604	1.656
q8.51.6	Top Management Personnel Use	H15(c)	.082	.028	.165	2.900	.004	.640	1.562

Table continues on next page.

q11.3	Specificity	H16(c)	-.035	.051	-.033	-.674	.501	.886	1.128
a80	Export Memory Overload	H17(c)	.171	.042	.206	4.045	.000	.798	1.253
	Size	H18(c)	6.100E-06	.000	.011	.226	.821	.850	1.176
q12.5	Turnover	H18(c)	.006	.014	.024	.458	.647	.746	1.340

Table 9.42 shows the results of the final regression on legitimizing use of export memory.

Table 9.42. Summary of final regression results for legitimizing use of export memory

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square = 31%	
			B	Std. Error	Beta			Tolerance	VIF
1	(Constant)		1.308	.189		6.931	.000		
env_com	Competitive Turbulence	H10(c)	.146	.039	.179	3.691	.000	.867	1.153
q11.9	Export Profit Dependence	H13(c)	.002	.001	.104	2.270	.024	.979	1.021
qval	Export Memory Quality	H14(c)	.175	.028	.302	6.323	.000	.895	1.118
q8.51.6	Top Management Personnel Use	H15(c)	.087	.023	.175	3.719	.000	.922	1.084
a80	Export Memory Overload		.176	.040	.212	4.368	.000	.868	1.152

Table 9.43 presents the results of the ANOVA test for the regression on legitimizing use of export memory while Table 9.44 shows that there is no significant change between the adjusted R square of the initial regression and the adjusted R square of the final regression.

Table 9.43. ANOVA test for regression on legitimizing use of export memory

ANOVA ^c						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.395	5	5.679	30.862	.000 ^a
	Residual	61.646	335	.184		
	Total	90.041	340			
2	Regression	30.778	21	1.466	7.889	.000 ^b
	Residual	59.263	319	.186		
	Total	90.041	340			

a. Predictors: (Constant), a8o, q8.51.6, q11.9, qval, env_com

b. Predictors: (Constant), a8o, q8.51.6, q11.9, qval, env_com, q11.7.2, size, q11.15, q11.3, q11.1, q8.51.4, env_reg, env_tec, q12.5, q8.51.1, env_cus, q8.51.2, a1, q8.51.5, q8.51.3, q11.8

c. Dependent Variable: a8leg

Table 9.44. Model summary of regression on legitimizing use of export memory

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.562 ^a	.315	.305	.42897	.315	30.862	5	335	.000
2	.585 ^b	.342	.298	.43102	.026	.802	16	319	.684

a. Predictors: (Constant), a8o, q8.51.6, q11.9, qval, env_com

b. Predictors: (Constant), a8o, q8.51.6, q11.9, qval, env_com, q11.7.2, size, q11.15, q11.3, q11.1, q8.51.4, env_reg, env_tec, q12.5, q8.51.1, env_cus, q8.51.2, a1, q8.51.5, q8.51.3, q11.8

c. Dependent Variable: a8leg

Table 9.45 presents a summary of the hypotheses and individual results for legitimizing use of export memory.

Table 9.45. Summary of hypotheses and individual results for legitimizing use of export memory.

Legitimizing Use of Export Memory			
Independent Variable	Hypothesis Number	Postulated Linkage	Finding
Acquisition of Information	H9(c)	-	ns
Competitive Turbulence	H10(c)	+	+
Market Turbulence	H10(c)	+	ns
Regulatory Turbulence	H10(c)	+	ns
Technological Turbulence	H10(c)	+	ns
Experience	H11(c)	-	ns
Export Complexity - Market	H12(c)	-	ns
Export Complexity - Product / Service	H12(c)	-	ns
Export Dependence - Profit	H13(c)	-	+
Export Dependence - Sales	H13(c)	-	ns
Export Memory Quality	H14(c)	-	+
Export Personnel Use	H15(c)i	+	ns
Marketing Personnel Use	H15(c)i	+	ns
Finance/Accounting Personnel Use	H15(c)ii	-	ns
Production Personnel Use	H15(c)ii	-	ns
Research and Development/Personnel Use	H15(c)ii	-	ns
Top Management Personnel Use	H15(c)ii	-	+
Specificity	H16(c)	+	ns
Export Memory Overload	H17(c)	+	+
Size - Employees	H18(c)	+	ns
Size - Turnover	H18(c)	+	ns

Competitive turbulence was found to be positively related to legitimizing use of export memory. Since dynamic environments may make it more difficult to assess situations from export memory, exporters may be inclined to base their decisions on other sources and then just look through their stored information to justify their decisions.

Experience is also positively related to legitimizing use of export memory. Exporters with experience may feel more confident to use their intuition which is the result of accumulated experience. As found in earlier studies, use of intuition is often favored in new situations requiring quick decisions (Simon 1986; Prietula and Simon 1989; March and Simon 1993; Burke and Miller 1999; Khatri and Ng 2000; Lieberman 2000; Jett and Brown 2002). Years of experience could provide the “decision maker with the internal ability to second-guess what this market will require, before needs are actually voiced by

customers (an ability which may be akin to being intuitive as far as this market is concerned)" (Vyas and Souchon 2003, p. 76). However, since intuition is tacit and nonmaterial, export managers may choose more concrete export memory (e.g. documents), to support their decision earlier based on their intuition (cf. Diamantopoulos and Souchon 1996; Vyas and Souchon 2003).

Export profit dependence was found to be positively related to legitimizing use of export memory. As Vyas and Souchon (2003, p. 74) argued, "this type of symbolic use may secure financial cooperation for adapting the product mix to foreign demand (and thereby serving export customer needs better)" by reducing intra-company conflict and promote better relations among its members (Raven and Kruglanski 1970

Export memory quality is positively related to legitimizing use of export memory. Although this runs contrary to the hypothesized relation, it is understandable since managers may use export memory for different purposes, such as increasing the resource support provided to this operation. In those cases, managers may use export memory – especially, quality export memory - to legitimize their decisions towards this specific goal which may be implicit (Vyas and Souchon 2003).

The use by top management was positively related to the legitimizing use of export memory. It might come as a surprise to see that top management use export memory in a legitimizing way. But Asians are known to use their intuition - which is tacit - extensively in decision making (e.g., Haley 1997) and thus have recourse to the more explicit part of export memory to strengthen their views.

Lastly, export memory overload is positively related to legitimizing use of export memory. This relationship is consistent to what was hypothesized in Chapter 4. It may happen that the overload of export memory produces confusion among the export decision makers. In order to overcome this, decision makers may just make a haphazard decision and find an element in their export memory that can support that decision (cf. Vyas and Souchon 2003)

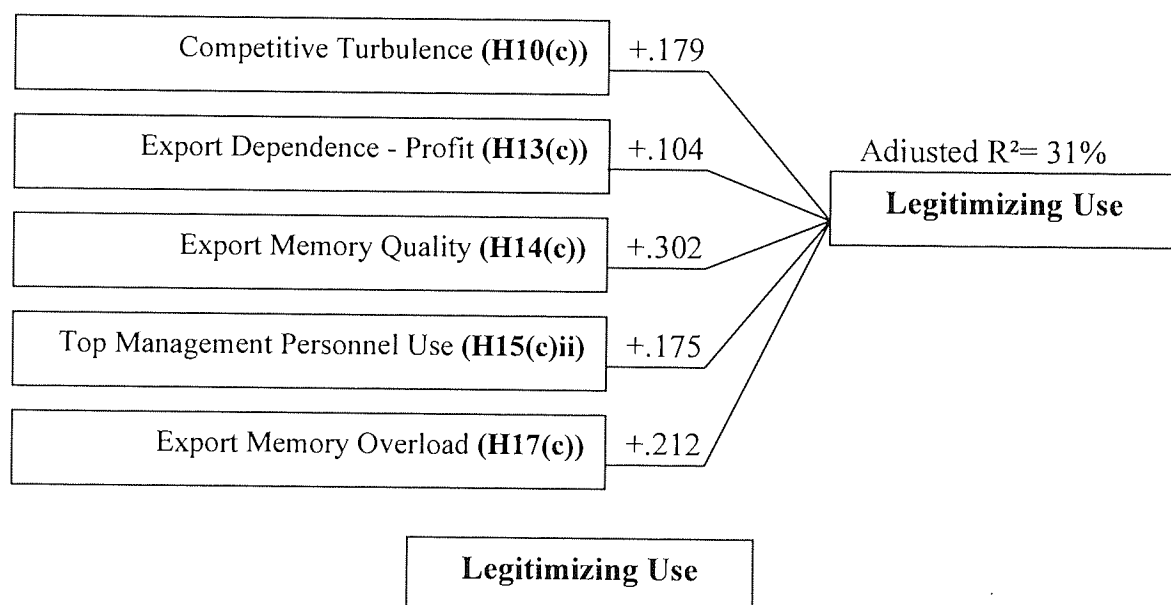
The quality of acquisition of information was found to have no significant relation with the legitimizing use of export memory contrary to the postulated negative relation.

All the dimensions of environmental turbulence except for competitive turbulence did not have a significant relation with the legitimizing use of export memory.

Neither export experience nor export market complexity was significantly related to the legitimizing use of export memory.

Figure 9.21 shows the final model of the antecedents to legitimizing use of export memory.

Figure 9.21. Final model of the antecedents to legitimizing use of export memory.



9.3.5. Export Memory Manipulation

9.3.5.1. Normality of Error Term Distribution

A Shapiro-Wilk test was conducted in order to test the normality of the error term distribution. As shown in Table 9.46 and Figure 9.22 the distribution was normal.

Table 9.46. Shapiro-Wilk test export memory manipulation

		Shapiro-Wilk Test	
	Statistic	df	Sig.
ZRE-qval	.993	341	.141

Figure 9.22. Histogram export memory manipulation

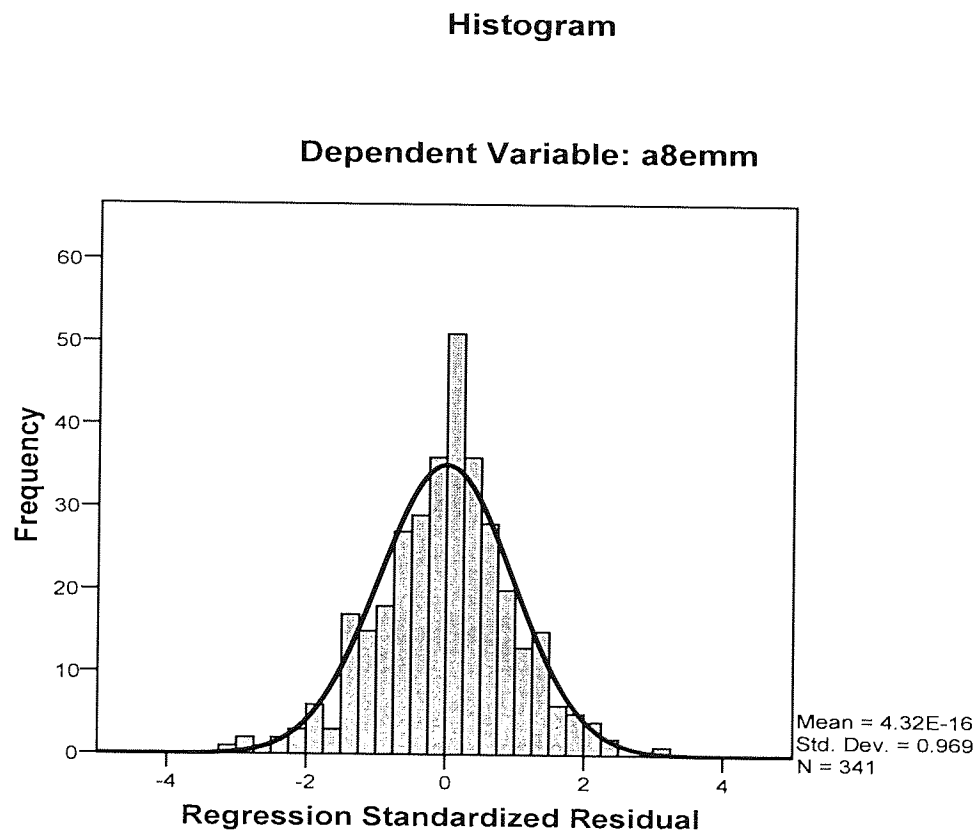
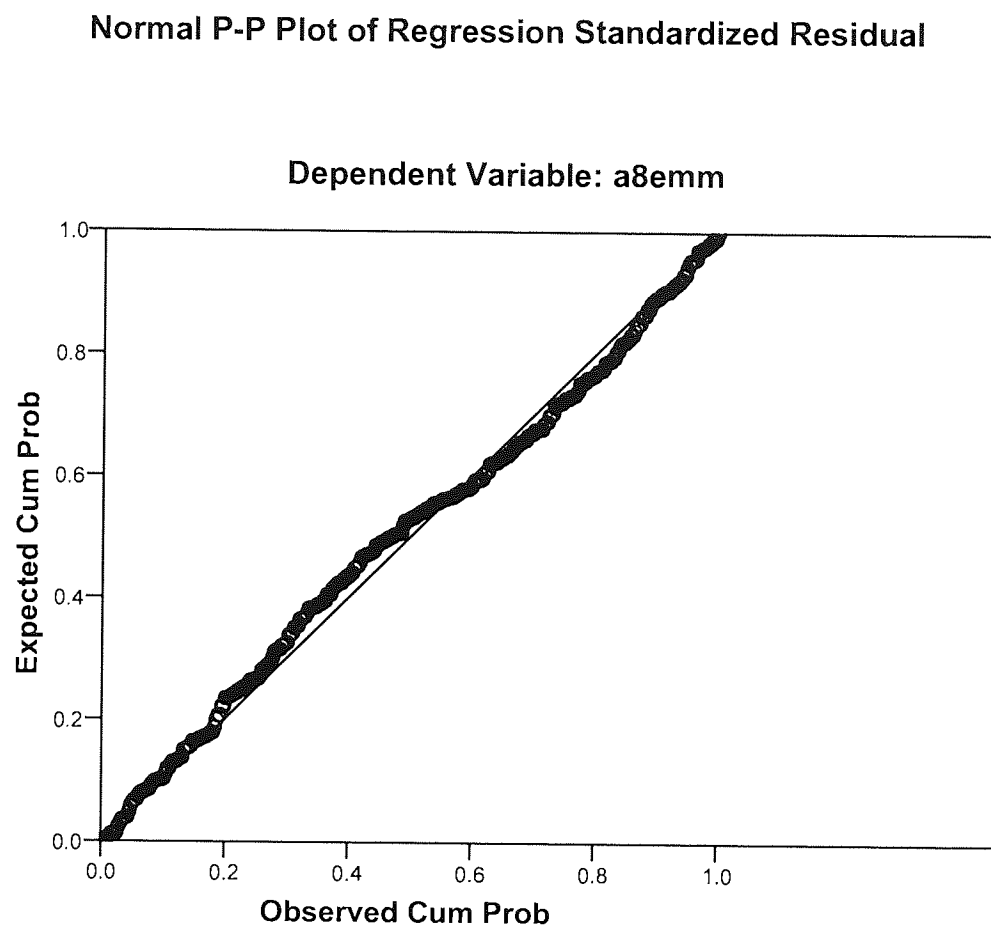


Figure 9.23. Normal P-P plot of regression standardized residual export memory manipulation

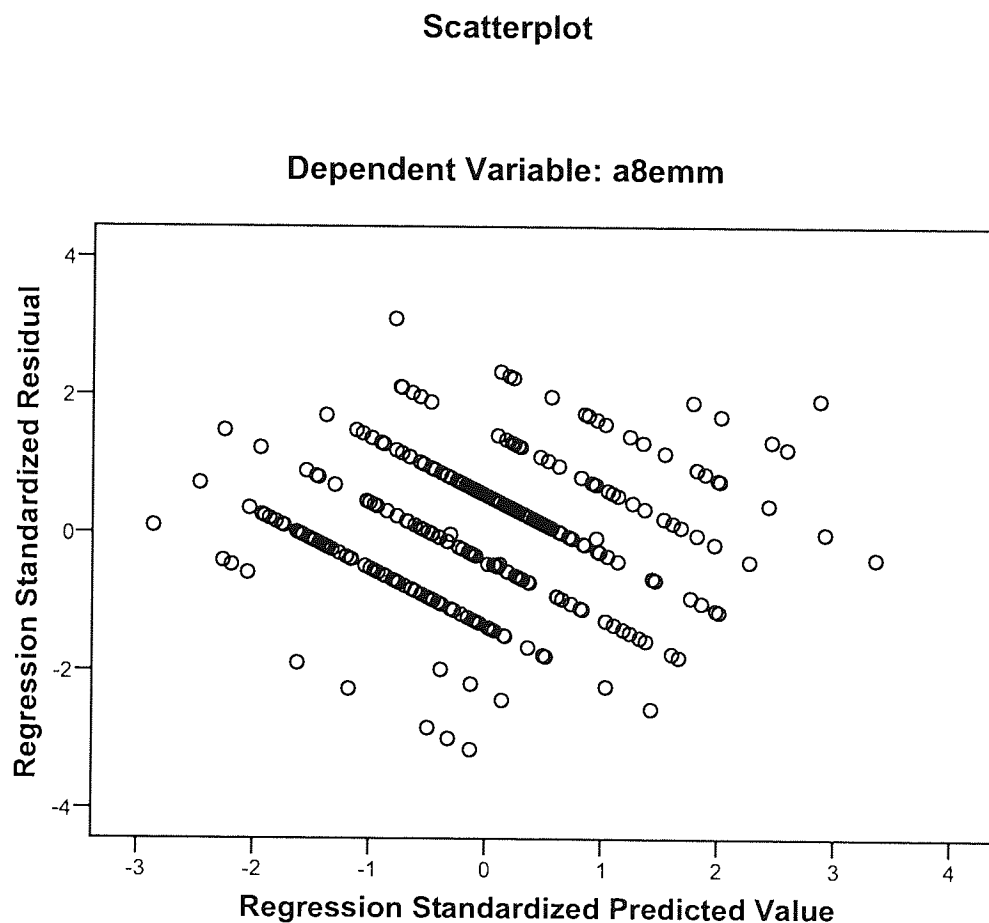


9.3.5.2. Linearity and Homoscedasticity

To assess the linearity of the relationships between the memory manipulation with the independent variables, the predicted values of memory manipulation are plotted against the standardized residual values. These plots can be seen in Figure 9.24. They show no evidence of non-linearity since no specific (e.g., curvilinear) patterns emerge.

Homoscedasticity (i.e., constant variance of residuals) is assessed using the same residual plots. Given that the patterns appear to be similar to the null plot (see Hair et al. 1992), constant variance of error terms is accepted.

Figure 9.24. Scatterplot export memory manipulation



9.3.5.3. Independence of Predictor Variable

The tolerance values for each predictor variable in the equation are calculated and are reported in Table 9.35. These tolerance values are all large (i.e., relatively close to one) which provides additional evidence to suggest that multicollinearity is not an issue in the regression equations presented here.

9.3.5.4. Regression Results and Discussions

From the initial regression results presented in Table 9.47, four factors were found to be significantly related to export memory manipulation: (1) export dependence – profit, (2) export memory quality, (3) production personnel use, and (4) export memory overload.

