LANGUAGE OPERATING CAPACITY:

THE CONSTRUCT, ANTECEDENTS AND OUTCOME VARIABLES

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Thesis Summary

Interest in the role of languages in international business has increased due to the ever-increasing globalised teams, the workforce or global marketplace. Despite this trend, there is lack of understanding about the role of languages in international business performance. This PhD thesis develops a two-factor Language Operating Capacity (LOC) as a means to address the unique challenges associated with the internationalisation of small and medium enterprises. In international business, both language and culture are key aspects to understanding and developing effective marketing and business strategies. The present cultural frameworks capture core values and practices within a national or organisational culture in an attempt to understand cultural diversity and how to manage such cultural challenges. Although influential across many streams of international business and management literature, the current literature is underdeveloped or considers it only implicitly. Despite agreement among researchers that foreign languages can pose structural challenges for communication and networking essential in international business. To date, no conceptual or empirical work has been developed that incorporates a construct reflective of language capabilities at an organisational level, with the exception of that by Welch and Welch (2018) which focusses explicitly on multinational corporations, ignoring SMEs, and does not empirically test the conceptualisation. Accordingly, this thesis advances an understanding of LOC by highlighting the importance of creating a valid, reliable measurement instrument and conceives of the construct as a dynamic capability. Accordingly, this thesis aims to advance an understanding of LOC by highlighting the importance of creating a valid, reliable measurement instrument and conceives of the construct as a dynamic capability. The thesis thus develops the concept of LOC by, firstly, presenting a new conceptual definition of the construct within an SME context to provide a theoretical basis for the development and validation of an LOC scale; secondly, identifying what constitutes LOC and to what extent individual and firm-level factors (micro-macro mechanisms) explain the level of language capability within a firm; and thirdly, ascertain the impact that LOC has on soft behavioural constructs as well as hard performance measures, namely: Export Orientation, Networking Capability and Export Performance.

In order to deliver on these three main contributions, two comprehensive studies were conducted a) to develop a valid and parsimonious measure for LOC and b) how LOC behaves within the nomological network of its antecedents and outcome variables. The mixed-methods research, grounded in theoretical and empirical evidence indicate that LOC, the newly developed concept is statistically different and well positioned within the nomological network of the two related yet distinct constructs: cultural intelligence and linguistic competence. Further, the research findings provide evidence for two dimensions of LOC: Motivation and Preparedness, and Actual Utilisation, demonstrating strong support for the

construct. Further, based on data obtained from survey results collected from 417 SMEs, empirical evidence shows that firm level-individual level antecedents or micro-macro mechanism namely: linguistic competence and cultural intelligence (individual) and willingness to invest, training and awareness of technological and linguistic services (firm level antecedents) has positive influence on LOC. Significantly, the findings of the antecedent construct capture multidimensionality (both firm level and individual level) of LOC. Moreover, findings clearly indicate LOC is directly related with all three outcome variables: export orientation, networking capability and export performance. In addition, findings support LOC as a process such that it mediates the relationship between its antecedents and export orientation. The results also indicate that networking capability positively moderates the relationship between LOC and export performance. Overall, this research theoretically and empirically brings the LOC construct closer to a complete understanding of language capabilities, that is, not only what constitutes LOC but also its drivers, along with its effect on performance for SMEs. The thesis concludes with a discussion of the theoretical and practical implications of the findings, the limitations of the study, and potential avenues for future research

Keywords: Language operating capacity, Language capabilities, Scale development, Internationalisation, Export orientation, Networking capability, Export performance, Small and medium-sized enterprises

Conference and Colloquium Presentation

Conference Papers

Tibrewal, A., de Jong, A., & Parkes, G. (2021). Language Operating Capacity: Developing a measurement scale for BAM conference, September 2021. (Awarded Best Full Paper in International Business and International Management Track)

Tibrewal, A., de Jong, A., & Parkes, G. (2021). Language Operating Capacity: A Nomological Network of Linguistic Competency and Cultural Intelligence for AIB PDW, June 2021 for 18th JIBS (Journal of International Business) conference.

Tibrewal, A., de Jong, A., Parkes, G., Haji, I., & Backhaus, C. (2019). Impact of Language Competencies on International Business Performance: Small and Medium Enterprise Perspective. ISBE 2019 Conference, Newcastle, United Kingdom.