Table 9.47. Summary of regression results for export memory manipulation

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square = 39%	
			B	Std. Error	Beta			Tolerance	VIF
1	(Constant)		.911	.293		3.115	.002		
al	Acquisition of Information	H9	.043	.048	.047	.908	.364	.660	1.516
env_com	Competitive Turbulence	H10(c)	.091	.056	.086	1.633	.104	.649	1.540
env_tec	Environmental Turbulence	H10(c)	.017	.045	.018	.372	.710	.740	1.351
env_cus	Market Turbulence	H10(c)	-.022	.043	-.026	-.510	.611	.676	1.479
env_reg	Regulatory Turbulence	H10(c)	-.016	.047	-.016	-.335	.738	.810	1.234
q11.1	Experience	H11(c)	-.003	.003	-.045	-.962	.337	.804	1.243
q11.15	Market Complexity	H12	.003	.003	.045	.994	.321	.884	1.131
q11.7.2	Product/Service Complexity Diversified Product	H12	.004	.004	.042	.953	.341	.910	1.099
q11.9	Export Profit Dependence	H13(c)	.003	.001	.161	2.564	.011	.454	2.202
q11.8	Export Sales Dependence	H13(c)	-.002	.001	-.107	-1.695	.091	.453	2.207
Qval	Export Memory Quality	H14(c)	-.114	.039	-.156	-2.905	.004	.620	1.612
q8.51.1	Export Personnel Use	H15(c)i	-.044	.033	-.070	-1.337	.182	.658	1.519
q8.51.2	Marketing Personnel Use	H15(c)i	.016	.035	.025	.452	.651	.591	1.691

Table continues on next page.

q8.51.3	Finance/Accounting Personnel Use	H15(c)ii	-.050	.031	-.089	-1.604	.110	.583	1.716
q8.51.4	Production Personnel Use	H15(c)ii	.085	.032	.154	2.661	.008	.532	1.879
q8.51.5	Research and Development Personnel Use	H15(c)ii	-.020	.028	-.040	-.730	.466	.604	1.656
q8.51.6	Top Management Personnel Use	H15(c)ii	.037	.034	.056	1.062	.289	.640	1.562
q11.3	Specificity	H16(c)	.108	.063	.078	1.725	.085	.886	1.128
a80	Export Memory Overload	H17(c)	.653	.052	.600	12.666	.000	.798	1.253
	Size	H18	-1.09E-05	.000	-.015	-.333	.740	.850	1.176
q12.5	Turnover	H18	-.022	.017	-.062	-1.268	.206	.746	1.340

Table 9.48 below shows the results of the final regression.

Table 9.48. Results of final regression on export memory manipulation.

Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square = 38%	
			B	Std. Error	Beta			Tolerance	VIF
1	(Constant)		.850	.197		4.318	.000		
q11.9	Export Profit Dependence	H13(c)	.002	.001	.084	1.972	.049	.990	1.010
Qval	Export Memory Quality	H14(c)	-.088	.034	-.116	-2.624	.009	.922	1.085
q8.51.4	Production Personnel Use	H15(c)ii	.068	.024	.123	2.852	.005	.979	1.021
a80	Export Memory Overload	H17(c)	.685	.048	.629	14.290	.000	.934	1.071

Table 9.49 presents the ANOVA test results for the regression on export memory manipulation while Table 9.50 confirms that there is no significant change between the adjusted R square of the initial regression and the adjusted R square of the final regression.

Table 9.49. ANOVA test for export memory manipulation.

ANOVA^c

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	60.587	4	15.147	53.957	.000 ^a
	Residual	94.322	336	.281		
	Total	154.909	340			
2	Regression	66.340	21	3.159	11.378	.000 ^b
	Residual	88.568	319	.278		
	Total	154.909	340			

a. Predictors: (Constant), a8o, q8.51.4, q11.9, qval

b. Predictors: (Constant), a8o, q8.51.4, q11.9, qval, q11.15, size, q11.7.2, q11.3, q11.1, env_cus, q8.51.6, env_reg, env_tec, q12.5, q8.51.1, q8.51.2, a1, env_com, q8.51.5, q8.51.3, q11.8

c. Dependent Variable: a8emm

Table 9. 50. Model summary for regression on export memory manipulation.

Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.625 ^a	.391	.384	.52983	.391	53.957	4	336	.000
2	.654 ^b	.428	.391	.52692	.037	1.219	17	319	.247

a. Predictors: (Constant), a8o, q8.51.4, q11.9, qval

b. Predictors: (Constant), a8o, q8.51.4, q11.9, qval, q11.15, size, q11.7.2, q11.3, q11.1, env_cus, q8.51.6, env_5, q8.51.1, q8.51.2, a1, env_com, q8.51.5, q8.51.3, q11.8

c. Dependent Variable: a8emm

It may be that under memory overload conditions, export memory may be manipulated to be made more understandable (Vyas and Souchon 2003). This would be a likely course since memory overload can lead to greater confusion and may lead decision makers to refrain from making decisions (c.f. Bardin and Majer 1983). Thus, results of the study run contrary to Williams' (1999, p. 50) findings that "symbolic information use and information overload were negatively related." However, this validates Diamantopoulos

and Souchon's (1999) earlier view. From these, it could be said that making sense of an overload of memory may drive export managers to manipulate this memory.

Export profit dependence was found to be positively related to export memory manipulation. Decision makers in the organization could easily manipulate information to serve their own ends especially in cases where they hold so much power from the exercise of their function in the entire organization.

The use by production personnel is positively related to the manipulating use of export memory. It is very possible that interdepartmental conflict exists within the organization. For instance, the production department may find itself in conflict with export department. As such, the export department might put a lot of pressure on the production department to produce on time. When misunderstandings arise, production department might manipulate information to support their own side.

Export memory quality was found to be negatively related to export memory manipulation. Those who are aware of the quality of export memory will be more careful in using it. They may see manipulating a quality memory a waste of resources.

The rest of the variables were found not to have a significant relation to the manipulating use of export memory.

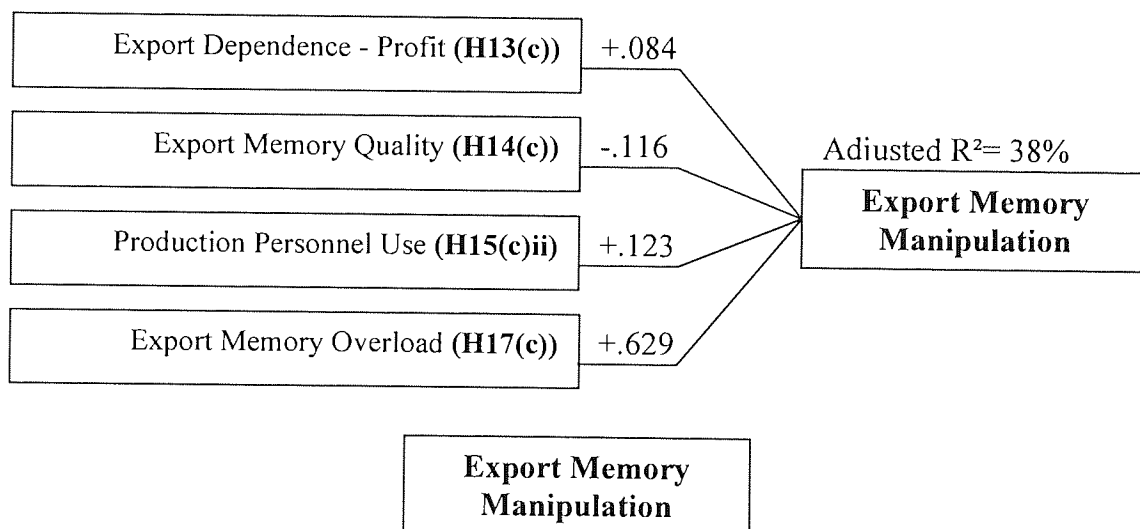
None of the use of export memory by functional personnel, except production personnel use, came out to be statistically significantly related to the manipulating use of export memory.

None of the environmental turbulences has a significant relation to manipulating use either.

A summary of the hypotheses and individual results for export memory manipulation is provided in Table 9.51 while the final model of the antecedents to export memory manipulation is seen in Figure 9.25.

Table 9.51. Summary of hypotheses and individual results for export memory manipulation.

Export Memory Manipulation			
Independent Variable	Hypothesis Number	Postulated Linkage	Finding
Acquisition of Information	H9(c)	-	ns
Competitive Turbulence	H10(c)	+	-
Market Turbulence	H10(c)	+	ns
Regulatory Turbulence	H10(c)	+	ns
Technological Turbulence	H10(c)	+	ns
Experience	H11(c)	-	ns
Export Complexity - Market	H12(c)	-	ns
Export Complexity - Product / Service	H12(c)	-	ns
Export Dependence - Profit	H13(c)	-	+
Export Dependence - Sales	H13(c)	-	ns
Export Memory Quality	H14(c)	-	-
Export Personnel Use	H15(c)i	+	ns
Marketing Personnel Use	H15(c)i	+	ns
Finance/Accounting Personnel Use	H15(c)ii	-	ns
Production Personnel Use	H15(c)ii	-	+
Research and Development Personnel Use	H15(c)ii	-	ns
Top Management Personnel Use	H15(c)ii	-	ns
Specificity	H16(c)	+	ns
Export Memory Overload	H17(c)	+	+
Size - Employees	H18(c)	+	ns
Size - Turnover	H18(c)	+	ns

Figure 9.25. Final model of the antecedents to export memory manipulation.

9.4. Discussion of Results

From the survey, the acquisition of information quality and the export memory quality have been seen to significantly affect the extent of export memory use. Specifically, acquisition of information quality and export memory quality are both positively related to extent of export memory use. The more effort the organizations put on acquiring export information, the more likely it will use the resulting export memory developed through that process. Investment in terms of time, effort, and money would be enough reasons to justify the use of export memory.

Export memory quality also determines how it used. This means a positive relation between export memory quality and export memory use. Since export memory can be considered an asset and quality assets are more valuable than those of lesser quality, the use of quality export memory may simply be a logical outcome of its quality trait.

But there was no significant relation detected between instrumental use of export memory and environmental turbulence. This is partly because of the greater processing needed of new information (Belich and Dubinsky 1999). This could also be due to the general feeling among Filipino exporters uncovered during the Qualitative Study that they do not have enough information on the export market anyway. It's possible that the exporters would use whatever export memory they have regardless of the environmental turbulence.

A total of four factors yielded a significant relationship with instrumental use of export memory. Technological turbulence, export memory quality, and top management use are positively related to the instrumental use of export memory while export specificity is negatively related to export memory use.

Technological growth is for some companies a cumulative process (Moore 2007). Their knowledge and practice of technology builds on past experience and practice. Many companies face tough competition from China in terms of pricing, and would have to

respond in terms of lower prices or better quality products. Besides lowering labor cost, cutting prices and achieving better quality products can be achieved, among other ways, through better technology (e.g., Eppinger and Chitkara 2006). Thus, many companies may, in fact, be using technology to offer better products within a competitive price (e.g., Bell et al. 2006). Thus, when technology changes, export memory is used more in a rational way, i.e., in an instrumental way with the idea that responding rationally to technological changes will bring the organizations competitive edge.

When companies are highly dependent on their export operation for profits, export memory will be used more directly and judiciously. Companies that seek profitability as a goal normally achieve it through efficient production and by introducing products modeled after existing ones (Walker and Ruekert 1987). This implies standardized operations where the information they need already exists (Belich and Dubinsky 1999).

A higher memory quality also gives way to a higher use of export memory in an instrumental way. Organizations will be more confident in using good quality export memory in a direct way to solve specific problems. This is consistent with previous studies (cf., Toften and Olsen 2004).

Top management also uses export memory in an instrumental way. Since part of top management duty is to make strategic decisions, a look at the past will give it greater basis for making sound strategic or even tactical export decisions.

Six factors have turned out to be significant factors affecting the conceptual use of export memory. Technological turbulence, competitive turbulence, export profit dependence, export memory quality, and top management use have all figured out to be positive factors affecting the conceptual use of export memory. On the other hand, export specificity is negatively related to the instrumental use of export memory. Basically, reasons for their positive or negative effects are similar to those given in the instrumental use of export memory.

Three are significant factors affecting the manipulative use of export memory. Export profit dependence and export memory overload are positively linked to the manipulative

use of export memory while export memory quality is negatively linked to the manipulative use of export memory. When organizations depend a lot on its export operation, people involved in the export operation may manipulate information to push their ideas which might be different from those that the data or policy would allow. Sometimes, export memory might become a hindrance to “out-of-the-box” decisions which people involved in making export decisions find important, if not even necessary. To a certain extent, they may see themselves involved in manipulating export memory to advance what they think would be a strategic move for the company. These findings lend support to Diamantopoulos and Souchon’s (1996) findings that instrumental or conceptual use, (as per their model) and symbolic use rarely co-exist. From the results, it could be said that propensity for instrumental and conceptual use of export memory negates interest for symbolic use.

Finally, export memory overload leads to a greater manipulative use of export memory. In cases where the level of overload leads to confusion, export memory users may advertently or inadvertently distort information. For example, export memory users in summarizing export memory may inadvertently distort information from mere ignorance and confusion. Export memory users may also erroneously simplify export information to make their lives less complicated without considering the possible negative effect it may have on export performance.

When export memory quality is high, it will be less used in a manipulative way. Quality memory would provide useful and relevant information to the organization. A distortion of this export memory is tantamount to a direct rejection of what is deemed to be a useful asset.

Five factors turned out to be significantly related to the legitimizing use of export memory: competitive turbulence, export profit dependence, export memory quality, top management use, and export memory overload.

Competitive turbulence is positively linked to the legitimizing use of export memory. Since export environments tend to be more dynamic than domestic ones (Leonidou and

Katsikeas 1997), exporting organizations may need to make quick decisions to address the changes and the uncertainties in such ever changing environment (Parikh 1994). As a result, many export managers may end up basing their decisions on gut feel or intuition (Calof 1994; Crick and Czinkota 1995) and thus end up using export memory as support for the decisions they have already made.

This research has considered intuition as part of export memory (c.f. Nonaka and Takeuchi. 1995; Nilakanta et al. 2006) since it is actually a resource developed through years of experience (Jett and Brown 2002). Intuition, or “gut feeling” is commonly used in decision making among top-level managers (Parikh, 1994, p. 6). This study has reinforced experience as a source of intuition (Weiss and Bucuvalas 1977; Grønhaug and Graham 1987; Schoemaker and Russo 1993; Leonidou and Adams-Florou 1999), and other marketing knowledge (cf. Gibb and Scott 1986; Seringhaus 1988), that encourages informal means of information acquisition (Calof 1994; Williams 2003). But as Williams (2003, p. 52) emphasizes, “the use of intuition, based on experience, is not necessarily a bad thing, particularly when export marketing information is difficult to obtain” (Williams, p. 52). And as has been mentioned earlier, intuition is a capacity that grows with experience. Thus, it may be possible that the reported legitimizing use of export memory is actually an instrumental use of export memory. However, since intuition is a capacity that cannot be seen or touch, it would be difficult to manifest it as basis of one’s decision. Export managers may then have recourse to those aspects of export memory which are more explicit, e.g. standard operating procedure. The resulting confusion may then explain why export managers use export memory in a legitimizing way when in fact they are also using them in an instrumental way when they use their intuition.

Positive relations with legitimizing use of export memory have been registered also by export profit dependence, export memory quality, export memory overload and top management personnel use. Top management of exporting firms in the Philippines are mostly composed of Filipino Chinese who are known to depend a lot on their intuition when making decisions. This practice for many has proven to be beneficial (Deshpande and Zaltman 1982; Kast and Rozenzweig 1979). Again, their impression of legitimizing use of memory may in fact be simply an instrumental use of export memory. Intuition as

a powerful source of export knowledge is implicit and may thus have to be justified through more explicit forms of export memory, e.g. policies.

In the case of export memory overload, its occurrence may actually feed the export memory users with enough export knowledge that export memory users could already base their decisions from what they already know. Again intuition may play an important part here. It is also possible that the confusion which an overload of export memory brings with it, could trigger decision makers to simply make decisions hastily and simply find in export memory supporting grounds for their action (Sabatier 1978; Menon and Varadarajan 1992; Toften and Olsen 2004).

A summary of export memory use findings discussed in this section is presented in Table 9.52.

Table 9.52. Summary of export memory use findings.

Export Memory Use Findings						
Independent Variable	H	Dependent Variable				
		Extent of Memory Use	Instrumental Use	Conceptual Use	Symbolic Use	
					Memory Manipulation	Legitimizing Use
Acquisition of Information Quality	H9	+	ns	ns	ns	ns
Technological Turbulence	H10	ns	+	+	ns	ns
Market Turbulence	H10	ns	ns	ns	ns	ns
Competitive Turbulence	H10	ns	ns	+	ns	+
Regulatory Turbulence	H10	ns	ns	ns	ns	ns
Experience	H11	ns	ns	ns	ns	ns
Export Complexity - Market	H12	ns	ns	ns	ns	ns
Export Complexity - Product/Service	H12	ns	ns	ns	ns	ns
Export Dependence - Sales	H13	ns	ns	ns	ns	ns
Export Dependence - Profit	H13	ns	ns	+	+	+
Export Memory Quality	H14	+	+	+	-	+
Export Personnel Use	H15	ns	ns	ns	ns	ns
Finance/ Accounting Personnel Use	H15	ns	ns	ns	ns	ns
Marketing Personnel Use	H15	ns	ns	ns	ns	ns
Production Personnel Use	H15	ns	ns	ns	+	ns
Top Management Personnel Use	H15	ns	+	+	ns	+
Export Specificity	H16	ns	-	-	ns	ns
Export Memory Overload	H17	ns	ns	ns	+	+
Size - Employees	H18	ns	ns	ns	ns	ns
Size - Turnover	H18	ns	ns	ns	ns	ns

Analyzing the relationships of each independent variable with the different uses of export memory will bring greater light on its significance.

Acquisition of information is only significantly related to the extent of export memory use. It does not have other significant relations to the other export memory use

dimensions. This may imply that as organizations acquire more information, they tend to use more of whatever memory it has. However, the way the export memory is used is not related to the quality of export information acquisition.

Technological turbulence is related significantly only to the instrumental and conceptual use of export memory. As mentioned earlier, the strong competition faced by Philippine exporters, makes them want to be more responsive to technological changes in their respective industries, taking this as an occasion to either defend their position or be on the offensive.

Market turbulence is not significantly related to any of the export use dimensions. It is possible that relatively market characteristics do not change as much as the other environmental factors to make it a relevant issue among exporters.

Competitive turbulence is significantly related to conceptual use and to legitimizing use of export memory.

Regulatory turbulence is not significantly related to any of the export use dimensions.

Export experience is significantly related only to the conceptual use of export memory. A better measurement of export experience may be needed to fully capture the richness of this construct and thereby see more clearly its relation to export memory use.

Export market complexity is significantly related to both the instrumental and conceptual uses of export memory.

However, export product complexity does not significantly relate to any of the export memory uses.

Neither does export sales dependence, perhaps because profit dependence may have already captured the explanatory power of export sales dependence.

Export profit dependence is positively related to conceptual, memory manipulation, and legitimizing uses of export memory.

Export memory quality proved to be significantly related to all the export memory use dimensions, except to memory manipulation where it is negatively related.

Only top management personnel use turn out to have a significant relation to export memory use. All other factors concerning export memory use by functional areas do not have any significant relation to export memory use. This might be because Asian management decision making normally rests on top management especially in small and medium enterprises. The ones who make actual decisions are the owner/managers of enterprises. This is also consistent with the findings of Myer (1997) that showed that most decisions in export operations are actually made by top management to allow coordination across markets. They are expected to use their export memory in a rational way. However, there are instances when top management may have made decisions based on other reasons and just needed to find a “rational” support for their decision, thus, the legitimizing use of export memory.