Impact

1. The ESRC-commissioned project report has been accepted at the **All Party Parliamentary Group** for modern languages (APPG-ML) and the findings of the report were presented to the APPG-ML, chaired by Baroness Coussins, on 20 May 2021 at 3 pm (see Appendix 10 for a list of MP attendees)
2. **Commissioned Project Report**: LO-C 30 Report, 2021 (Role of Languages in International performance for UK SMEs) was launched along with the TalkGlobal app on 11 May 2021: https://www.aston.ac.uk/research/bss/abs/loc30-report

   The research launch was covered by The British Academy:

   > **https://www.thebritishacademy.ac.uk/news/british-academy-welcomes-new-research-showing-value-of-language-skills-to-smes/**

   and the Greater Birmingham Chamber of Commerce: **https://bit.ly/3hl6s48**

3. TalkGlobal is a web-based diagnostic tool: http://talkglobaladvisor.co.uk/ that firms can use to identify their export-readiness, with language capability as a central feature.
4. The research findings were disseminated through the TheBusinessDesk.com webinar to a business/practice audience on 22 July 2021 at 10 am (see Appendix 11 for a list of attendees).

Dedication

To Lord Krishna and my Guru-His Holiness Sri Sri Ravi Shankar

karmanye vadhikaraste, Ma phaleshu kadachana

(Be dedicated, not attached)

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Khusainova, Dr Julius Stephan, and my PhD colleagues who have now become great friends: Mohit Dar, Jake Hinks, Sandrine Tunezerwe and many others. Thank you for your support, friendly chats and making this journey as enjoyable as a PhD journey can be. I would also like to thank industry partners COMTEC Translation and the Association of Translation (ATC) for part-funding this research. My sincere appreciation also goes to all the participants in this PhD thesis; their interest, time and effort enabled the successful completion of the data collection phase.

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https://www.aston.ac.uk/research/bss/abs/loc30-report

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List of Abbreviations

SME- Small and Medium Enterprises
MNE- Multinational Enterprises
MNC- Multinational Corporation
LOC- Language Operating Capacity

List of key definitions

Linguistic competencies/skills	refers to a (foreign) language skill within an individual for the purposes of effective communication within an international context (Hurmerinta et al., 2015) and adopt different levels of language competencies that are used by the Common European Framework of References for Languages (CEFR). It is an individual level construct that is language skills of an individual within a firm.
Cultural Intelligence	refers to 'a person's capability for successful adaptation to new cultural settings, that is, for unfamiliar settings attributable to cultural context' (Earley & Ang 2003, p.9 and use SFCQ (short-form measure of cultural intelligence) which has three components: cultural knowledge, cross-cultural skills and cultural metacognition (Thomas et al., 2015)
Willingness to Invest	refers to a readiness to invest in language services either through the translation of relevant documents, for example, operation manuals, website translation or packaging, or hiring an individual with the necessary linguistic competence.
Technological awareness	refers to knowledge of technology-facilitated services in languages, including translation companies or computer-assisted (machine-learning) services such as Google Translate, WeChat or any similar platforms or services available at firm level.
Training (for existing or new resources in linguistic competence)	refers to a systematic approach to learning and development to improve individual, team and organisational effectiveness (Goldstein & Ford, 2002). Training for linguistic competence refers in this study to the encouragement, support and facilitation of staff development through systematic language-training courses, online or otherwise, aimed specifically at international business development and performance
Language Operating Capacity (LOC)	Refers to motivation and preparedness towards developing language-related capabilities (ability to develop) as well as the actual utilisation of language capabilities (ability to exploit) within the organisation. In other words, LOC refers to an organisational level language capabilities and recognises that language skills though within an individual, firms play an important role in development and effective utilisation of such capability for international performance.
Export orientation	Export (market) orientation, has three crucial behaviour components – Export Intelligence Generation (EIG), Export Intelligence Dissemination (EID) and Export Intelligence Responsiveness (EIR) – and is focused on customers, competitors and the environmental changes affecting the organisation and its dynamics (Cadogan and Diamantopoulos, 1995; Cadogan et al, 1999, 2005)
Networking capability	refers to initiating, developing and terminating business networks (Mitrega et al., 2012)
Export performance	is measured with four items using Cadogan et al., (2009) and Morgan et al., (2012 b) and includes composite score of performance indicators such as export sales, export profit, export sales growth and new market entry to encompass the multidimensionality of performance measures (Morgan et al., 2004).

Chapter 1- Introduction

1.1 Introduction

This chapter provides an overall research context and begins with the role of languages in the international business and marketing research field within which the thesis is positioned. The background provides for a synopsis of languages studies so far in this international business and marketing literature. In addition, the chapter also presents the research aims and objectives of this PhD dissertation and concludes by outlining the overall structure followed in the thesis.

1.2 Background to Languages in International Business

The role of languages has been sparsely and dispassionately addressed as a barrier or hindrance to be managed (Piekkari & Zander, 2005) and a 'forgotten factor' (Marschan-Piekkari et al., 1997; 1999) in international studies. Some of the earliest studies, by Luo and Shenkar (2006) and Fredriksson et al. (2006) appositely put focus on the role of languages and describe multinational companies respectively as multi-lingual communities and multi-lingual units to understand the dynamics and complexities of functioning in a multi-lingual environment. Since then, the study of language and language skills in international business has been growing, albeit in a limited perspective (Hurmerinta et al., 2015).

In the realm of international business and international marketing, culture and languages have been described as important drivers of international business performance (Johanson & Vahlne, 1977, pp.23–32). Various studies have been conducted to understand cultural values in the past, including those by Schwartz and Bilsky (1987), Trompenaars and Turner (1993), Hofstede Model (2001), Hofstede and Hofstede (2005), Hofstede (2007), GLOBE model (2004), claiming that the 'business of international business is culture' (Hofstede, 1994; Hofstede et al., 2010). These cultural studies have facilitated research in international marketing strategies such as branding (Roth, 1995), customer loyalty (Thompson & Chmura, 2015) and international channels (Hoppner & Griffith, 2015) to understand and possibly evoke desired outcomes in international markets and to gain sustainable competitive advantages.

In contrast, language was 'conflated with culture' (Tenzer et al. 2017, p. 823) and implicitly embedded, and has not been recognised separately. However, language researchers argue that this is problematic, as language diversity has a unique influence on social interactions, communication and mutual perceptions in an international setting (Henderson, 2005). A growing body of research in the extant literature has increasingly given attention to complex role language play in multinational firms (Pudelko, 2020; Angouri and Piekkari, 2017; Karhunen et al., 2018). Much of the recent research on languages in international business has focused exclusively on large multinational corporations as part of an overall strategy, such as trust (Tenzer et al., 2014), knowledge transfer (Peltropi & Vaara, 2014), power relationships (Tenzer & Puldelko, 2017), and reduced cognitive performance (Volk et al., 2014). These studies are primarily qualitative. Moreover, research into the internationalisation of SMEs, focusing on the personal characteristics of the owner or manager (Manovola et al., 2002) studies the relationship between the linguistic ability of an individual and export performance (Stion & Rialp-Criado, 2010; Williams, 2003; Marcella et al., 2002; Ursic & Czinkota, 1989; Turnbull & Welham, 1985) the results of which are inconclusive and mixed (Knowles et al., 2006; William & Chaston, 2004). Furthermore, a qualitative study by Hurmerita et al. (2015) suggests that the approach to study the linguistic competence of managers in small firms can create language oversight in market selection, for instance choosing a Latin American nation for internationalisation by a Spanish firm on the basis of language similarity and does not necessarily facilitate successful internationalisation.

To the best of our knowledge, no comprehensive studies quantify the impact of language capabilities on international marketing and business performance within firms. This can be attributed to the complexity of cross-disciplinary study that considers both linguistic and business aspects (Harzing & Feely, 2008), the lack of concurrent measures for studying linguistic competence in business (Dow & Karunaratne, 2006) and the lack of integration of research in international marketing and international business research (Morgan et al, 2018), more specifically language research.

The presence of linguistic resources is, however, crucial for SMEs as they find it difficult to remain competitive within the international market due to liability of smallness (resources), liability of foreignness (lack of international knowledge), and sensitivity to external influence (Maekelburger et al., 2012). Often, SMEs in the international market are disadvantaged due

to their limited financial and human resources compared to large companies. The struggle for SMEs to remain competitive in an international context is now further enhanced in the United Kingdom since its exit from the European Union following a referendum in June 2016 and consequent uncertainties around single-market access. A report to UK Trade & Investment by Foreman- Peck and Wang (2014) illustrates the severity of the issue and states that language skill deficiencies as a barrier to exports, amounts to 3.5% of GDP in 2014. Another study by the British Chamber of Commerce identifies language as one of the top three barriers to exporting for the UK. This is coupled with a perception among six out of ten SMEs that command of the English language is enough to export in international markets (Jenkins, 2018).

Hence, the focus of this research is to identify the role of languages and language capabilities, independently of concepts such as culture (Hofstede, 2001, 2005, 2007; House et al., 2004) or psychic distance (Dow & Karunaratna, 2006) as recommended by Welch et al., (2005) for the internationalisation of SMEs. A key paper in this respect is that of Welch and Welch (2018) which coined and conceptualised the construct of LOC. There is no denying that language and culture are linked; however, language poses challenges in international markets beyond cultural awareness (Welch & Welch, 2008) that leads to structural challenges in effective communication and networks. As Piekkari, Welch & Welch (2014, p.157) suggest, foreign language skills can facilitate the 'ability of a firm's representative to interact and to collect relevant information'. We argue that the role of languages in international business and marketing is pervasive and, thus, there is a need for a more comprehensive understanding of the role languages play in the internationalisation and international marketing of SMEs. More specifically, how languages can facilitate SMEs in their internationalisation (Johanson & Vahlne, 1977, 1990, 2009).