Export specificity is negatively related to the instrumental and conceptual uses of export memory.

Export memory overload, as expected, is positively related to memory manipulation and legitimizing uses. Again, due to the confusion that overload may cause in organization, managers are in a better position to manipulate the memory they have to serve their own specific agenda. The managers faced with an overload of export memory may look for other sources to base their decisions and draw from export memory what can well legitimize their decisions.

Finally, size, based on both the number of employees and on turnover, does not have any significant relation to export memory use dimensions.

Overview of Chapter Ten: EXPORT PERFORMANCE

Chapter Ten: EXPORT PERFORMANCE

10.1. Descriptive Analysis of Export Performance Index

10.1.1. Export Growth

10.1.1.1. Growth in Export Sales

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10.3.2.4.1. Effect of Export Memory Use on Export Performance

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10.3.2.4.2.1. Export Memory Overload

Chapter Ten: EXPORT PERFORMANCE

“Export performance,” explains Katsikeas et al. (2000, p. 501), “is a complex phenomenon involving organizational inputs and outputs (Chakravarthy 1986; Lewin and Minton 1986), which are variously viewed and assessed.” Thus, export performance is a multidimensional construct (Bonoma and Clark 1988; Bhargava et al. 1994) which requires multi-item measurement (e.g., Madsen 1987; Cadogan et al. 2002). So, in order to test the hypotheses on export performance, a multi-item measure was constructed.

Export performance was conceptualized in this research via first and second order constructs. The main export performance construct was captured using a formative index because the export performance construct is likely a function of the level of the different performance indicators. Furthermore, an index of overall export performance was developed to simplify the testing of the final set of hypotheses pertaining to the impact of export memory use on export performance.

This chapter explains the development of the export performance index in three parts. First is a descriptive analysis of each of the three export performance dimensions used in coming up with the global export performance index. These are export growth, relative export performance, and satisfaction with export activities. The second part involves the measurement development procedure for the overall export performance variable. The third part explains the hypotheses testing methodology for export performance involving a moderated approach to regression analysis. After the development of the export performance index, the results of the regression equations (linking export memory use to export performance) are discussed together with the effects of moderating variables, namely export memory overload, market turbulence, technological turbulence, regulatory turbulence, and competitive turbulence.

Furthermore, in response to Cavusgil and Zou's (1994) plea for the use of "strategic considerations" when examining export performance, the latter is not only assessed in terms of sales, profits, growth, but also in relation to competitors and other exporters from other industries, and also in relation to the company's strategic objectives. The broad dimensions of export performance (e.g., Souchon and Durden 2002) captured within the frame of this study are the following:

1. Export Growth
 - Growth in Export Sales
 - Growth in Export Profitability
2. Relative Export Performance
 - Export Performance in Relation to Competitors
 - Export Performance in Relation to Other Exporters in their Country
3. Satisfaction with Export Activities
 - Export Sales Volume
 - Export Profits
 - Export Market Share
 - Rate of New Market Entry
 - Satisfying Export Customers' Needs

A measure of overall export performance was included as a validating item used in the process of coming up with an export performance measure.

The measures included in each of the three broad dimensions are first described in an attempt to profile the respondents with respect to the various aspects of export performance. The description of each item serves as a basis for the development of the export performance measure.

10.1. Descriptive Analysis of Export Performance Index

Each of the main dimensions of export performance is discussed successively in this section. Specifically, the following export performance indicators are developed: export growth, relative export performance, and satisfaction with export activities. Overall export performance is included as a validating item.

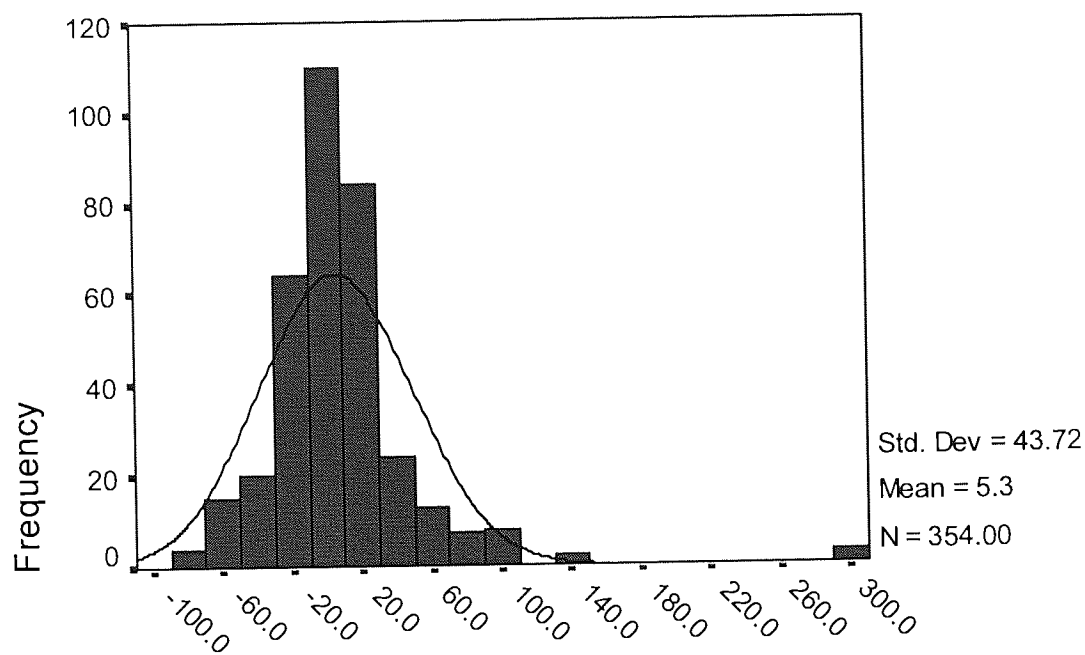
10.1.1. Export Growth

Export growth can be described in terms of growth in export sales and in export profitability. Most studies on export marketing use these “sales-related measures”, such as export sales and export profitability (Aaby and Slater 1989), for measuring export performance (Katsikeas et al. 2000).

10.1.1.1. Growth in Export Sales

Export sales were captured by a ratio variable. Respondents indicated whether their sales over the past three years increased, decreased, or remained static. The respondents were also asked to estimate the rate of growth or decline of export sales over the past three years (Naidu and Prasad 1994). Figure 10.1 shows the histogram of annual sales growth within that period.

Figure 10.1. Histogram of annual sales growth over the past three years.



Sales Growth in the Last Three Years

The biggest drop in export sales percentage wise was 90% while the biggest rise was 300%. The distribution is skewed to the right with 52% of the companies having either 0% or negative growth rate. Among the respondents, 5.9% posted a 10% growth rate, 4.5% had 15% growth rate, and 7.3% had 20%. Barely 3% of the respondents reported a growth rate of 100% or above.

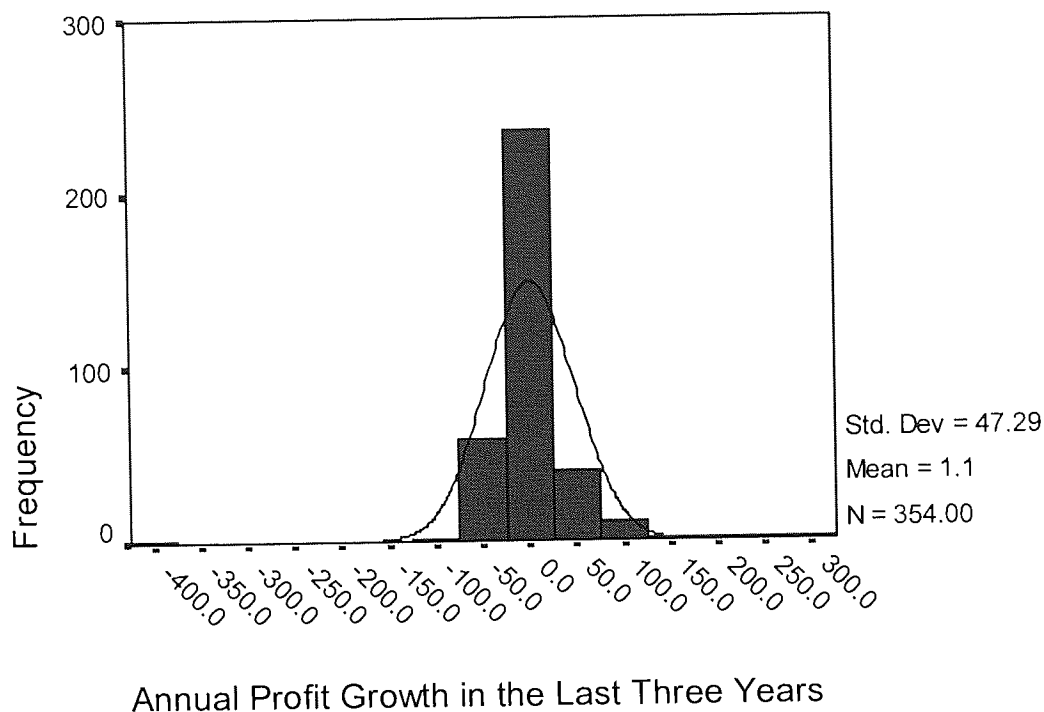
This could be a reflection of the tough times being faced by Filipino exporters possibly with the stiff competition coming from foreign companies like those from China (as expressed by respondents in the Qualitative Study).

10.1.1.2. Growth in Export Profitability

Export profitability was captured by a ratio scale variable. The respondents were asked to indicate whether their export profitability was increasing, decreasing, or at a static level over the past three years. They were also requested to indicate the estimated rate of

growth or decline of export profits within the same period (Souchon and Diamantopoulos 1997). Figure 10.2 shows annual profit growth within the last three years.

Figure 10.2. Histogram of annual profit growth in the past three years.



More than 58% of the companies reported 0% or negative growth rate in profits. As compared to sales growth, there seems to be a bigger decline in profits than in sales. Sales might have grown but might not have translated to profit. Barely 30% of companies reported a growth rate of at least 10% or more. In fact only 10% of the companies had a growth rate of at least 30%.

One possible reason for the bigger decline in profit than in sales is the price cuts companies implemented to address the very low prices of products from competitors, again as seen in the Qualitative Study (see also Katsikeas et al. 2000).

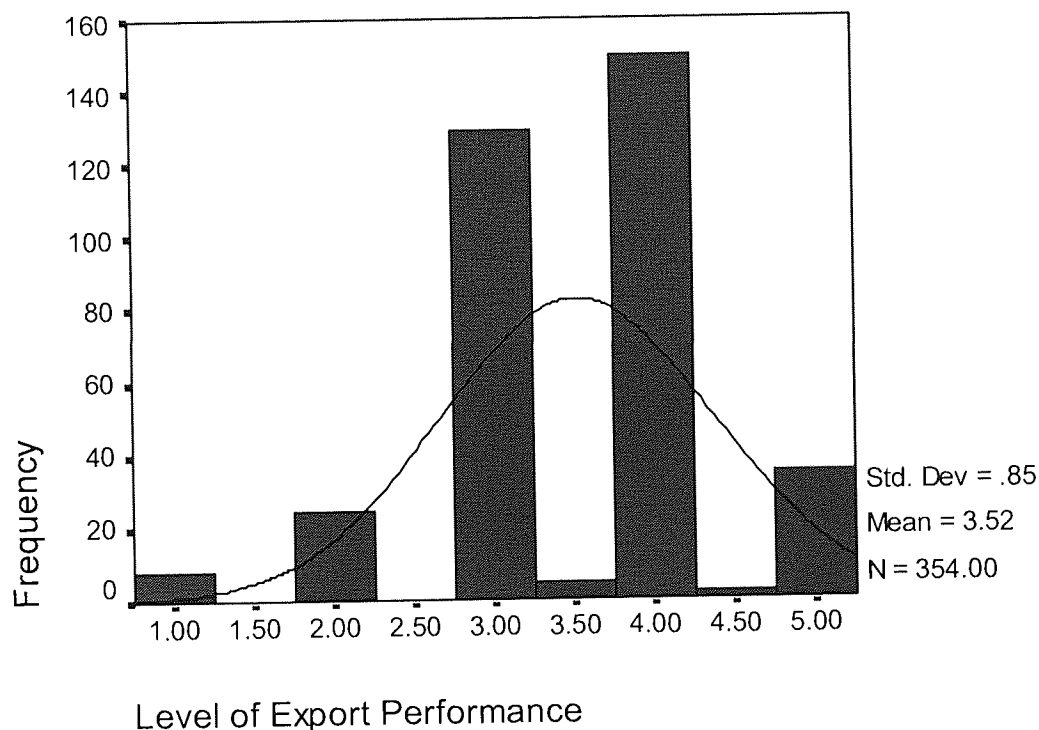
10.1.2. Relative Export Performance

Export performance was also measured as a comparison to competitors' performance and to the performance of exporters from other industries. Performance level could be considered relative. For example, a company that has a 30% growth rate in sales may not

be performing that well when prevailing industry growth rate is at 50%. These measures were adapted from Souchon and Durden's (2002) scales of export performance.

In order to measure relative level of performance, respondents were asked to rate their performance vis-à-vis other exporters in their industry using a five-point Likert scale (1 = Poor to 5 = Outstanding). Figure 10.3 shows the histogram of export performance as compared to exporters in the same sector. The mean is 3.52 which is above the median score. On the average, the respondents were fairing relatively better than their competitors.

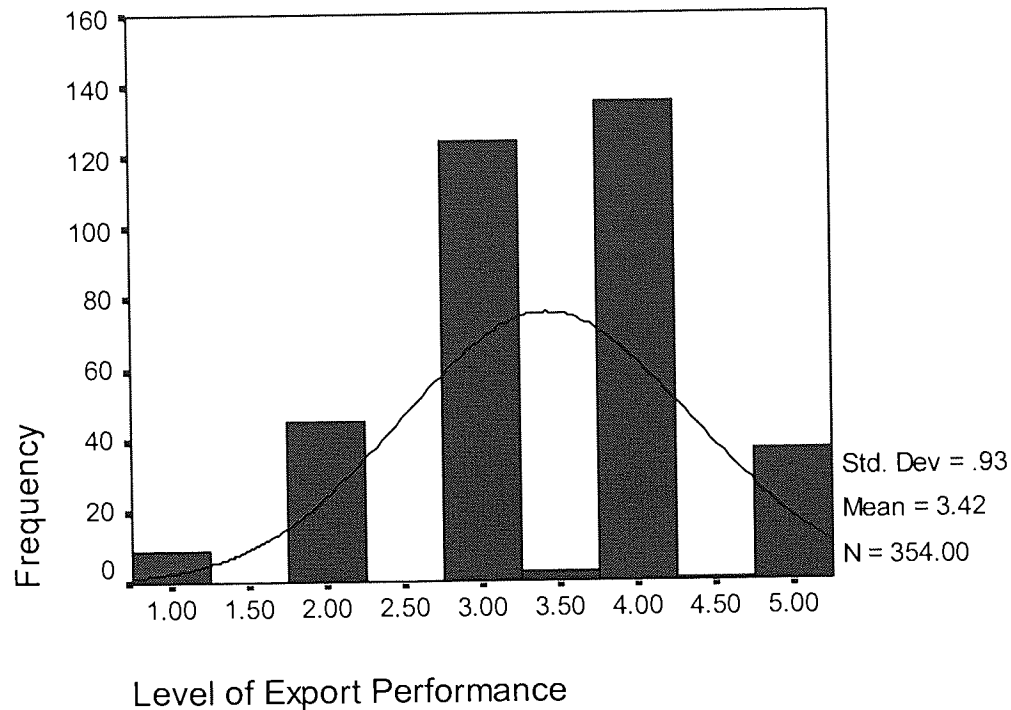
Figure 10.3. Histogram of export performance compared to exporters in the same sector.



Respondents were also asked to rate their performance as compared to other exporters from different industries using a five-point Likert scale (1 = Poor to 5 = Outstanding). Figure 10.4 shows the histogram of the responses. The mean score is 3.42, which is also

above the median of 3. The graph indicates that, generally, the respondents were fairing better than other exporters from other industries.

Figure 10.4. Histogram of export performance compared to exporters in their country.



10.1.3. Satisfaction with Export Activities

Satisfaction with export activities was measured in two steps. First, satisfaction along five criteria was assessed on a five-point scale ranging from 1 = very unsatisfied to 5 = very satisfied. The five criteria (Souchon and Durden 2002) were the following:

- export sales volume
- export profits
- export market share
- rate of new market entry
- satisfying export customers' needs

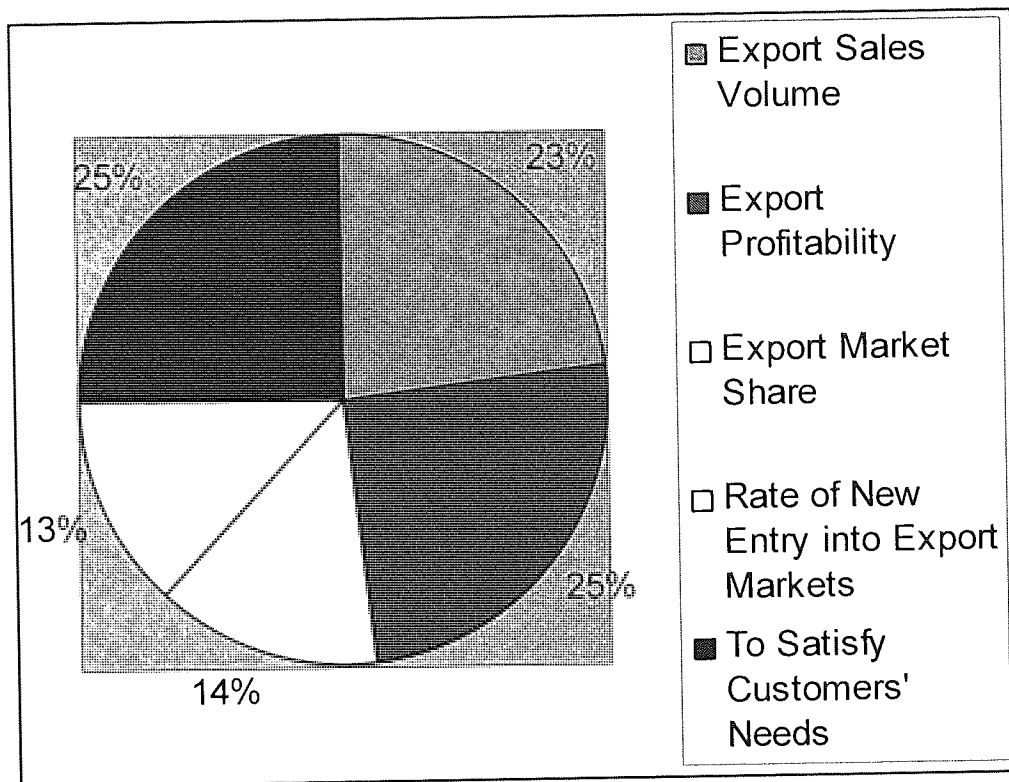
Table 10.1 shows performance satisfaction along the five criteria. The differences in scores among them are significant as seen from Table 10.1. Satisfying customers' needs received the highest score, while "rate of new entry into new export markets" got the lowest. As seen in Chapter Six, many of the respondents were only servicing a few countries; 51% were selling to five or fewer countries. Only 28% of the respondents sold their products to more than nine countries.

Table 10.1. Descriptive statistics for raw satisfaction variables.

		Export Sales Volume	Export Profitability	Export Market Share	Rate of New Entry into New Export Markets	Satisfying Export Customers' Needs
N	Valid	354	354	354	354	354
	Missing	0	0	0	0	0
Mean		3.2178	3.1504	2.8995	2.8604	3.6778
Median		3.0000	3.0000	3.0000	3.0000	4.0000
Std. Deviation		.9708	.9440	.8943	.8732	.8211
Skewness		-.335	-.307	-.030	-.166	-.571
Std. Error of Skewness		.130	.130	.130	.130	.130

Second, the five criteria were assessed by the respondents in terms of their perceived relative importance in contributing to the company's success. Respondents were asked to allocate a total of 100 points among the following five objectives: export sales volume, export profitability, export market share, rate of new entry into export markets, and to satisfy customers' needs (Cavusgil and Zou 1994; Qualitative Study). Figure 10.5 shows the mean scores of the relative ranking in terms of the objectives' perceived importance to export success. The differences in the mean scores are significant as can be seen from Appendix 10.1. "To satisfying customers' needs" was ranked high, together with "export profitability". "Rate of entry into new market" seems not to figure highly in the exporters' mind.

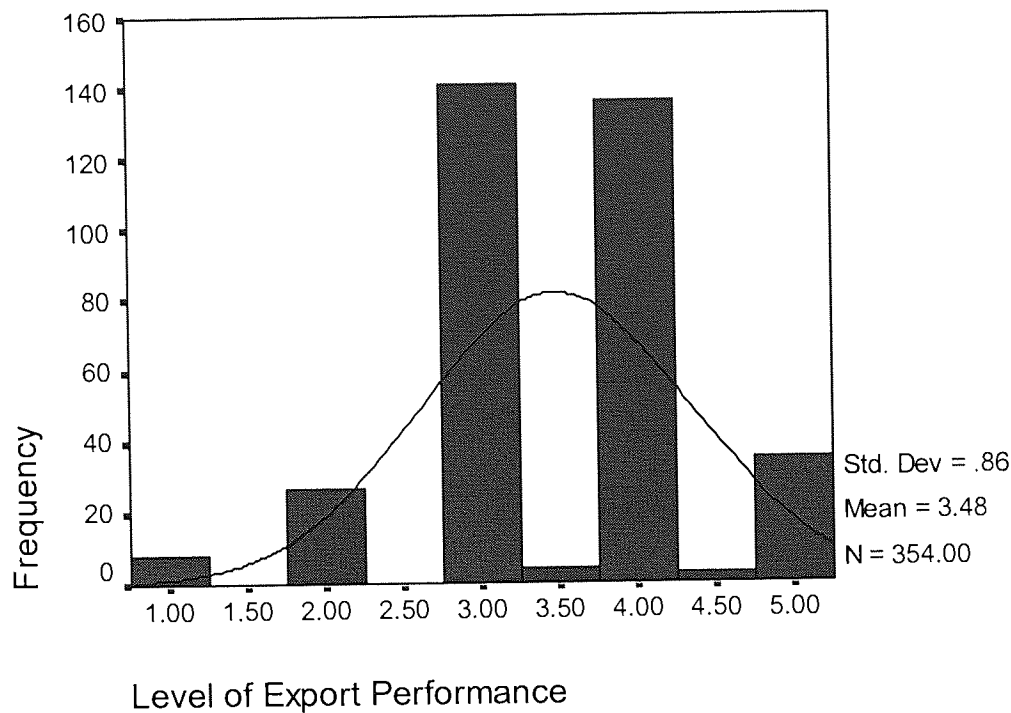
Figure 10.5. Relative importance of five objectives to export success.



10.1.4. Overall Export Performance

An overall export performance indicator was included as a validating variable, asking the respondents to rate their company's overall export performance on a five-point scale ranging from 1 = poor to 5 = outstanding (c.f., Jaworski and Kohli 1993; Evangelista 1994). Figure 10.6 shows the histogram of overall assessment of export performance. The mean score is 3.48 which is above the median of 3 with a standard deviation of .86. Among the respondents, 12% reported performance below the average while 40% rated their performance as average. Only 10% considered their performance as outstanding.

Figure 10.6. Histogram of overall export performance.



10.2. Measurement Development Procedure

This section covers the development of the export performance index. This is composed of different dimensions that reflect the multidimensional aspect of performance (Cadogan et al. 2002). The different factors used in the index do not need to covary since they measure varied dimensions of performance which are not necessarily consistent with each other. For example, sales can be high but profit may be low due to high production costs or to low product price. As a result, it is unlikely, that overall export performance is a latent construct which causes the individual indicators presented above to fluctuate (Diamantopoulos 1999). Rather, it is more likely that the extent to which a firm performs on each indicator determines the firm's overall export performance. This causal direction between the construct and the items composing it indicates that overall export performance is a formative *index* rather than a reflective *scale* (see Bollen and Lennox 1991). As such, the individual items need not be inter-correlated since they are not

required to covary. As explained above, a company may be experiencing high sales per employee, but its export profitability may remain low due to high production costs. Katsikeas et al. (2000, p. 498) explain: “Another widely used and practically useful indicator is export sales growth, which may overstate performance because of price escalation and market growth, or understate performance because of experience curve effects and deteriorating demand (Kirpalnain and Balcome 1987).” The creation of an index aims to provide a *general* picture of the firms’ export performance and not an indication of their success on any *specific* dimension (Souchon and Durden 2002).

A weighted satisfaction score was created, after which, the different export performance indicators were factor analyzed.

To create the weighted satisfaction score, each of the importance scores was multiplied by the raw satisfaction ratings given to each dimension. The satisfaction ratings used a five-point semantic differential, while the importance ratings used a constant sum of 100. The product scores ranged from 100 to 500. However it would be more easily interpretable if the range would be from 0 to 100. Thus the weighted satisfaction score was calculated as follows:

$$\frac{\sum_{i=1}^5 (\text{Satisfaction} \times \text{Importance}) - 100}{4}$$

The weighted satisfaction score and the scores of the other items indicating export performance were standardized. These items include the following: (a) average annual export sales growth/decline in the past three years, (b) average annual profit growth/decline in the past three years, (c) firm’s export performance compared to other exporters in the same sector, (d) firm’s export performance compared to other exporters in the country, and (e) overall firm’s export performance.

To develop the export performance index, the five standardized indicators, excluding the overall firm’s export performance, were factor analyzed using principal component analysis resulting in two factors (see Appendix 10.2).

Table 10.2

Rotated Component Matrix^a

	Component	
	1	2
zq11a	.130	.922
zq13a	.100	.932
zq17	.929	.070
zq18	.918	.035
zobj_sat	.679	.409

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

The first factor explained 53% of the variance while the second factor explained 29% of the variance. The first factor was composed of (a) the firm's export performance compared to other exporters in the same sector, (b) firm's export performance compared to other exporters in the country, and the (c) weighted satisfaction score. The second factor was composed of (a) average annual export sales growth and (b) average annual export profits growth.

The scores of the items in the first factor were summed up to get the score for the first factor. Likewise, the scores of the items in second factor were also summed up to get the score for the second factor. Each score was correlated to the score of the overall export performance which was used as validating item. As can be seen from Table 10.3, the first factor was highly correlated with the validating item. Thus, it was decided to use the first factor as the measure of export performance.

Table 10.3: Correlation

	First Factor	Second Factor
Validating Item	.855	.220
Sig. (2-Tailed)	.000	.000
N	354	354

From Figure 10.7 one can see that the frequency distribution of export performance index is slightly negatively skewed. However, a Kolmogorov-Smirnoff test performed on the index showed a normal distribution ($K=1.258$), as seen in Table 10.4.

Figure 10.7. Histogram of export performance.

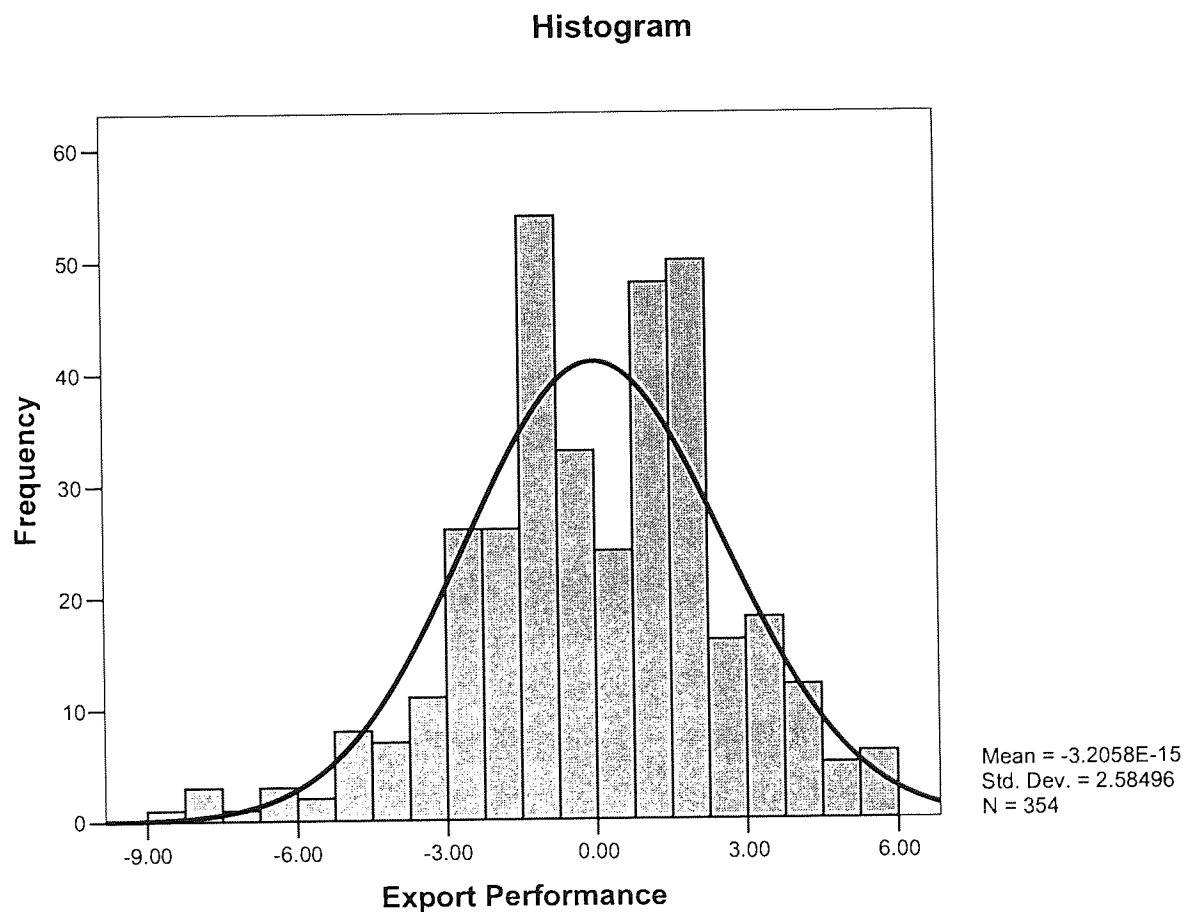


Table 10.4: Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test		
		newperf_s2
N		354
Normal Parameters ^{a,b}	Mean	.0000
	Std. Deviation	2.58496
Most Extreme Differences	Absolute	.053
	Positive	.033
	Negative	-.053
Kolmogorov-Smirnov Z		1.000
Asymp. Sig. (2-tailed)		.270

a. Test distribution is Normal.

b. Calculated from data.

10.3. Hypotheses Testing

In testing the hypotheses that concern export performance as a function of export memory use, a moderated regression approach was adopted considering the inclusion of interaction effects of environmental turbulence and export memory overload (Chapter Four).

10.3.1. Moderated Approach to Regression Analysis

Multiple regression was used to assess the relationship between the export memory use variables and the overall index of export performance. As stated earlier, a moderated regression approach (Sharma et al. 1981) was used to verify the moderating effects of environmental turbulence and export memory overload.

When moderating effects are hypothesized, it is necessary to determine if the interaction terms are significant through the use of hierarchical regression (Jaccard et al. 1990). In doing so, the interaction variables are first tested for their potential main effect on the dependent variable. It is only after having tested for these main effects that the interaction

term (the multiplication of the two variables) is inserted in the regression equation. This method allows for the examination of the changes in R^2 in terms of statistical significance.

First, extent of memory use, instrumental use of export memory, conceptual use of export memory, manipulating use of export memory, and legitimizing use of export memory were included in the equation since they were the ones hypothesized to have a main effect. The second step involved the inclusion of environmental turbulence (technological turbulence, market turbulence, competitive turbulence, and regulatory turbulence) into the equation as they were deemed to be pure moderators (see Sharma et al. 1981). In the third step, the interaction terms were added to the equation, including the interactions between the four environmental turbulence variables and (a) extent of export memory use, (b) instrumental use of export memory, (c) conceptual use of export memory, (d) manipulating use of export memory, and (e) legitimizing use of export memory. The strength of the interactions could be determined by examining the difference between the R^2 of the equation without the interaction effect and the R^2 of the equation that contains the interaction effect (Jaccard et al. 1990). The fourth and last step involves a series of regressions where one non-significant item is removed each time until only the significant items are left together with the corresponding main effects.

10.3.2. Assumptions

10.3.2.1. Normality and Error Term Distribution

In order to ascertain the normality of the error terms' distributions Shapiro-Wilk tests were conducted for the three regressions in this section. The first regression model run consisted of all the five independent variables (extent of memory use, instrumental use, conceptual use, legitimizing use, and export memory manipulation) with the dependent variable of export performance. The result of the test shows a normal distribution as shown in Table 10.5 and Figure 10.8

Table 10.5 Shapiro-Test (first regression)

		Shapiro-Wilk Test	
	Statistic	df	Sig.
ZRE_1	.994	354	.194

Figure 10.8. Histogram export performance (first regression)

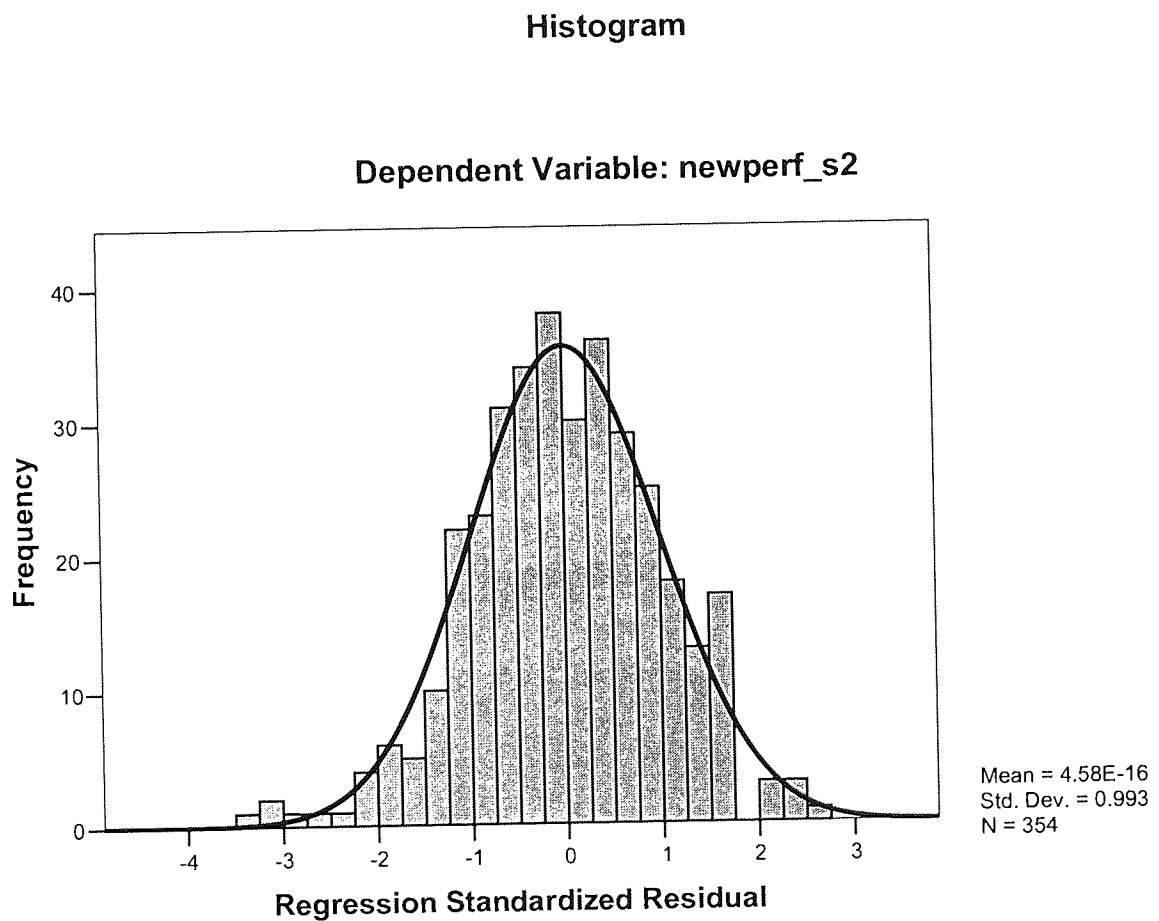
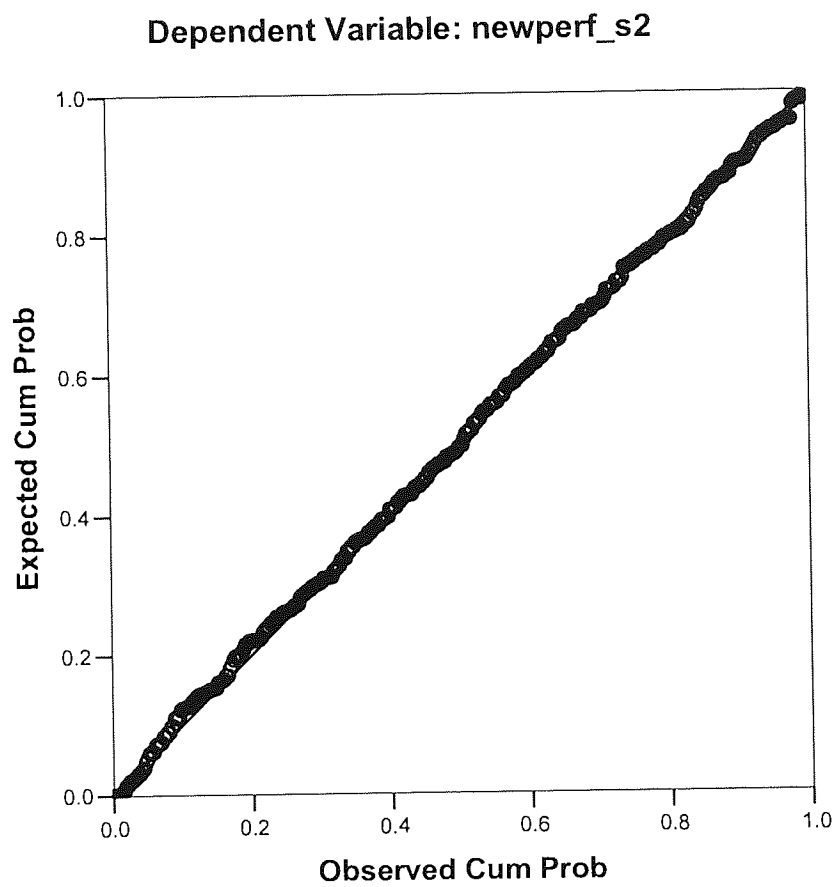


Figure 10.9

Normal P-P Plot of Regression Standardized Residual



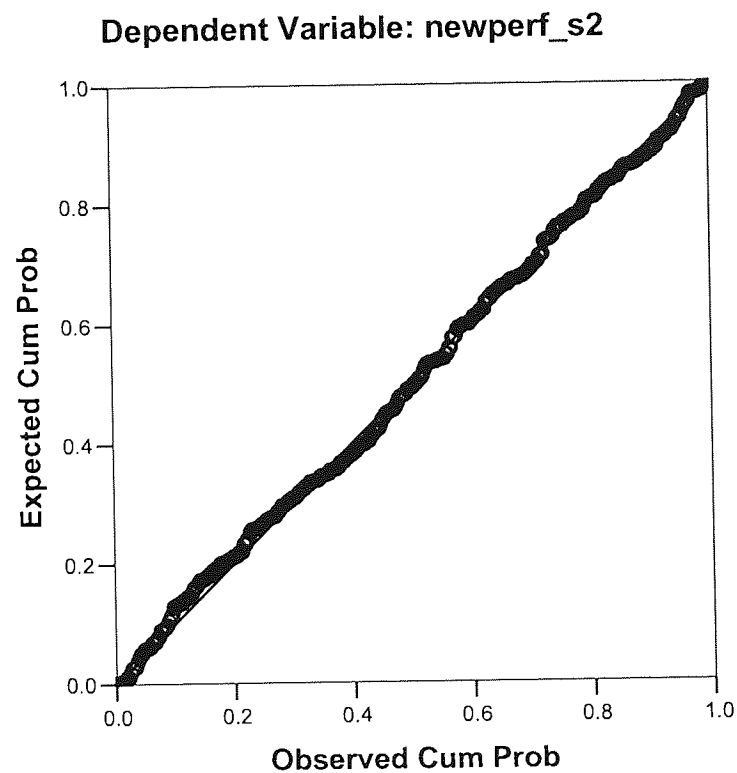
The second regression model run consisted of the above five independent variables together with the five moderating variables (competitive turbulence, regulatory turbulence, technological turbulence, market turbulence, and memory overload) with export performance as dependent variable. The result of the Shapiro-Wilk test showed normality in the error terms' distribution as seen from Table 10.6.