Welch and Welch (2018) identify LOC as an organisational language capability and recognise that, although language skills are a competence at the individual level, organisations play a critical role in their development. To this end, this study attempts to draw on the work of Welch and Welch (2018) and define language capability and its dimensions to develop a measurement instrument of language capacity for SMEs. In addition, investigate what facilitates LOC and also its impact on international marketing and business performance of SMEs. That is, we develop and empirically validate a measurement of language capabilities at

a firm level which is termed as LOC. In addition, we also identify the individual and organisational antecedents and consequences of LOC in the context of SMEs. With this approach, we aim to contribute to international business and marketing literature in three important ways. These are discussed as research objectives in the next section.

1.3 Research Aims and Objectives

1.3.1 Objective One: To develop and operationalise Language Operating Capacity

This PhD dissertation focusses on language capabilities within a firm. The research aims to develop and empirically validate the concept of LOC – a term coined by Welch & Welch (2018, p.1) in the context of SMEs and conceptualised as "language resources that have been assembled and deployed in a context-relevant and timely manner throughout the MNE's global network" to address multiple approaches to languages in international business literature (cf. Tenzer et al., 2017) by distinctively identifying language capabilities at a firm level.

Indeed, language skills inherently relate to individuals, but this research draws on Welch and Welch's conceptualisation of language capabilities and focuses on the firm level in an international context and organisations. However, Welch & Welch (2018) focus exclusively on large multinational corporation ignoring the SMEs and did not empirically validate the LOC concept.

Hence, the first aim is to develop and operationalise the LOC construct. The present study therefore, includes eight interviews with SME owners/managers which were then corroborated with a literature review to explore the concept of LOC within the context of SMEs. It is followed by empirically validation of a measurement tool which is utilised to assess the level of language capacity within an SME. Therefore, an important contribution of this thesis is to have empirically explored and developed language operating capacity (LOC) measure that will provide a tool for firms to assess their language capabilities needed for internationalisation. It necessarily can also serve as a means to address the unique challenges associated with internationalisation, specifically for SMEs. The achievement of the first objective is vital as it lays the foundation for the conceptual theoretical model.

1.3.2 Objective Two: To identify the antecedents of Language Operating Capacity

The capabilities literature focuses not just on addressing the capabilities required for internationalisation but also on their sources or key drivers. Since LOC is a relatively new concept, it is equally important to understand what factors facilitate it. The second contribution of this research involves investigating the antecedent variables of LOC. In this regard, we shall focus on the micro (individual) as well as the macro (organisational) level of antecedents, that is, how individual competencies within an SME along with firm-level antecedents facilitate the development of LOC. The need for understanding the individual level competences is more prominent within SMEs due to the influence of personal characteristics of the entrepreneur/key decision maker in decision- making process of SMEs (Kalinic et al., 2014).

The antecedent variables are identified, and a conceptual model is proposed from the literature review and interviews. The literature review in conjunction with the interviews informs the development of the hypothesis, which will be tested using dependence techniques (multivariate regression analysis).

1.3.3 Objective Three: To determine the impact of LOC on relevant outcome variables

A third important research objective is understanding the impact of LOC on relevant outcome variables in context of SMEs. Research in capabilities literature emphasizes on actual use of resources to achieve desired goals (Volbedra et al., 2010; Camison & Fores, 2010; Jansen et al., 2005; Cohen & Levinthal, 1990). SMEs differ from large firms in their characteristics not only regarding structure and the management but also in regard to human and financial resources (Johanson and Valhne, 2003) such that these influence their decision to internationalise and can have impact on their international performance (Laufs and Schwens, 2014; Cheung and Yu, 2008). Thus, this research aims to establish the relationship between LOC and international performance for SMEs, such as export orientation, networking capability and export performance.

Consistent with the literature, this thesis will examine performance-related variables as mentioned above to understand whether and how language capabilities have any impact on these international performance matrices.

This will, in turn, contribute to the role of languages in internationalisation by assessing the effect of LOC on the firm's international performance.

1.4 Thesis Structure and Overview

This section outlines the structure of the thesis which comprises eight chapters including the present chapter (Introduction) and is organised as follows:

Chapter 1 introduces language research in an international context while also identifying the three research objectives for the thesis.

Chapter 2 discusses dynamic capabilities as a theoretical foundation for the development of LOC and its two dimensions. Furthermore, it discusses the existing language literature which highlights the relevance of the topic in international business and management. This dynamic capability approach to languages within the SME internationalisation context helps the researcher develop and identify the conceptual model with relevant antecedents and the outcome variables (Chapter 4).

Chapter 3 discusses the methodological approach for this thesis, including epistemological and ontological considerations, while identifying key decisions made regarding research design and the methodologies used in the study. The chapter concludes with ethical consideration for the study.