Table 10.6 Shapiro-Wilk test (second regression)

	Statistic	Shapiro-Wilk Test	
		df	Sig.
ZRE_1	.995	354	.261

Figure 10.11 Histogram export performance (second regression)

Normal P-P Plot of Regression Standardized Residual



The third regression combined all the variables included in second regression with all the interaction variables (e.g., interaction of extent of memory use with regulatory turbulence). Like the previous two regressions, the Shapiro-Wilk test showed a normal error term distribution as seen from Table 10.7 and also the histogram of the regression standardized residuals.

Table 10.7 Shapiro-Wilk test (third regression)

		Shapiro-Wilk Test	
	Statistic	df	Sig.
ZRE_1	.994	354	.185

Figure 10.12 Histogram export performance (third regression)

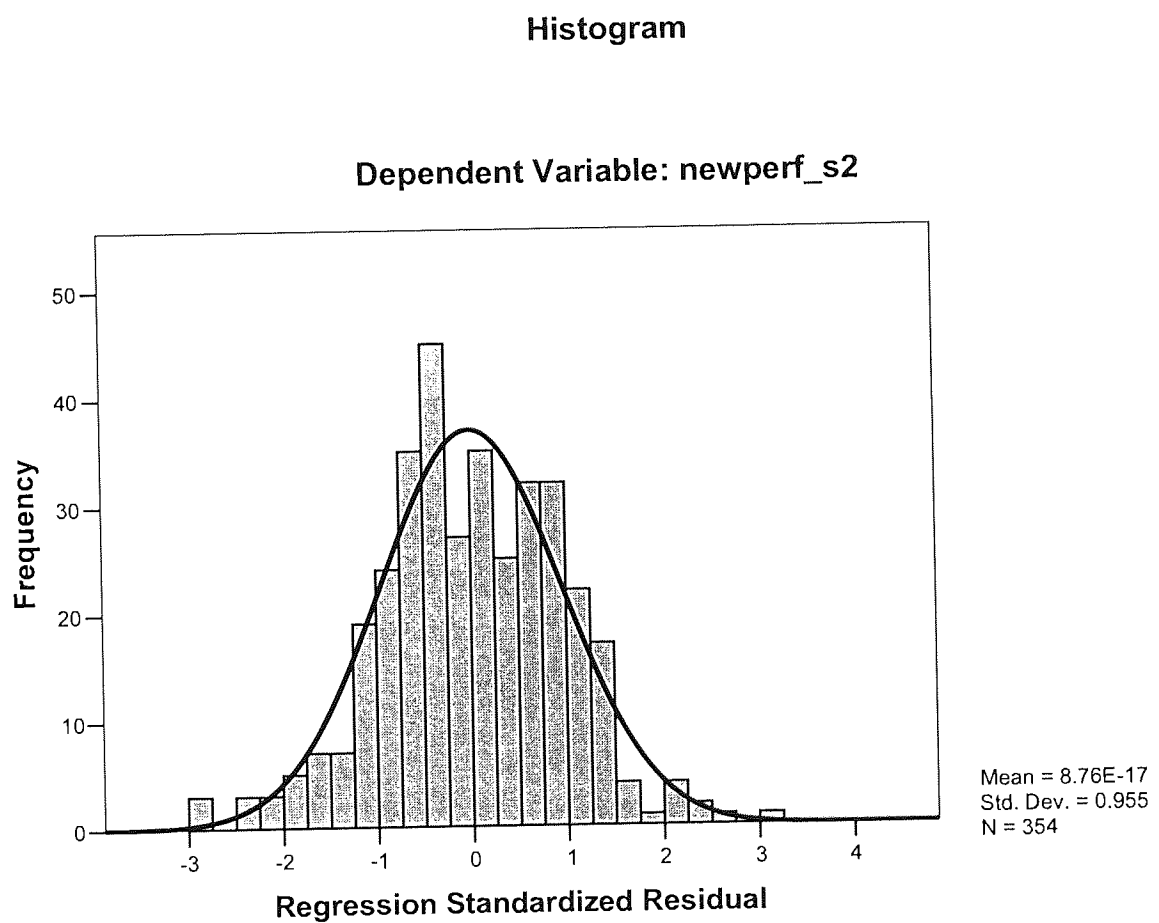
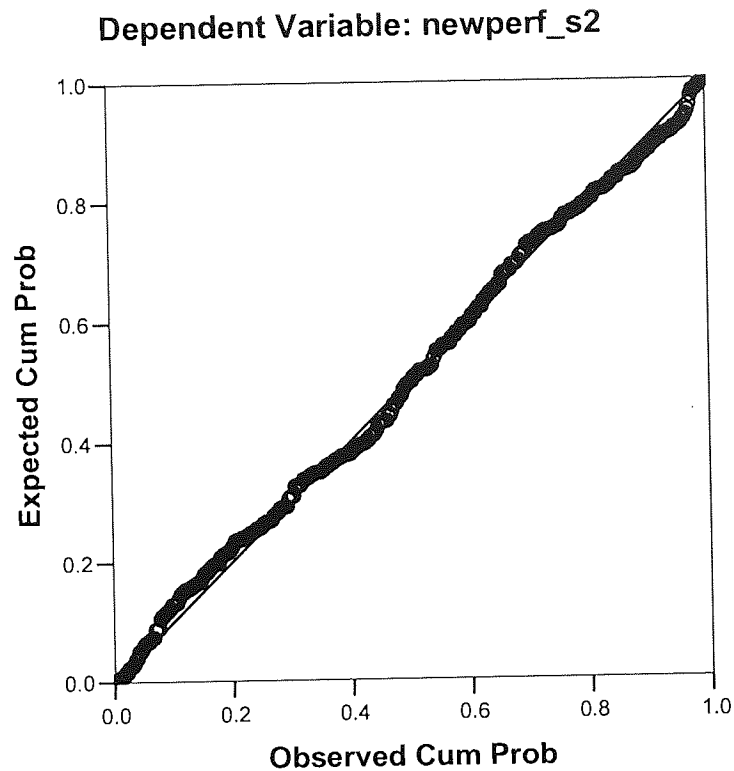


Figure 10.13

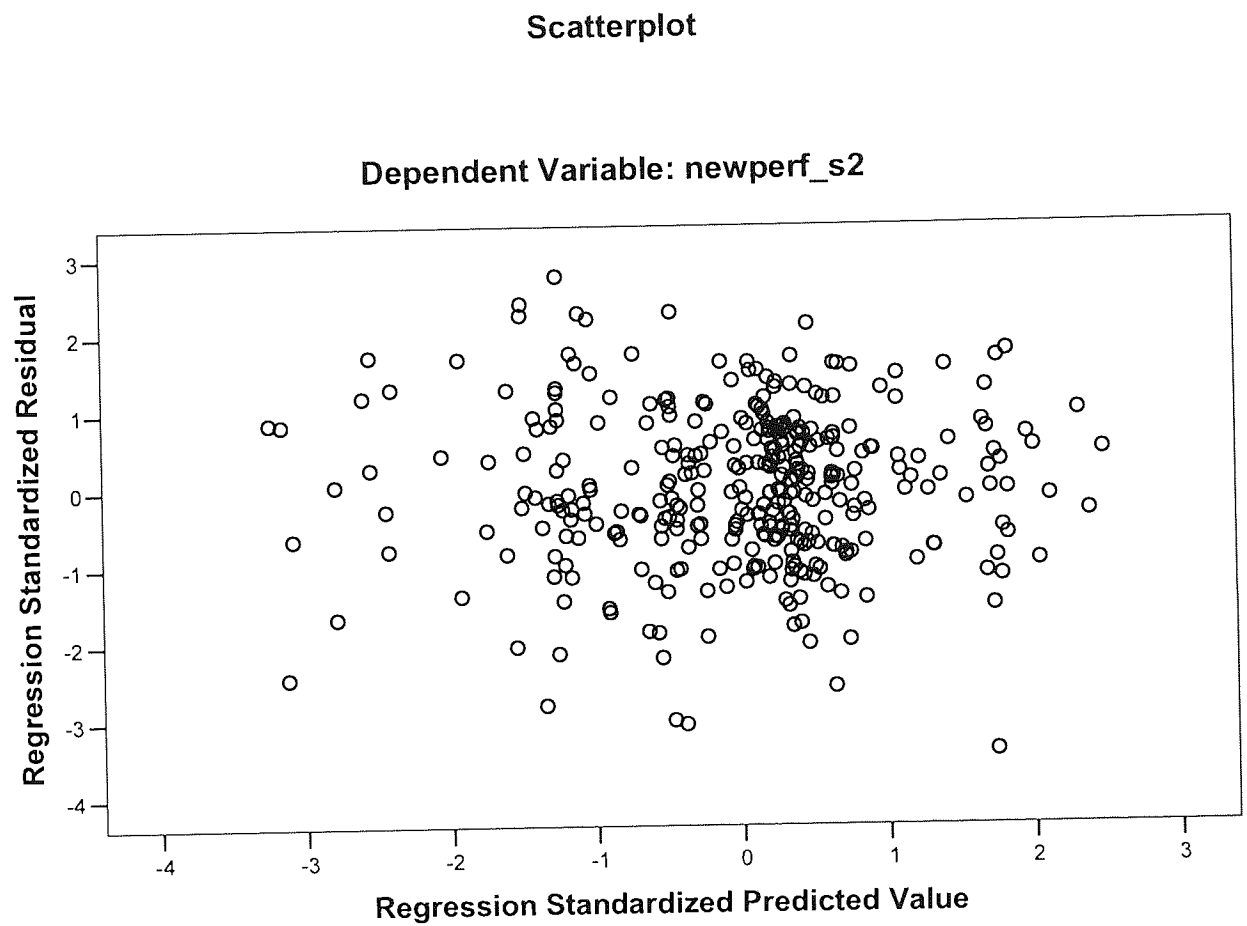
Normal P-P Plot of Regression Standardized Residual

*10.3.2.2. Linearity and Homoscedasticity*

To determine the linearity of the relationship between export performance and the independent variables, the predicted values of export performance were plotted against the studentized residual values for the three regressions. The plots seen in Figures 10.14, 10.15, 10.16 show no sign of non-linearity.

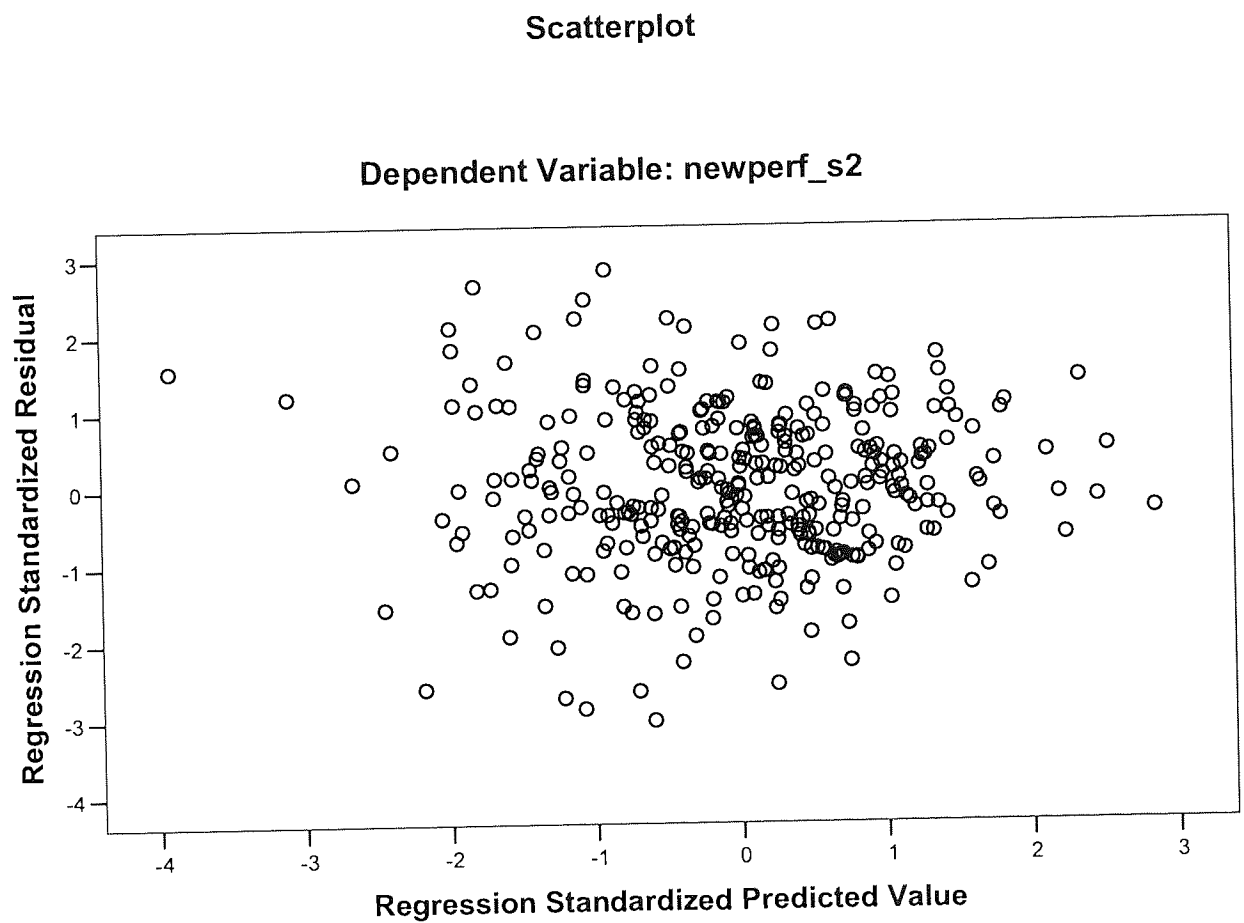
Figure 10.14

First Regression



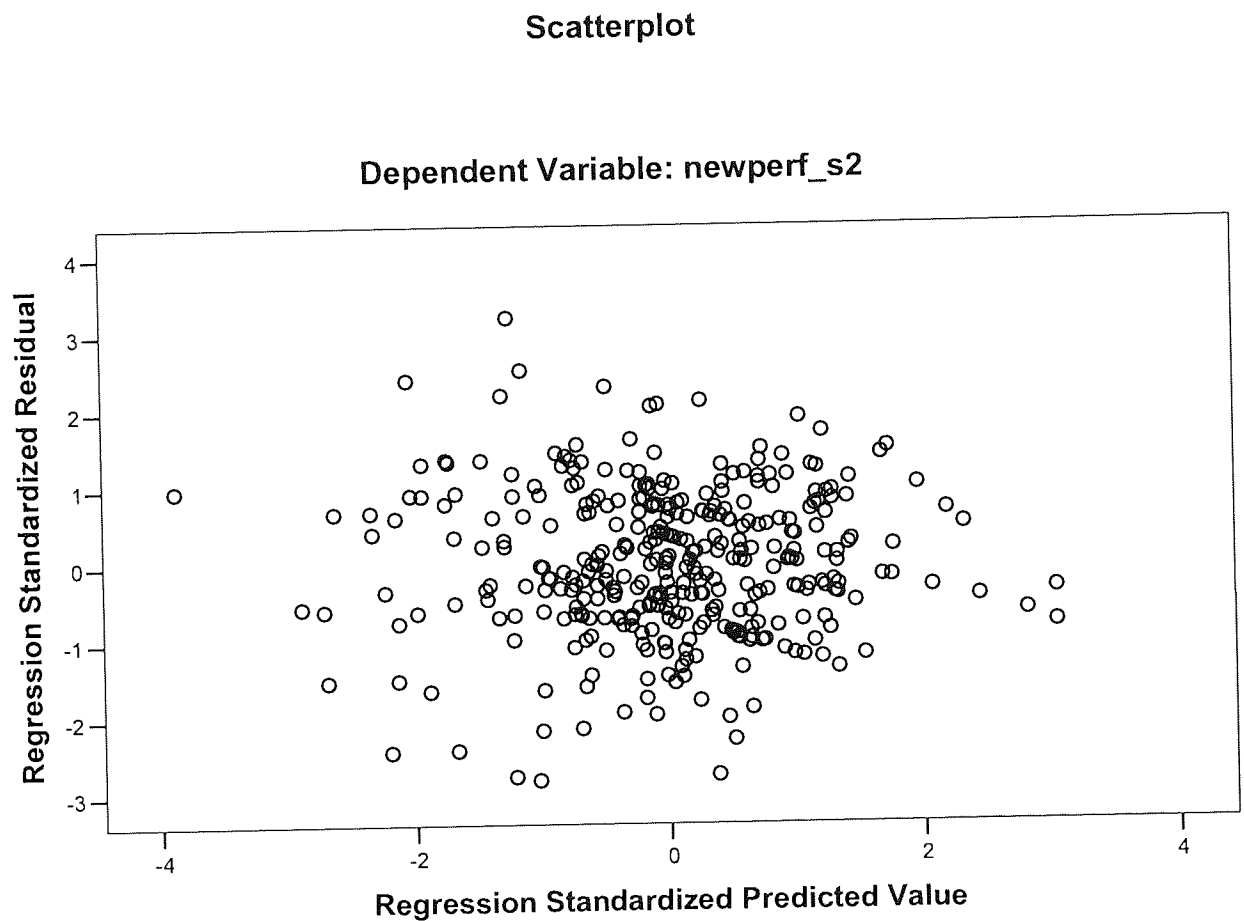
Second Regression

Figure 10.15



Third Regression

Figure 10.16



Test of homoscedasticity also uses the same plot. Since the patterns seem to look like the null plot (see Hair et al. 1992), constant variance of error is accepted.

10.3.2.3. *Independence of Predictor Variables*

The mean-centered values (i.e., for each variable, the variable's mean is subtracted from its scores) of the variables are employed to avoid multicollinearity problems which may arise due to the inclusion of the multiplicative term. Tables 10.8 to 10.10 show the collinearity statistics. They are all generally low except for the interactions between conceptual use of export memory with technological turbulence, market turbulence, and competitive turbulence. In total, there is no reason for concern in terms of possible collinearity problems (Hair et al. 1992).

Table 10.8 First regression

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-5.594	1.201		-4.656	.000		
a8i	.371	.473	.070	.783	.434	.326	3.069
a8emm	.154	.196	.041	.787	.432	.975	1.026
a8emu	1.146	.261	.275	4.398	.000	.664	1.507
a8leg	-.427	.430	-.084	-.992	.322	.361	2.773
a8c	.284	.590	.053	.481	.631	.217	4.601

a. Dependent Variable: newperf_s2

Table 10.9 Second Regression

Coefficients ^a								
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
1 (Constant)	-5.822	1.297		-4.490	.000			
a8i	.050	.465	.009	.108	.914	.314	3.185	
a8emm	.154	.240	.041	.644	.520	.607	1.647	
a8emu	1.060	.253	.254	4.188	.000	.655	1.526	
a8leg	-.305	.432	-.060	-.708	.480	.334	2.994	
a8c	.552	.577	.102	.956	.340	.212	4.722	
env_reg	.877	.198	.228	4.424	.000	.914	1.094	
env_cus	-.311	.182	-.096	-1.703	.089	.765	1.306	
env_tec	-.107	.197	-.030	-.545	.586	.786	1.272	
env_com	-.342	.246	-.083	-1.393	.165	.682	1.467	
a8o	.113	.277	.027	.408	.683	.552	1.810	

a. Dependent Variable: newperf_s2

Table 10.10 Third Regression

Coefficient ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-5.666	1.353		-4.188	.000		
	a8i	.344	.489	.065	.704	.482	.269	3.723
	a8emm	.094	.252	.025	.372	.710	.519	1.925
	a8emu	1.089	.255	.261	4.279	.000	.613	1.632
	a8leg	-.271	.460	-.053	-.589	.557	.279	3.589
	a8c	.530	.597	.098	.887	.375	.188	5.332
	env_reg	.825	.202	.214	4.088	.000	.834	1.199
	env_cus	-.325	.186	-.100	-1.747	.082	.696	1.436
	env_tec	-.085	.203	-.024	-.418	.676	.700	1.430
	env_com	-.389	.249	-.094	-1.563	.119	.628	1.593
	a8o	-.205	.286	-.049	-.716	.475	.490	2.040
	c_cus	.067	.769	.011	.087	.930	.150	6.647
	emu_reg	-.296	.422	-.044	-.701	.484	.589	1.697
	emm_tec	.007	.312	.001	.022	.983	.618	1.617
	emu_tec	.171	.331	.036	.518	.605	.474	2.110
	emm_reg	.116	.273	.024	.427	.670	.754	1.327
	emm_com	-.289	.348	-.053	-.831	.407	.557	1.794
	emu_com	-.933	.474	-.151	-1.971	.050	.389	2.574
	leg_reg	.110	.635	.014	.173	.863	.368	2.715
	leg_tec	.160	.675	.028	.236	.813	.164	6.093
	o_i	1.578	.473	.214	3.337	.001	.554	1.806
	emm_cus	-.014	.322	-.003	-.043	.966	.488	2.051
	leg_com	-.656	.805	-.096	-.815	.416	.163	6.119
	emu_cus	.907	.357	.189	2.543	.011	.416	2.403
	i_reg	1.035	.745	.131	1.390	.165	.258	3.870
	i_com	1.845	.795	.246	2.322	.021	.204	4.898
	i_tec	-.176	.596	-.031	-.294	.769	.201	4.977
	leg_cus	.584	.571	.099	1.022	.307	.245	4.083
	c_reg	-.543	.838	-.068	-.648	.518	.206	4.846
	i_cus	-1.850	.724	-.295	-2.554	.011	.171	5.847
	c_com	-.379	1.002	-.052	-.378	.706	.122	8.214
	c_tec	-.766	.924	-.128	-.830	.407	.096	10.380

a. Dependent Variable: newperf_s2

10.3.2.4. Regression Results and Discussion

10.3.2.4.1. Effect of Export Memory Use on Export Performance

In order to ascertain the impact of different export memory uses on export performance, multiple regression analysis was used. Due to previous findings on the moderating effect of environmental turbulence and information overload on the use of information and its impact on performance, a hierarchical moderated regression approach was used (Sharma et al. 1981). Table 10.11 shows the result of the regression run.

Table 10.11 All regressions

		Coefficients					Collinearity Statistics	
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Tolerance	VIF
		B	Std. Error	Beta				
1	(Constant)	-5.594	1.201		-4.656	.000		
	a8i	.371	.473	.070	.783	.434	.326	3.069
	a8emm	.154	.196	.041	.787	.432	.975	1.026
	a8emu	1.146	.261	.275	4.398	.000	.664	1.507
	a8leg	-.427	.430	-.084	-.992	.322	.361	2.773
	a8c	.284	.590	.053	.481	.631	.217	4.601
2	(Constant)	-5.822	1.297		-4.490	.000		
	a8i	.050	.465	.009	.108	.914	.314	3.185
	a8emm	.154	.240	.041	.644	.520	.607	1.647
	a8emu	1.060	.253	.254	4.188	.000	.655	1.526
	a8leg	-.305	.432	-.060	-.708	.480	.334	2.994
	a8c	.552	.577	.102	.956	.340	.212	4.722
	env_reg	.877	.198	.228	4.424	.000	.914	1.094
	env_cus	-.311	.182	-.096	-1.703	.089	.765	1.306
	env_tec	-.107	.197	-.030	-.545	.586	.786	1.272
	env_com	-.342	.246	-.083	-1.393	.165	.682	1.467
	a8o	.113	.277	.027	.408	.683	.552	1.810
3	(Constant)	-5.666	1.353		-4.188	.000		
	a8i	.344	.489	.065	.704	.482	.269	3.723
	a8emm	.094	.252	.025	.372	.710	.519	1.925
	a8emu	1.089	.255	.261	4.279	.000	.613	1.632
	a8leg	-.271	.460	-.053	-.589	.557	.279	3.589
	a8c	.530	.597	.098	.887	.375	.188	5.332
	env_reg	.825	.202	.214	4.088	.000	.834	1.199
	env_cus	-.325	.186	-.100	-1.747	.082	.696	1.436
	env_tec	-.085	.203	-.024	-.418	.676	.700	1.430
	env_com	-.389	.249	-.094	-1.563	.119	.628	1.593
	a8o	-.205	.286	-.049	-.716	.475	.490	2.040
	c_cus	.067	.769	.011	.087	.930	.150	6.647
	emu_reg	-.296	.422	-.044	-.701	.484	.589	1.697
	emm_tec	.007	.312	.001	.022	.983	.618	1.617
	emu_tec	.171	.331	.036	.518	.605	.474	2.110
	emm_reg	.116	.273	.024	.427	.670	.754	1.327
	emm_com	-.289	.348	-.053	-.831	.407	.557	1.794
	emu_com	-.933	.474	-.151	-1.971	.050	.389	2.574
	leg_reg	.110	.635	.014	.173	.863	.368	2.715
	leg_tec	.160	.675	.028	.236	.813	.164	6.093
	o_i	1.578	.473	.214	3.337	.001	.554	1.806
	emm_cus	-.014	.322	-.003	-.043	.966	.488	2.051
	leg_com	-.656	.805	-.096	-.815	.416	.163	6.119
	emu_cus	.907	.357	.189	2.543	.011	.416	2.403
	i_reg	1.035	.745	.131	1.390	.165	.258	3.870
	i_com	1.845	.795	.246	2.322	.021	.204	4.898
	i_tec	-.176	.596	-.031	-.294	.769	.201	4.977
	leg_cus	.584	.571	.099	1.022	.307	.245	4.083
	c_reg	-.543	.838	-.068	-.648	.518	.206	4.846
	i_cus	-1.850	.724	-.295	-2.554	.011	.171	5.847
	c_com	-.379	1.002	-.052	-.378	.706	.122	8.214
	c_tec	-.766	.924	-.128	-.830	.407	.096	10.380

a. Dependent Variable: newperf_s2

Legend:**A8EMU**

(Extent of Export Memory Use)

A8Leg

(Legitimizing Use of Export Memory)

A8EMM

(Export Memory Manipulation)

A8C

(Conceptual Use of Export Memory)

A8I

(Instrumental Use of Export Memory)

A8O

(Export Memory Overload)

ENV_TEC

(Technological Turbulence)

ENV_CUS

(Market Turbulence)

ENV_COM

(Competitive Turbulence)

ENV_REG

(Regulatory Turbulence)

EMU_TEC

(Interaction between Extent of Memory Use and Technological Turbulence)

The rest of the variables are interactions between the variables with main effect and the

The change in R^2 obtained when including the interaction variables in the equation (i.e., $R^2_3 = .206 - .153 = .053$) was significant at $p = .009$ (Table 10.12).

Table 10.12. Hierarchical regression for export performance.

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.311 ^a	.097	.084	2.47398	.097	7.476	5	348	.000
2	.413 ^b	.171	.146	2.38822	.074	6.088	5	343	.000
3	.513 ^c	.263	.192	2.32300	.093	1.930	21	322	.009

a. Predictors: (Constant), a8c, a8emm, a8emu, a8leg, a8i

b. Predictors: (Constant), a8c, a8emm, a8emu, a8leg, a8i, env_reg, env_cus, env_tec, env_com, a8o

c. Predictors: (Constant), a8c, a8emm, a8emu, a8leg, a8i, env_reg, env_cus, env_tec, env_com, a8o, tec, emu_tec, emm_reg, emm_com, emu_com, leg_reg, leg_tec, o_i, emm_cus, leg_com, emu_cus, leg_cus, c_reg, i_cus, c_com, c_tec

d. Dependent Variable: newperf_s2

A series of regressions were done, removing the predictor that has the highest p-value at each run, until the point where all the predictors were all significant. The following final results were achieved as shown in Table 10.13.

Table 10.13 Final Result of hierarchical regression analyze

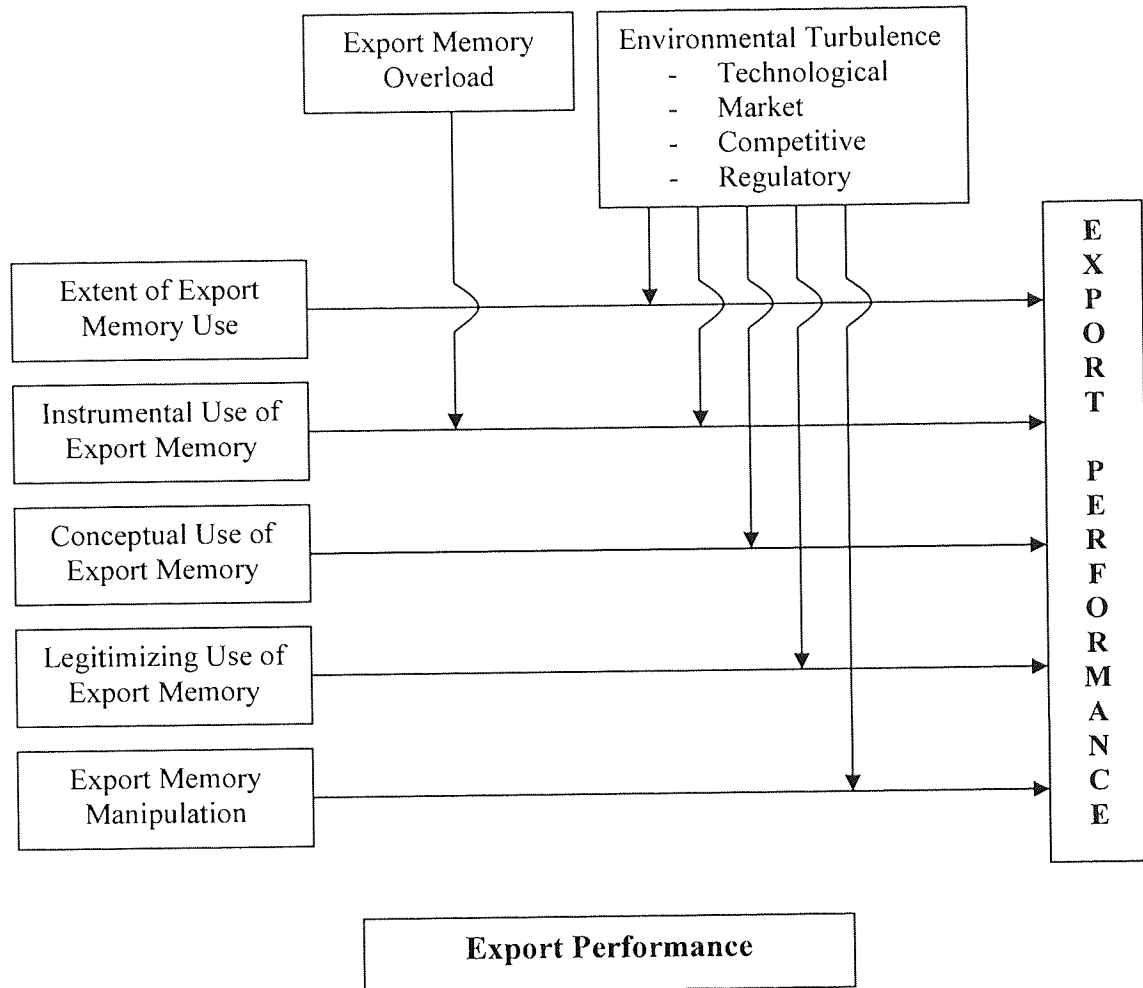
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6.308	1.164		-5.419	.000
	a8emu	1.142	.232	.274	4.914	.000
	a8i	.519	.316	.098	1.644	.101
	env_reg	.784	.193	.203	4.063	.000
	env_cus	-.535	.159	-.165	-3.366	.001
	a8o	-.143	.224	-.034	-.639	.523
	o_i	1.627	.395	.221	4.119	.000
	i_cus	-.827	.304	-.132	-2.721	.007

a. Dependent Variable: newperf_s2

Table 10.13 shows the following significant relations: the extent of export memory use (+), regulatory turbulence (+), market turbulence (+), interaction between overload and instrumental use (U-shaped), and the interaction between instrumental use and market turbulence (inverted U-shaped).

The extent of export memory use has a significant positive influence on export performance with a standardized coefficient of .255. However, none of the different types of export memory use (e.g., instrumental) proved significantly related to export performance. All other things being equal, this may mean that what is important is the extent of export memory use rather than the way this memory is used. Alternatively, different situations may demand different modes of export memory use. For example, Leonidou and Katsikeas (2003, p. 30) point out that “it is also important to realize that many export decisions are situation-specific, contingent upon managerial, organizational, and environmental factors.” Thus, what may be important is the suitability of the type of export memory use to the demand of the situation. What these findings suggest support the assertion that what matters in export success is not the individual role of each of these types of export memory use, but the synergistic effect of their interplay. To gain maximum performance, all four types of export memory use “should act as a whole and, therefore, a systematic information planning is required in order to secure high levels of consistency, coherence, and correspondence among them” (Leonidou and Katsikeas 2003, p. 29). In other words, if the effectiveness of export memory use types is context-specific, or depends upon particular contingencies, the moderating effects need to be examined. Another way to explain the result is to consider the effect of each dimension of export memory use to be too small to be detected. However, if all the dimensions of memory use are taken together under extent of memory use, its impact on export performance could be seen.

Figure 10.14. Final model for export performance and its antecedents.



Regulatory turbulence is positively related to export performance. It has a standardized coefficient value of .214 with a significance of .000. The positive effect of regulatory turbulence may be explained by the greater openness in the world market for goods and services. With the continuing removal of trade barriers, organizations may find themselves with more export opportunities than ever. Thus it is always necessary to keep abreast of regulations since they can actually fall into either two separate directions.

Market turbulence was found to be negatively related to export performance. This is consistent with the hypothesis that the higher the environmental turbulence, the lower will be the export performance. When foreign markets become more demanding, exporting organizations might not be able to cope well with those changes in consumer preference. When market is turbulent, organizations need more resources (financial, production, or managerial), which they may not have, thus, making them fall short in delivering the right product or service to its market. To make it worse, foreign buyers can always choose to get their products from other suppliers.

10.3.2.4.2. Effects of Moderating Variables on Export Performance

Export memory overload, technological turbulence, regulatory turbulence, market turbulence, and competitive turbulence were tested as moderating variables in the relationships between export memory use and export performance.

10.3.2.4.2.1. Export Memory Overload

The interaction between export memory overload and instrumental use of export memory was found to be significant at $p = .000$ value. The calculation of the inflection point yielded a mean-centered value of -.443 for export memory overload, corresponding to no change in export performance due to instrumental use of export memory at that level of export memory overload. This was computed by dividing the negative of the coefficient of the main effect by the coefficient of the interaction $(-.098/.221)$. Adding to it the mean

value of export memory overload (2.816) results in a figure of 2.373. In substantive terms, this signifies that when the score of export memory overload is below 2.373 (given the five-point scale on which this variable is measured), instrumental use of export memory is negatively related to export performance. As export memory overload increases and reaches a score above 2.373, the relationship between instrumental use of export memory and export performance becomes positive. This is contrary to what has been hypothesized, wherein higher levels of overload is seen to confuse, and not guide and enlighten, the users (Albaum et al. 1989; Chisnell 1997). It was expected that at higher levels of export memory overload, instrumental use of export memory would have a negative influence on export performance, since as Souchon and Diamantopoulos (1997, p. 138) explain, “an overload of information will hinder the decision making activity (e.g., Saunders and Jones 1990) by creating confusion in the decision maker’s mind (e.g. Cavusgil 1985) and resulting in the “inability to retrieve information quickly” (Goodman 1993, p. 13). One explanation could be that when organizations face an overload of memory, they stop acquiring new export market information (Souchon and Diamantopoulos 1997) and instead use the information they already have. In this context, export memory may contain relevant information for the task at hand enabling the organization to perform better. This is congruent with Payne et al. (1993) idea that balancing between reducing cognitive tasks in information processing, and information acquisition leads to “contingent use of heuristics (e.g., simplifying strategies that are more selective in the use of information)” (Bruggen et al.’s 2001, p. 797). Parallel to this, at a lower level of overload (possibly underload), instrumental use may not be adequate to enhance export performance. This is explained by the insufficient data commonly acquired by the respondents in the first place (Chapter Nine); since it is only with the “benefit of more data that it [in this case instrumental use] will positively affect the possibility of attaining decision accuracy” (Bruggen et al. 2001, p. 797).