Chapter 4 builds on the theoretical foundation chapter (Chapter 2) and systematic scale development process identified in Chapter 3 to conceptually develop and empirically assess the LOC construct within an SME context. First, theoretical domain of the construct is identified using capabilities literature and then the qualitative interviews are presented which together informs the generation of items. This is followed by the opinions of expert judges, scale purification (EFA) and then outlines the process of scale refinement and the model fit indices adapted using confirmatory factor analysis (CFA) to develop a valid and reliable scale of LOC measurement.

Chapter 5 builds on the theoretical foundation chapter (Chapter 2) which informs the development of a hypothesis and a model to be tested in subsequent chapters (Chapter 8) with LOC as a key construct. This enables us to explore the relationship between antecedents, LOC and outcome variables identified within an SME context.

Chapter 6 presents the discussion of specific research methodology (exploratory factor analysis) and essentially details procedural and operationalisation of employed constructs. Next, the chapter discusses an outline of the main data collection procedure (survey) and provides the findings of the preliminary statistical test which informs the subsequent discussion such as data screening, results of missing data as well findings from exploratory factor analysis for antecedent variables, and outcome variables.

Chapter 7 reports the statistical analysis for the main categories of the conceptual framework (antecedents and outcome variables). Further, the constructs of interest are tested for reliability and validity and assessed for psychometric properties of construct measures using CFA and is utilised in the following chapter for hypothesis testing.

Chapter 8 reports the results of hypotheses testing of the theoretical model 5.0 (Chapter 5). The findings are first analysed from the statistical perspective and are then utilised to assess the implications of the findings for the hypotheses set out in Chapter 5. The results of the hypothesis testing were utilised to inform the discussion chapter.

Chapter 9 integrates the findings of the thesis by synthesising the results obtained in previous chapters. The significant and non-significant findings from each of the hypotheses are summarised and discussed. The theoretical contribution to the literature as well as managerial implications and contribution to practice are also presented. Finally, possible avenues for future research and the limitations of this research are discussed.

Chapter 2- Theoretical Framework

2.1 Introduction

The primary purpose of this chapter is to present the theoretical foundation of this dissertation, with a focus on capabilities literature as an important theoretical pillar for the development of the LOC construct within SMEs. The chapter begins with a review of the current definitions of languages and approaches to language studies in various literature streams. Next, we introduce the dynamic capability literature which forms the basis for the development of key construct – LOC, its antecedents and outcome variables (see Chapter 4 & 5) along with relevant language studies within international businesses which is discussed in the subsequent section. This leads to suggestions as to the importance of LOC in internationalisation for firms. Then we introduce, SMEs internationalisation with the focus on exporting as a key mode of internationalisation. Building on the capability literature, we discuss how we use the notions of dynamic capability literature for the current conceptualisation of LOC, its antecedents, and consequences within the SME context.

2.1.1 Languages and internationalisation

Languages have been studied from various perspectives, such as international business and marketing, linguistics, socio-linguistics and psychology (Tenzer et al., 2017). First, we look at the literature to explain the various concepts and definitions of language and linguistic competence, followed by the various approaches taken to study languages in these field of studies.

2.1.2 The concept of language

Language in its simplest form refers to a means of communication. Early work conceptualised language as a 'vehicle for group' (inter and intra) communication for a psychological process such as decision-making (Bales, 1956). Hantarias (1989) describes language as a 'vehicle of expression'. However, such simple descriptions have been frequently criticised in that language is misunderstood as merely a 'means of communication' or a 'functional property of social life' (Gasiorek et al., 2015). Giles (1977) describes language as a social practice. It constitutes an important part of one's ethnic identity and describes culture, linguistics and geography as dimensions of ethnic identity. In other words, individuals learn to make sense

of the world around them through the language they use, and it is in this process that they define themselves and others (Giles, 1977; Giles et al., 1979). Language is also understood as what is called 'thinking for speaking' (Slobin, 1987) and belongs to a category of cognitive studies which argues that language shapes thought, stemming from what is popularly known as the Saphir- Whorf Hypothesis of Linguistic relativity. Whorf (1956, cited in O'Neill, 2014) argues that language shapes thought. Although the Whorf view has been heavily criticised, there is some consensus for suggesting that language does have an influence on experiences and thought (Larsen et al., 2002) especially in the case of social experiences. Its proponents claim that language (words) is not merely the consequence and by-product of thought, but that it also facilitates the generation of thoughts and cognition; that is, 'language is a critical tool of human cognition, one which allows us to move beyond individual cognition and engage in culturally mediated cognition' (Fivush, 1988, p.486). Hence, it is important to not only understand the meaning of language and but also the role that it plays in effective communication and interactions imperative for international business

In linguistic studies, language competency was initially explored by Chowksy (1965), while Hymes (1971, 1972) extensively explored the field of linguistic and sociolinguistic studies. In 1980, Canale and Swain started to develop the following components: language competence (knowledge) and linguistic competence (grammatical), sociolinguistic competence, discourse and strategic competence. Subsequently, Bachman (1990) described language competence or knowledge as a communicative competence and defined it in terms of linguistic competence (grammatical) and pragmatic competence, which included functional, sociolinguistic and strategic competence and the psycho-physiological process from which language originates and is understood. In a third wave of developments, Celce-Murcia, Ddmyei and Thurrell (1995) developed a model of communicative competence (language knowledge) and made similar attempts to explain its components as linguistic, strategic, socio-cultural, actional and discourse competence. Fourthly, Lehamnn (2007) defined linguistic competence as multi-dimensional containing a cognitive level of competence which included language ability and language knowledge, and a general level of competence which included universal semiotics, oratory competence, language-specific, sociolinguistic, cognitive and pragmatic competences.

In short, based on a closer inspection of the four definitions discussed above, some common elements of linguistic competency can be derived:

- Language knowledge (i.e. knowledge of grammar), syntax, systems of language and fluency;
- Sociolinguistic competence (i.e. the ability to employ language and topics relevant and appropriate to the social context);
- Strategic competence (i.e. the process through which people make adjustments to make themselves understood), and;
- Discourse competence, which refers to the ability to produce language (text) effectively in all modes of communication, i.e. written, oral, visual or in combination.

It is also clear that various expressions have been used to describe similar constructs in linguistic studies, such as language competence, linguistic competence, communicative competence and language knowledge, along with corporate language, foreign-language skills, native language, linguistic skills, language resources and language skills more generally. In this research however, the terms linguistic competence and language skills will be used in narrow terms defined as adequate use of a (foreign) language skills for the purposes of effective communication within an international context (Hurmerinta et al., 2015). As we specifically focus on language skills and the knowledge needed for communication, rather than grammar, syntax or systems of language. With this in mind, the following section reviews the approach undertaken to studying languages.

2.1.3 Approaches to Studying the role of Languages (Language and internationalisation- different logic)

Languages have been studied in various contexts, such as from the perspectives of international business and economics, linguistics, socio-linguistics and /or psychology. Moreover, language-related constructs such as corporate language, national language, native language, English as lingua franca (ELF) and linguistic distance can be broadly categorised as culture- focused studies in international business, the gravity model in economics and linguistic relativity in sociolinguistic studies (Tenzer et al., 2017). Table 2.1 below summarises the five streams of literature that examine the role of languages in different fields, using approaches that are distinct yet interlinked:

Table 2-1. Five perspectives on language

Literature stream	Level of study	Concepts	Author	Theory
International Business	Inter-unit, Subsidiary-headquarters, Team-level, Individual-level, Firm-level	Internationalisation, Inter-unit dynamism, Knowledge sharing, Power dynamics, Trust and cooperation, Boundary-spanning role, Personnel selection and recruitment.	Piekkaari (1997, 1999a, b); Barner-Rasummusen (2014); Luo & Shenkar (2006); Brannen et al., (2004) Johanson & Valhne (1977, 1990, 2009) Marschan-Piekkari et al., (2013); Welch and Welch, (2018)	Social Identity Theory Resource-based Theory. Capability/Capacity perspective.
Marketing & advertising	Domain-specific effectiveness	Social Cognition, affectiveness and emotions.	Noriega & Blair, (2008); Koslow et al., (1994); Nesse et al., (1994); Clarke, 2000; Crick, 1999; Marcella & Davies, (2004)	Consumer Psychology and Resource-based Theory.
Economics	Macro-level, Country-level outputs, Firm-level	Trade flows and Trade deficit.	Melitz J, (2008); Melitz & Toubal (2014); Wang et al. (2014); Foreman, Peck & Zhou (2015); Ly et al., 2018	Gravity Model of Trade, Transaction Cost economics (TCE) theory. Resource based view
Linguistics*	Language as a subject in itself	Syntax, semiotics of language.		Linguistic determinism. Speech Act Theory.
Socio-Pyscho-linguistic**	Individual and group setting in a community, society (informal setting)	Cognition & Motivation, Group Dynamism.	Fivush (1998), Chomksy (1965), Steven Pinker (1994)	Social Identity Theory & Social Network Theory, Cognition & learning Theory.

* Linguistics is a discrete field, unrelated to this study.
**This is a vast field of study in itself and lies beyond the scope of our thesis.