10.3.2.4.2.2. Market Turbulence

The interaction between instrumental use and market turbulence also has a significant effect on export performance. The calculation of the inflection point yielded a mean-centered value of .742 for market turbulence, corresponding to no change in export performance due to instrumental use of export memory at this level of market turbulence. Adding the mean value of market turbulence (3.7424) to the mean-centered point resulted in 4.514. In substantive terms, this signifies that the relationship between instrumental use and export performance is positive as market turbulence reaches a score of 3.9424 (given the five-point scale on which the variable is measured). But it becomes negative beyond market turbulence values of 3.7724.

This relationship was expected and is consistent with what has been hypothesized. This finding supports the advice that “in turbulent environments, organizations are advised to continually generate, process, and distribute information about their products, processes, and customers (Davenport and Beer 1995; Leonard-Barton 1995)” since “exploitation of past knowledge can be useful only to the point when environments remain stable” (Bhatt 2000, p. 93).

One of the reasons for export memory’s decline in relevance is the dynamic changes in the market structure. Present market models no longer represent the true picture of the market. As Johnson et al. (2004, p. 24) put it: “...in turbulent environments, previous patterns of behavior are less informative, and firms must draw on their environmental knowledge stores to guide their actions with respect to reconfiguring and managing the IR portfolio.” Companies therefore focus on information acquisition in turbulent environments (Daft and Macintosh 1981; Egelhoff 1982; Belich and Dubinski 1999) instead of relying on their memory.

Table 10.15. Summary of hypothesis and individual results.

Export Performance Findings			
Independent Variable	Hypothesis Number	Postulated Linkage	Finding
Extent of Memory Use (EMU)	H19	+	+
Instrumental Use of Export Memory (I)	H19(a)	+	ns
Conceptual Use of Export Memory (C)	H19(b)	+	ns
Legitimizing Use of Export Memory (LEG)	H19(c)	-	ns
Export Memory Manipulation (EMM)	H19(c)	-	ns
Export Memory Overload (O)	H21(a)	-	ns
Technological Turbulence (ENV TEC)	H22	-	ns
Market Turbulence (ENV CUS)	H22	-	-
Competitive Turbulence (ENV COM)	H22	-	ns
Regulatory Turbulence (ENV REG)	H22	-	+
(O) X (I)	H21(b)	Inverted U	U-shaped
(EMU) X (ENV TEC)	H20	Inverted U	ns
(EMU) X (ENV CUS)	H20	Inverted U	ns
(EMU) X (ENV COM)	H20	Inverted U	ns
(EMU) X (ENV REG)	H20	Inverted U	ns
(I) X (ENV TEC)	H20	Inverted U	ns
(I) X (ENV CUS)	H20	Inverted U	Inverted U
(I) X (ENV COM)	H20	Inverted U	ns
(I) X (ENV REG)	H20	Inverted U	ns
(C) X (ENV TEC)	H20	Inverted U	ns
(C) X (ENV CUS)	H20	Inverted U	ns
(C) X (ENV COM)	H20	Inverted U	ns
(C) X (ENV REG)	H20	Inverted U	ns
(LEG) X (ENV TEC)	H20	Inverted U	ns
(LEG) X (ENV CUS)	H20	Inverted U	ns
(LEG) X (ENV COM)	H20	Inverted U	ns
(LEG) X (ENV REG)	H20	Inverted U	ns
(EMM) X (ENV TEC)	H20	Inverted U	ns
(EMM) X (ENV CUS)	H20	Inverted U	ns
(EMM) X (ENV COM)	H20	Inverted U	ns
(EMM) X (ENV REG)	H20	Inverted U	ns

Overview of Chapter Eleven: CONCLUSIONS

11.1. Theoretical and Methodological Implications

11.1.1. Reconceptualization and Measurement Development of Quality and Use of Export Memory

11.1.1.1. Export Memory Quality

11.1.1.2. Export Memory Use

11.1.2. Reconceptualization and Measurement Development of Antecedents to Quality and Use of Export Memory

11.1.2.1. Antecedents to Export Memory Quality

11.1.2.2. Antecedents to Export Memory Use

11.1.3. Reconceptualization and Measurement Development of Export Performance

11.1.3.1. Export Memory Quality and Export Performance

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11.1.3.3. Moderating Variables of Export Performance

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11.3. Study Limitations and Recommendations for Future Research

Chapter Eleven: CONCLUSIONS

This chapter, which has three main parts, presents the conclusions of the study. The first part tackles the theoretical and methodological implications of the study arranged in three sub-sections. Considering that this study has dual foci on the main central constructs of export memory, covering both export memory quality and use, there is a two-tiered approach for each sub-section. These sub-sections include the reconceptualization and measurement development of export memory quality and export memory use; reconceptualization and measurement development of antecedents to export memory quality and export memory use; reconceptualization and measurement of export performance, and the relationship between export memory use and export performance with the moderating variables environmental turbulence and export memory overload.

The second part of this chapter presents the managerial implications. These include an outline of recommendations that are likely to have solid practical value to exporters.

Lastly, the third part identifies worthwhile future research agenda in light of the platform provided by this present study, after evaluating its limitations.

11.1. Theoretical and Methodological Implications

This study is geared to the deeper understanding of organizational memory in general and export memory in particular. More specifically, it sought ways to develop or enhance good quality export memory, including controllable company factors that aid in optimizing memory use. It examined outcomes (both beneficial and detrimental to the firm) of export memory (see Shane 2000) and identified new constructs as well as developed psychometrically sound measures for these. It also proposed and tested a nomological net for export memory.

Although the focus of this study was on export memory quality and its use, this study has, on a wider scope, contributed to the enhancement of theories pertaining to the export marketing information system (Leonidou and Theodosiou 2004), organizational learning (Sinkula 1994, Slater and Narver 1995), export marketing (Cavusgil 1984c), resource-based theory of the firm (Newbert 2007), knowledge-based theory of the firm (De Luca and Atuahene-Gima 2007), contingency theory of the firm (Galbraith 1973) knowledge utilization in firms (Menon and Varadarajan 1992), and association between environmental turbulence and dimensions of export memory use (cf., Glazer and Weiss 1993; Souchon and Diamantopoulos 1997).

11.1.1. Reconceptualization and Measurement Development of Quality and Use of Export Memory

11.1.1.1. Export Memory Quality

In this study, export memory quality was conceptualized as the presence or absence of certain attributes of stored information, considered important by export memory users (see Table 4.1. dimensions of export memory quality in Chapter Four) namely: accurate, complete, easily understood, easily interpreted, objective, relevant, timely, useful, adding value to the organization, usable, credible accessible, up-to-date, concisely represented, and consistently represented. Thus, the literature (for example on information quality – see Wang et al. 1998, and on information systems quality – see Stein 1995), the Qualitative Study, and the main survey, were all instrumental in conceptualizing and developing a multi-dimensional measure of export memory quality, as perceived by exporters themselves. Since this is the first attempt to conceptualize and measure export memory quality, this study can serve as a platform for other researchers who are interested in further explicating this construct.

Export memory quality was measured by how it is perceived by the respondents (cf. O'Reilly 1982; cf. Menon and Varadarajan 1992; Maltz and Kohli 1996), using twelve items for export memory such as standard operation procedures, rules, routines, written documents, etc. (Walsh and Ungson 1991), that were assessed in terms of accuracy,

completeness, etc. (see Chapter Seven). The quality values of the items were later averaged and summed, creating formative indices rather than reflective scales for each of the 12 items (see Bollen and Lennox 1991). The 12 indices were then also summed to create a higher-order index of overall export memory quality. The rationale behind this approach is that memory quality is a likely function of the quality of each individual indicator, rather than the reverse (where a latent construct causes its individual indicators to vary). The results show that the index used for the study captures export memory quality adequately (Chapter Seven), which is a good indication of the effectiveness of this method for measuring export memory quality. Thus, the contribution of the study is not the mere "internationalization of terms" (Cadogan and Diamantopoulos 1995). Rather, a novel approach to the study of memory was adopted and proved fruitful. The conceptualization and measurement of export memory quality has enriched the growing body of knowledge on the export information processing theory of the firm.

11.1.1.2. Export Memory Use

Export memory use had, to the author's best knowledge, not been studied empirically before. Thus, the current study contributed to export marketing theory by underpinning a theory-driven conceptualization of this construct and developing psychometrically sound measures for it. The conceptual definition of export memory use was adapted from Diamantopoulos and Souchon's (1999) definition of information use. Export memory use is viewed as taking stored export information into account during decision making (cf., Diamantopoulos and Souchon 1999) of, and can be categorized into three key use dimensions: instrumental, conceptual and symbolic use (cf., Souchon and Diamantopoulos 1996).

With regard to measures of export memory use, findings revealed that instrumental use and conceptual use of export memory are two dimensions and not simply two poles of the same construct (Diamantopoulos and Souchon 1999). Furthermore, symbolic use was found to act two-dimensionally, that is, the legitimizing and manipulating use of export memory.

Measures for export memory use were borrowed and adapted mostly from Diamantopoulos and Souchon (1999), applying their methodology for export information to stored export information. A substantial number of items were also derived from the Qualitative Study. The current study pioneered the development of multi-item scales of export memory use from the perspective of the application of export memory. It identified different dimensions of export memory use, as well as valid and reliable measures of each dimension

To conclude this section, this research further extended the study on export information use to the use of export information in its stored form. Specifically, four dimensions of export memory use have been discovered: instrumental use, conceptual use, legitimizing use, and manipulating use.

11.1.2. Reconceptualization and Measurement Development of Antecedents to Quality and Use of Export Memory

11.1.2.1. Antecedents to Export Memory Quality

This study found four variables to be significantly related to export memory quality, namely export information acquisition quality, export information interpretation quality, export coordination, and the quality of integration into the organizational system (Chapter Eight).

To measure the export information acquisition quality this research used six items (see Chapter Eight). It discovered that export information acquisition quality is positively related to export memory quality, since, logically enough, what will eventually be part of the organization's memory bank begins from what the organization acquires.

Export information interpretation quality was measured using six items (see Table 8.5 in Chapter Eight). It is also positively related to export memory quality (cf., Dinur 1998; Simonin 1999; Liyanage and Barnard 2003). The quality of interpreting the information is seen to be crucial to the development of a quality export memory since how the

organization makes sense of the information is at the core of the organization's export memory.

The fourth variable, export coordination was measured using three items (see Table 8.11, Chapter Eight). Findings indicated that export coordination is positively related to export memory quality. The clear involvement and cooperation of everyone in the organization are a prerequisite to achieving a certain level of export memory quality.

Integration into the organizational system quality was measured using eight items (Table 8.13 in Chapter Eight). It also has a positive relation to the quality of export memory. Results suggest that companies encourage their employees to keep a written record of market information and transaction, a "people-to-documents" approach (Teare and Rayner 2002, p. 355), as a preferred mode of integrating market knowledge (Goh 1998). Most exporters are not able to accomplish this approach, even if they were aware of its benefits, due to sheer cost (Teare and Rayner 2002). The motivation for undergoing such process is the value proposition that it is an investment that would outweigh its costs (O'Dell and Grayson 1999). Eventually only what is stored becomes a part of the organization's export memory. If the process of integration is of good quality, the resulting export memory is also of good quality.

In a nutshell, this research has provided the initial factors that are related to the development of quality export memory.

11.1.2.2. Antecedents to Export Memory Use

Antecedents to export memory use were identified based upon both the information use literature as well as the Qualitative Study (see Table 4.4 in Chapter Four). The two antecedents found to be significantly related to export memory use were export information acquisition quality and export memory quality.

Thus, increased investment in export information acquisition tends to a greater use of export memory, seeing this to be an essential prerequisite to making successful business

decisions (Vyas and Souchon 2003). Better quality of export information acquisition leads to greater use of export memory because it is reasonable for organization to use a tool they have invested in, seeing it to be valuable to the organization (cf., Souchon et al. 2003).

High quality export memory also tends to increase export memory use (cf., Toften and Olsen 2004). It is again reasonable for organization to use an asset, export memory, which is of high quality. This is especially the case since export market is a less familiar area for organizations, thus, needing the support of stored knowledge.

Five antecedents found to be significantly related to the instrumental use of export memory are: technological turbulence, export market complexity, export memory quality, top management use, and export specificity.

Technological turbulence was found to be positively related to the instrumental use of export memory. It is the only one among the four dimensions of environmental turbulence that has a significant relation to the instrumental use of export memory. This means that organizations have higher tendency to take past information on technology the more turbulent the technological environment is. This seems baffling since, intuitively, organizations are thought to want to dissociate themselves from the past whenever the technological turbulence is high. However, it may mean that most organizations' products are still of continuous innovation rather than a disruptive one which actually still need the continuity export memory offers.

Top management use of export memory was found to be positively related to the instrumental use of export memory. As top management, the rational use of export memory is expected from them. As key decision makers of the organizations, top management makes use of its export memory to address the operational and strategic export marketing issues that the organization faces.

However, export specificity was found to be negatively related to the instrumental use of export memory. Organizations that have a more defined group in charge of its export operation may tend less to depend on its export memory in making decisions since they

might have newer export information. Those with less specialized group for export information might not have much export memory stored in the organization and thus may then depend more on what little they have in the export memory.

Also found to be negatively related to instrumental use of export memory is export market complexity. Since export markets tend to be differentiated and export regulations may differ and change more frequently within these different markets, exporters may feel stored information to be no longer dependable. Thus, when exporters market their services or products within a large number of countries, they may prefer to acquire and use new information rather than rely on an existing information base (Belich and Dubinsky 1999).

Export memory quality was found to be positively related to the instrumental use of export memory. To a large extent, it would not be surprising to see organizations using export memory when it is of good quality. As a resource of the organization, export memory becomes more valuable to the organization when its quality is high.

Top management use of export memory also was found to be positively related to the instrumental use of export memory. Again, this is expected since top management would be expected to use an asset in a rational way especially when that asset is of good quality. Within the export operation, they are the ones who would make most of the decisions to help facilitate the coordination of diverse markets (Myers 1997).

Lastly, export specificity was found to be negatively related to the instrumental use of export memory. It may be surprising to see this finding considering the fact that organizations that have more defined group for export operation would use export memory in a more rational way.

The following antecedents were found to be significantly related to the conceptual use of export memory: technological turbulence, competitive turbulence, export experience, export market complexity, export profit dependence, export memory quality, top management use, and export specificity.

It was found that technological and competitive turbulence were both positively related to the conceptual use of export memory. (cf., Menon and Varadarajan 1992; Ottesen and Grønhaug 2004). It is probable that when technological and competitive factors change more rapidly, exporters might want to make sense of what is happening by looking to the past and see a possible trend. Technological turbulence is actually positively related to both the instrumental and conceptual uses of export memory. This may mean that a high level of rational use of export memory happens when there are more technological changes.

Export experience was found to be negatively related to the conceptual use of export memory. Due to the way export experience was measured, a solid interpretation of this finding may not be possible for the time being.

Export market complexity was found to be negatively related to conceptual use of export memory. It may be good to note that export market complexity turned out to be negatively related to both instrumental and conceptual ways of using export memory. It may be possible that organizations may find it less to their advantage to use export memory when they deal with many countries. The more they deal with more countries, the more they may realize the differences in each country. Thus, dependence on past information to deal with new countries may not be so ideal. Furthermore, besides the differences that exist between countries, there is also the possibility that these differences are also changing, thus, organizations may not be inclined to use their export memory when dealing with more countries.

Export dependence was found to be positively related to conceptual use of export memory. When organizations depend a lot on their export operation they may put more effort in understanding more deeply the way the export operation works since a lot is at stake with this operation. For example, lessons learned from past export experience may become a basis for making sense of certain trends in the export market.

Export memory quality was found to be positively related to conceptual use of export memory. Exporters who find themselves with quality export memory may find it very

reasonable to use this memory in the process of learning more about the export market. Since learning of the export market is seen by organizations as something important to the success of the export operation, a quality export memory will be considered an important tool in such a process.

The use of export memory by top management was found to be positively related to the conceptual use of export memory. As seen earlier, top management use of export memory was also positively related to the instrumental use of export memory. As top management need to have a holistic understanding of the export operation, the use of export memory in a conceptual way is consistent to the role and duties of top management.

Export specificity was found to be negatively related to conceptual use of export memory. From earlier findings, export specificity was also found to be negatively related to the instrumental use of export memory. This may show that the more structured the export operation, the more inclined the organization is to not use its export memory in a rational way.

The following antecedents were found to be significantly related to the legitimizing use of export memory: competitive turbulence, export profit dependence, export memory quality, top management use, and export memory overload.

The more competitive the environment, the more organizations use their export memory in a legitimizing way. To a certain extent, decision makers need to make quick decisions when competition is fierce and thus decision makers may end up basing their decisions on intuition, for example, and formalize the decisions by looking for justifications from the export memory.

Export profit dependence was also found to be positively related to the legitimizing use of export memory. Decision makers in the organizations that depend on exporting easily legitimize their decisions through the use of export memory. The decision makers may for example have plans for their organizations which they base on other factors, like their intuition.

In terms of symbolic use, the study revealed a positive relationship between competitive turbulence and legitimizing use of export memory. Thus, memory could be used to support an existing decision made on other grounds when exporters have greater difficulty in assessing the situation.

Similarly, export memory quality is positively related to the legitimizing use of export memory. One reason could be the cultural background of the respondents. It is tacit knowledge that Asians use their intuition extensively in decision-making (e.g., Haley 1997). Furthermore, key decisions in smaller, internationally inexperienced companies tend to be more subjective in nature and are normally done only by the owner manager (Williams 2003). The respondents in this research were mostly small and medium-sized companies. Thus, the better the quality of export memory is, the more confident the exporters would be in using export memory to support their decisions based on other factors.

Export memory overload is positively related to the legitimizing use of export memory. This indicates that export memory overload confuse exporters, who make haphazard decisions and then find support from export memory (cf., Vyas and Souchon 2003). It is possible that when decision makers are faced with an overload of export information, they may tend to make decisions based on other reasons and then, again, simply use their export memory to support what they did. It may also imply that the excess amount of stored export information is used simply to increase the decision makers' confidence and satisfaction with the decisions made (O'Reilly 1980; Souchon and Diamantopoulos 1997).

The following antecedents were found to be significantly related to memory manipulation: export profit dependence, export memory quality, and export memory overload.

Turning now to export memory manipulation, profit dependence on export operations was found to be positively related to it. This relationship may be surprising considering the fact that dependence on exporting for profit would mean a rational use of export

memory. However, it is possible for decision makers to manipulate export memory in order to make it suit their own plans maybe for even greater resource allocation for the export operation for example. This may be easily done due to the importance of the export operation.

High quality export memory, however, is negatively related to the manipulation of export memory. Manipulating high quality memory would be a waste of resources. Thus, export decision makers would tend not to distort export memory that is already of good quality.

11.1.3. Reconceptualization and Measurement Development of Export Performance

11.1.3.1. Export Memory Quality and Export Performance

The operationalization of export performance was taken from literature. On issue of conceptualization and measurement of export performance, an eclectic approach was followed (e.g., Cadogan et al. 2002, Souchon and Durden 2002). Important factors of these studies on export performance were incorporated together.

The main insight in this section is that the relationship between export memory quality and export performance is mediated by the extent of export memory use. The results revealed that export memory quality is positively related to the extent of export memory use which in turn was found to be positively related to export performance.