Table 2.1 shows the five streams of literature that study the role of languages. First, in international business studies, the focus is primarily and necessarily on organisational dynamics, such as cooperation, trust and knowledge transfer within multinational corporations leading to different conceptualisations of language, such as corporate language or the national language of a multinational corporation and English as a language of global business or lingua franca (Brannen et al., 2014). Furthermore, language has been examined from various perspectives, including as a common corporate language (Sorensen, 2005), language barriers (Harzing & Feeley, 2008), a key aspect of culture (Brannen, 2004), language

fluency (Barner-Rasmussen & Bjorkman, 2007) and language nodes (Barner-Rasmussen et al., 2014). This group of studies utilises a social identity perspective (Giles, 1977) and recognises language as resource or capital (a resource-based view). These studies have facilitated immensely to the growth of language research and have moved the field forwards by giving direction to future researchers.

Secondly, in contrast to international business research, economists have adopted a macro viewpoint. They used linguistic distance (i.e. the relative complexity in learning another language) to study trade-flows and other outcomes at national level. Economists have typically studied language as a barrier to trade-flows among countries with different languages. Empirical research in this field suggests that countries with the same language trade 1.5 times more often (Sauter, 2012) and concludes that language is a barrier to trade-flows among 195 countries (Melitz & Toubal, 2014). Further, research by Foreman and Zhou (2015) utilises data from multiple countries in Europe to understand the role of language in international trade performance.

Third, international marketers' perspective utilises cross-cultural communication perspective (Luna & Peracchio, 1999, 2001), identity perspective (Forehand & Despande, 2001), and social cognition (Noriega & Blair, 2008) specifically to target multi-lingual or bilingual people in their native language for ease not only in processing information but also for affective response.

Fourth, linguistic studies have focused on the semantics, origin and syntax of the language studied, going so far as to reclaim belief in the so-called 'Saphir- Whorf hypothesis' of linguistic relativity first introduced in 1957 which suggests that languages shapes thought or perception. Although we do not completely agree with such claims, we acknowledge that there is a renewed interest in such relationships within the field (O'Neill 2014) with similar emphasis. Fifth, socio-linguists and psycho-linguists have studied the field from the perspective of socio-cultural factors affecting language variety and cognition respectively (Tenzer, 2017). These studies closely align with the linguistic perspectives we discussed in Section 2.1 and study the social and psychological impacts originating from the nuisance of language within a social or informal environment.

In this thesis, we focus on the international marketing and business perspectives, aiming to understand not only how languages can facilitate international business performance for

SMEs. As seen in Table.2.1 above, the most common approach within the perspective of international business studies is the resource-based view (RBV), in which an individual's linguistic skills or competence is studied in the context of boundary-spanning roles, such as facilitating, exchanging and/or mediating, that enable important conversations in international business, that is the role of languages as an enabler of or barrier to the flow of information and knowledge within a firm (Tenzer et al., 2017; Barner- Rasmussen, 2014). Nevertheless, few efforts have been made to develop language capabilities as concepts at a firm level. It is this approach – that is, a capability approach – that notes capability as a 'capacity' to sense and shape, to seize opportunities and to sustain competitiveness by developing, exploiting and, when necessary (Teece, 2007; Helfat et al., 2007; Hieu, 2020), reconfiguring the SMEs' resources in an international context. Furthermore, it is to this stream of literature, that is international business, that we aim to contribute predominantly, while also identifying the role of international marketing in international business.

2.2 A Capability perspective on languages

2.2.1 Theoretical Background

While most studies in the field of international business address language as a skill or competence at an individual level (e.g. Barner-Rasmussen et al., 2014; Piekkari et al., 2013), Welch and Welch (2008, 2018) adopted languages as a 'capacity' and considered languages capability at a firm-level. It is argued that adopting this capability perspective is more fruitful in identifying how firms develop and utilise language capabilities. In other words, instead of a narrow focus on individual skills or competence, there is a need for a systematic understanding of language capability at a firm level to understand its role in international business performance.

The capability perspective is based on the resource-based view proposed by Barney (1991) and Prahalad and Hamel (1990) who posit that heterogeneous resources are a source of competitive advantage for a firm and consider the firm as a collection of resources and capabilities. Prahalad and Hamel (1990) describe organisational capability as a firm's ability to utilise the resources available to meet long-term organisational goals. The resource-based view (RBV) theory contends that these resources and capabilities are distinctive and, hence, not imitable or easily substituted (Barney, 1991). Hence, organisational capabilities are

viewed as 'resources' (Grant, 1991) and it is argued that these distinctive resources that render a firm competitive advantage. However, Mahoney and Pandian (1992), building on the early work of Penrose (1955), argue that due to the ever-changing business environment, organisational resources can lose their added value. Resources that were once a strength can become a problem. Moreover, it is not only the presence of these valuable resources that renders rent, but also a firm's distinctive capability to develop and utilise them.