Export performance has been conceptualized as a multi-dimensional construct and measured using several indexes which were eventually averaged to come up with a global export performance index. The first index is export growth (Aaby and Slater 1989) which is divided into growth in export sales and growth in export profitability. Export sales covers the period of the past three years (Naidu and Prasad 1994), which was the same period for export profitability (Souchon and Diamantopoulos 1997). Second index is relative export performance in relation to their competitors and exporters from other industries, developed from Souchon and Durden's (2002) methodology for measuring competitiveness in exporting. Third index is satisfaction with export activities measured along five criteria (i.e., export sales volume, export profits, export market share, and rate of new market entry). These indexes need not covary because they measure varied

dimensions of export performance that are not necessarily consistent with each other (e.g., sales and profit). An overall export performance measure was derived by asking the respondents to rate their company's overall export performance on a five-point scale (cf. Evangelista 1994; Jaworski and Kohli 1993). This was used as a validating variable during the measure development.

To conclude, using these indexes to measure export performance illustrates that it is a multi-dimensional construct (cf., Mattyhussens and Pauwels 1996; Cadogan et al. 2002) composed of economic and strategic elements that pertains to overall export performance (cf., Diamantopoulos 1999) rather than any specific dimension (Souchon and Durden 2002).

11.1.3.2. Relationship of Export Memory Use and Environmental Turbulence with Export Performance

Results of the study show that there is only one aspect of export memory use that significantly affects export performance – extent of export memory use. This suggests that what matters in export memory use in so far as it affects export performance is not the type of export memory use but how much it is used. This finding could mean that there is no particular type of export memory use favored since the choice of the type of use is “situation specific” (Leonidou and Katsikeas 2003, p. 30). Thus, the different types of export memory use are beneficial to exporters as long as sufficient amount of export memory is used coupled with “systematic information planning” (Leonidou and Katsikeas 2003, p. 29). This research has contributed to the development of knowledge on memory-performance link (Berthon et al. 2001).

Market turbulence is negatively related to export performance. As export market demand changes radically, exporters may not be able to quickly address those demands (cf., Glazer and Weiss 1993) and thus it will have a negative effect on export performance.

Regulatory turbulence is positively related to export performance. Increased regulatory turbulence may equate to greater openness in the world for goods and services (e.g., Tan

2002). The increased breaking down of export barriers has a positive effect on export performance.

11.1.3.3. Moderating Variables on the Relationship between the Use of Export Memory and Export Performance

The moderating variables tested in the study were export memory overload, technological turbulence, regulatory turbulence, market turbulence, and competitive turbulence.

Export memory overload significantly affects the relationship between the instrumental use of export memory and export performance. With higher levels of export memory overload, it was expected that the instrumental use of export memory would have a negative effect on export performance (cf., Cavusgil 1985; Saunders and Jones 1990; Goodman 1993; Souchon and Diamantopoulos 1997). Results support this relationship in so far as low levels of export memory overload are involved. When export memory overload exceeds a certain point, the use of export memory in an instrumental way is related positively to export performance. A possible explanation for this is that at low level of memory overload, the exporters may not have enough information to properly guide them in their decision. However, at higher levels of export memory overload, the organization may be able to find sufficient enough information for it to address the issue at hand. Although overload brings with it confusion, decision makers may have a way of handling this obstacle.

For market turbulence, it significantly affects the relationship between instrumental use of export memory and export performance. At lower levels of market turbulence, instrumental use of export memory would still contribute positively to export performance. But with high levels of market turbulence, exporters are better off acquiring and using new information (Daft and Macintosh 1981; Egelhoff 1982; Davenport and Beer 1995; Leonard-Barton 1995; Belich and Dubinski 1999) because instrumental use of export memory would only be useful in relatively more stable environments (cf., Eisenhardt 1989; Bhatt 2000; Johnson et al. 2004). Market realities may have already changed radically that may make the memory for example no longer relevant.

11.2. Managerial Implications

The findings of this research are relevant to export decision-makers who wish to improve their export performance. The managerial applications of the study's findings are outlined and practical pointers are provided which will be additional venues for exporters to enhance their export performance.

Further study on the implications of the different uses of export memory in terms of determining the conditions (as to when they would be beneficial and when they would be harmful) to the organization would provide greater guidance to export practitioners. This study has already begun investigating this area by testing the moderating effects of environmental turbulence and export memory overload on the relation between export memory use and export performance (see Vyas and Souchon 2003).

The extent of export memory use has been found to positively affect the company's export performance. It is therefore important for exporters to be aware of the factors that will enhance the extent of export memory use. From this research, two factors have been seen to have a significant effect on the extent of export memory use: export information acquisition quality (a positive effect), and export memory quality (a positive effect). In terms of acquisition of information, it could be deduced then that the higher the quality of the acquisition of export information, the higher will be the use of export memory. It may imply that organizations tend to use something that it has invested in since achieving a high quality of export information acquisition demands, among other things, financial and human resources investment. It is important then for organizations to invest in achieving a high quality export information acquisition.

The other important factor of influence is export memory quality. It would be logical to expect that organizations that perceive themselves to have quality export memory will extensively use what they have. It is important then that exporters develop high quality memory. For managers faced with an abundance of data, quality of information would be

a crucial determinant of the use of information (Low and Mohr 2001). This is also true with export memory. Export memory should then be managed in the same way as a successful product has been managed in its life cycle. For example, "the degree and frequency of changes in information products depend on the type and nature of the information, the tasks the information supports, and the changing context in which the information is used" (Wang et al. 1998 pp. 101). The measure of export memory quality developed in this research can also be used as a diagnostic tool for managers to assess how good their export memory is. This diagnostic tool will provide the organizations indications on which aspects of their export memory they could still improve.

It would also be interesting to see in hindsight the factors that influence the development of a quality memory. From this study, managers are advised to focus on the following factors that have been found to significantly affect export memory quality: export information acquisition quality (positive effect), export information interpretation quality (positive effect), export coordination (positive effect) and integration into the organizational system quality (positive effect).

First, since what is stored come from some source, the quality of acquiring the material of export memory would be a big factor in determining its resulting quality.

Second, since information is now more accessible than ever before, what sets an organization apart from the rest is the way they interpret the information they acquire. Johnson et al. (2004) suggest that it is important to improve the ability of managers to interpret information which will probably lead to a higher quality of export memory. It will benefit the exporting organizations to assess the way they interpret the information they have and see how to improve the process of giving meaning to the information they have. For some, a more open corporate environment may help synthesize the different contributions from different functional areas. Or it may simply be a more open communication environment within the export department to enhance interpretation. It may also be worthwhile to investigate if a catalyst is needed in terms of inspiring out-of-the-box interpretations of the information, should the need arise.

Third, coordination within the export function and between different functional areas in an organization is critical to achieving high quality export memory. Export operation is most probably not a solitary act of one department but a concerted effort by the whole organization. This goal of achieving the right level of coordination may require more attention from the management, since "a review of the classical literature on the main requirements for successful managerial action shows that it is precisely this lack of social and political cohesiveness that makes coordinating 'internally' the crucial and most elusive of managerial skills (Roure et al. 1993, p. 490). Some factors that concern organizational climate may enhance or obstruct the coordination in the organization. For example, the level of trust that exists between the people of the export marketing function and the other members of the organization could be assessed and evaluated for possible improvements (cf. Soren 1999). Organizations can also look into and manage the degree of interdepartmental conflict and tension (e.g., Jaworski and Kohli 1993; Frankwick et al. 1994) which obstruct efforts for greater coordination.

The fourth important factor to consider is the way the quality of the information's integration into the organizational system. To a full degree, only the information stored could potentially be recalled. For example, the ability to discern what information would be worth keeping (Anand et al. 1998) translates into efficient storage of hard-to-copy information (Barney 1991; Quinn 1993). It will be logical then to assume that the process of storing information is a critical factor, and in fact a necessary factor, to a quality exports memory. In fact, some studies have even found a positive relation between integration and project success (e.g. Leonard-Barton et al. 1994; Hoopes and Postrel 1999).

Since integrating export information into the organization is important it is essential also for managers to assess the quality of this organizational process. Some members of the organization may not be willing to share, much less to integrate their knowledge into the organization, due to political reasons (cf., Stenmark 2001). It is possible that organizations are not even aware of these 'wasted' resources. It will be advisable to see what tools the organization can use to help integrate export information. Also it is important to constantly or regularly update the export memory they have (see Silberberg

et al. 1999). With intuition as an important part of the organization's export memory, it will be advisable to be more aware on how to enhance it and how it can be integrated better into the organization. For example, Eisenhardt (1999, p.67) proposes that "sharing information at "must attend" meetings is an essential part of building collective intuition." The dynamics of meetings enhance managers' understanding of the data. The proper use of information technology in storing export information makes "the discursive process of remembering more efficient by reducing the cost and effort associated with the storage of and access to an organization's memory" (Nilakanta et al. 2006, p. 87). In the specific area of documenting information for future use, managers must be aware whether or not organizational members are biased towards keeping a record only of export information that address short term needs to the detriment of export information which will have a longer-term value (Nissley and Casey 2002).

Market turbulence has been found to affect export performance in negative manner. Exporting organizations may counteract this effect if it responds preemptively to potential market turbulence in their industry. It may be good to investigate which kinds of products or services are more prone to market turbulence. Those products or service found to face a more turbulent market should be monitored more extensively.

The other environmental factor having an effect on export performance is regulatory turbulence. In this aspect, the regulatory changes do have a positive effect on performance. This may be due to the trend towards a freer trading world which allows exporters access to new markets. For example, a service exporter may have to monitor more closely the labor laws prevailing in target countries. Some countries may have open policies on certain professions (e.g. Martin 2003).

Instrumental use of export memory will have a negative effect on export performance at certain levels of export memory overload and a positive effect at higher levels of export memory overload. It would be beneficial to further investigate on this point looking for other possible reasons why higher levels of export overload would trigger better performance when export memory is used in an instrumental way.

Instrumental use of export memory also has a positive effect on export performance at lower levels of market turbulence. At higher levels, the instrumental use begins to show a negative effect on export performance. Again, exporting managers will have to know at what point of market turbulence will export memory still be useful. Generally, in unstable environment, managers need more information since stored information may easily become obsolete during such conditions and thus would be required to undergo more information processing in order to cope with the instability. (cf. Tushman and Nadler 1978; Menon and Varadarajan 1992; Low and Mohr 2001).

11.3. Study Limitations and Recommendations for Future Research

At the time this research was conducted, it is the only extensive study on export memory quality and export memory use. This is the first study to consider empirically all of the following: (1) constructs of antecedents to export memory quality considered in this study, (2) construct of export memory quality, (3) all dimensions of export memory use, (4) both antecedents and outcomes to export memory use

However, the study has its limitations. The study used cross-sectional data, and conclusions regarding causality cannot be drawn (e.g., Berthon et al. 2001). Rather, we can only draw inferences from the patterns of the empirical relationships observed between the variables of interest. More powerful information about possible causal linkages between the antecedents to export memory quality and export quality, antecedents to export memory use and export memory use, and export memory use and export performance would require either longitudinal descriptive studies, or experimental/quasi-experimental approaches, and future researchers may wish to consider these options. Future research can undertake a longitudinal study in order to examine information acquisitions at two points in time: a) that which contributes to memory quality and b) that which competes with memory use. Furthermore, a longitudinal study should be more helpful in observing the impact of time on export memory use than the cross-sectional methodology used in this study. A longitudinal study would also show the different modes of export memory use and their impact on

export performance under different circumstances. Last but not the least, the cyclical nature of export learning process, of which export memory forms a part, requires the use also of longitudinal study in order to grasp the dynamic nature of the process.

The measures used in the study for export memory quality and export memory use could be further developed by replication on different samples to provide additional evidence of reliability, validity and stability. Replications of this study is also called for to provide additional evidence on the psychometric soundness of the measures of export memory quality and export memory use as well as validate the generalizability of the whole model to other populations (cf., Brown and Gaulden 1984; Kohli et al. 1993; Easley et al. 1994). For instance, this study only covered two dimensions of symbolic use of export memory. Future study should consider measuring also the other dimensions of symbolic use as proposed by Vyas and Souchon (2003). The country of origin of the exporters may affect the extent to which, and ways in which export information is used. As the study represents a first attempt in the quantitative measurement of export memory use as a multidimensional construct, replication of the scales in different settings is necessary in order to assess the stability of their psychometric properties and establish their generalizability.

The same need for replications exists with the three new constructs developed in this research: export information interpretation quality, export learning, and the quality of integration into the organizational system.

A better measure for export experience can be developed and used for future testing of relation between this factor and use of export memory.

The methodologies used for studying export memory quality and export memory use could be adapted to a domestic setting. In fact, non-export antecedents to export memory quality should be used in succeeding studies. The factors influencing the way in which export memory is used within organizations are worthy of future study. In a domestic study, there is a rich literature on antecedent factors of information use such as organizational characteristics (Deshpandé 1982), information source characteristics (e.g.,

Larsen 1983), decision-maker characteristics (e.g., Schlegelmilch and Therivel 1988) and project-specific characteristics (e.g., Lee et al. 1987). Most of these variables would be relevant in an export setting too. Future studies should consider other important antecedents which were not covered in this research.

This study also represents a “single-shot” piece of research. That is, it is the only research of its kind, and the stability of the study findings need to be assessed by other researchers. Specifically, the presence of a U-shaped relation between the instrumental use of export memory and export performance with overload of memory as moderating variable could be further validated. This is also true for the inverted U relationship between the instrumental use of export memory and export performance which is moderated by market turbulence.

It may be interesting to investigate on what kind of idiosyncratic information would contribute most to discovery of opportunities in the export market (cf., Venkataraman 1997; Shane 2000). This will be important to know so that managers would be able to direct their energies and resources in developing such kind of export memory (see Shane 2000). Furthermore, as Berthon et al. (2001, p. 141) propose that in terms of facilitating operational and strategic perceptions on issues, “it may be the type of memory rather than the overall *degree* of memory development that is critical.

The sample is from Filipino exporters. There may be some idiosyncrasies within this group due to maybe culture which may not allow the results to be generalized (see Tsang 1997). Cross-cultural studies allows for comparing results done in a Western context which may show for example a different results in terms of export memory use patterns (cf., Diamantopoulos et al. 2003).

Owing to studies with overseas Chinese, it may be good to further analyze in future studies how these Filipino-Chinese document the information that they acquire or develop. This study could see if there is a relation between the integration of information and company size. Or maybe we could also see the specific methods of integration which Filipino-Chinese exporters use (see Tsang 1997). The findings of the study, which are

applicable to export marketing, should be replicated in a cross-national way to find out the impact of cultural differences on the use of export memory.

On the other hand, having only a single respondent from respondent exporters would not sufficiently reflect the sentiment of the whole organization (see Rindfleish and Moorman 2001). Several respondents in each organization would better validate their answers although this may be very difficult to do since many export operations are run by just one person.

This research used a subjective measure of economic success. Previous studies have shown that a strong correlation exists between objective assessments of performance and their more subjective counterparts (Desks and Robinson 1984; Pierce et al. 1987). However, there is a clear need to double check that the current findings hold when more objective performance measures are used. Of particular interest will be the identification of the optimal value of the different modes of export memory use. The latter could provide a benchmark for firms who wish to improve their export performance by manipulation of the way they use their export memory.

It would be good to be aware of the final items that were used in measuring export learning orientation since the two original items that were supposed to consider generative or double-loop learning were removed after the factor analysis was done. The two items removed were: (1) "We are not afraid to reflect critically on the shared assumptions we have made about our export customers." and (2) "Personnel in this enterprise realize that the very way they perceive the export marketplace must be continually questioned." Thus, it would be good to assess if the present items only measure a single-loop learning.

Other researchers may find it interesting to undertake a study on the kind of export information worth preserving. For instance, are they the procedural knowledge or the declarative knowledge? Basically those who have special prior knowledge would be in a better position to discover the opportunities that exist in the market (see Shane 2000).

Export memory quality has been conceptualized and measured in this research. An initial set of antecedents to export memory quality has been uncovered. Moving forward, dimensions of export memory could further be studied to get a deeper understanding of how to better manage the organization's export memory. It would also be useful to study the impact of the different aspects of export memory (e.g., export information obtained through formal and informal relationships with external export-specific groups) on performance (cf., Leonidou 2002).

For export memory use, the appropriateness of its different types could also be studied. The export memory use scales developed in this research could be used by future researchers to examine the way in which extent, instrumental, conceptual, legitimizing, and manipulating use impact on different aspects of export performance. Following the work of Vyas and Souchon (2003) on the symbolic use of export information, research on further explicating the different export memory uses with the focus on the symbolic use of export memory would be important.

Since this study found out that what is important is the extent of memory use and not the specific way in which the memory is used, it would be beneficial to investigate in what conditions it would be appropriate to use the different modes of export memory use. It can be deduced from this research that the symbolic use of export memory may not necessarily mean a "bad" use of export memory. Thus, it would be useful to gauge how such symbolic use of export memory contributes to export performance. One approach to achieve this research objective is to conduct post-survey in-depth interviews. This method would be quite different from the exploratory approach to qualitative interviewing adopted in this study. Rather than seeking to gain insights into the construct of export memory use, the discussions between the future researcher and the interviewees may focus on concrete issues uncovered in the empirical study presented here. For example, as stated earlier, it may be productive to examine when it will be useful to apply each mode of export memory use. Furthermore, using a cross-national study, it may show variance among managers coming from different countries in the way they prefer certain modes of export memory use (cf., Diamantopoulos 2003).

However, the antecedents used in the study for export memory quality and as well as for export memory use, could further be expanded (cf., Diamantopoulos et al. 2003). Other items could be studied such as the degree of group decision making (Low and Mohr 2001) and export task (Diamantopoulos et al. 2003). A more detailed study of what constitutes quality export memory and their relative importance in achieving a high quality of export memory would be helpful to companies in their efforts to improve the quality of their export memory. Different export memory repositories may demand a different set of quality attributes. If such case exists, exporting companies may invest on suitable actions addressing the unique demands of each depository.

It would be important determine what aspects of export performance are affected by export memory use in order to see the particular contribution which export memory has on them (Richey and Myers 2001; Toften and Olsen 2003).

This study did not identify *all possible* antecedent factors to export memory quality and export memory use. Future study should then consider the impact of additional variables affecting export memory quality as well as additional factors influencing the use of export memory (i.e., other organizational, managerial, and informational variables) in order to come up with a more comprehensive model explaining export memory enhancement and the use of export memory. Future researches should focus more on the different aspects of export memory quality.

Export managers may tend to use their intuition extensively. It is possible that managers may find their intuition to be stronger in certain areas of marketing than in others. Furthermore, managers may initially use intuition at certain stages in the decision making process and shift to the use of other aspects of export memory during other stages of decision making (cf. Lewis 2002). It would thus be important for managers to know how they could enhance this important managerial tool (Agor 1988, 1999; Walsh 1995; Bazerman 1997) which is part of the organization's export memory. At the end of the day, the use of intuition is in fact an instrumental use of export memory as it "play[s] as important a role in problem definition and decision making as in other general aspects of marketing management and practice (Butler 1994, p. 10.) However, this could be

followed by the legitimizing use of export memory to justify such use. This could be clarified in future study (see Williams 2003). As mentioned earlier use of intuition is in fact use of export memory (see Vyas and Souchon 2003).

The study used the MVA function of SPSS in addressing missing values. There are limitations to this method as mentioned in Chapter Six. Future study could make use of the same data but could use a more advanced method of addressing missing values like the multiple imputation method.

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