Essentially, RBV was considered static, insufficient to explain a firm's performance in an ever-changing dynamic environment (e.g. Priem & Butler, 2001b) and, thus, less suitable as a theory in the dynamic context of SME internationalisation. This is an inherent paradox of existing organisational capability and collective resources in resource -based view that is a fixation with existing valuable capabilities within the firm can prevent the development of other capabilities (Schreyogg & Kliesch-Eberl, 2007). Further, failure to adapt and reconfigure to the external environment and harness new opportunities can negatively affect the firm's performance (Audia, Locke & Smith, 2000). As such resource-based view (Penrose, 1960; Wenerfelt, 1984) represents the root of the process-oriented dynamic capability perspective (Eisenhart & Maritn, 2000; Makadok, 2001). In fact, the dynamic capability perspective as a means to understand a firm's survival and growth in an ever-changing environment draws on a variety of theoretical perspectives, such as evolutionary economics (Nelson & Winter, 1982), organisational behaviour (Cyert & March, 1963), market dynamism (Williamson, 1975; 1985) and firm-specific assets (Teece, 1982).

Accordingly, Teece et al. (1997, p.516) state that, to remain relevant, firms need to systematically reinvent their organisational capabilities and therefore propose dynamic capabilities as 'the firm's ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments' (see the Table 2.2 below for several conceptualisation of dynamic capabilities). These capabilities are dynamic in the sense that they can influence static resources or capabilities. Dynamic capability literature has since grown significantly because of a long-standing link between firm resources, strategic choice and environmental conditions in management and organisational theory literature. The extant literature contains several distinct conceptualisations of dynamic capability (e.g. Doving & Gooderham, 2008; Eisenhart & Martin, 2000; Helfat et al., 2007; Teece, 2007; Teece

at al., 1997; Winter, 2003; Sapienza et al., 2006; Zollo & Winter, 2002). Table 2.2 below summarises some of the key definitions of dynamic capabilities:

Table 2-2. Definitions of Dynamic Capabilities

Study	Year	Definitions
Teece & Pisano	1994 p.541	The subset of the competencies and capabilities that allow the firm to create new products and processes and respond to changing market circumstances.
Teece, Pisano & Sheun	1997 p.516	The firm's ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments.
Eisenhardt & Martin	2000, p. 1107	The firm's processes that use resources - specifically the process to integrate, reconfigure, gain and release resources – to match and even create market change, thus dynamic capability is the organisational and strategic routine by which firms achieve new (developed) resources as markets emerge, collide, split, evolve and die.
Teece	2000	The ability to sense and seize opportunities quickly and proficiently.
Zollo & Winter	2002 p.340	A dynamic capability is a learned and stable pattern of collective activity.
Winter	2003 p.991	Those (capabilities) that operate to extend, modify or create capabilities.
Zahra, Sapienza & Davidssons	2006 p.918	The abilities to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriate by its principal decision-maker.
Helfat et al.	2007 p.1	The 'capacity' of an organisation to purposefully create, extend or modify its resource base.
Teece	2007 p.1	Dynamic capability can be disaggregated into the 'capacity' a) to sense and shape opportunities and threats (b) to seize opportunities and (c) to maintain competitiveness through enhancing, combining, protecting and, when necessary, reconfiguring the business enterprise's intangible and tangible assets.
Barreto	2010 p.271	The firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions and change its resource base.

These alternative conceptualisations of dynamic capabilities relate to two distinct yet interrelated perspectives. Several conceptualisations followed a perspective that is closer to resource-based view while others are more akin to the evolutionary economics perspective (Nelson & Winter, 2002). In fact, DiStefano et al. (2010), in their bibliometric review of dynamic capability, identified the conceptual divide between Teece et al. and Eisenhardt et al. (cf. Peteraf, DiStefano & Verona, 2013; Arndt & Pierce, 2018). Nevertheless, most researchers addressing the nature, specific role and outcomes of dynamic capabilities (Wang & Ahmed, 2007; Easterby-Smith et al., 2009; Barreto, 2010; Breznik & Hisrich, 2014) agree that Teece et al. (1997) as the original contribution of dynamic capability; however, researchers also agree that such critical debates have collectively contributed and facilitated the expansive growth of dynamic capabilities literature (Wilden et al., 2016). In addition, in context of SMEs prior studies have argued that dynamic capability can facilitate SMEs reconfigure their existing resources (internal and external) to meet the uncertainties of their

business environment in international markets, due to lack of resources, relatively underdeveloped institutional and network support (Alcalde- Heras et al., 2019; Parida et al., 2016; Flatten et al., 2011). In summarising the various key definitions of dynamic capability presented in the table above, we identify the main tenets of dynamic capabilities as follows:

- First, dynamic capability represents an 'ability' or 'capacity' and extends the resource-based view by suggesting dynamic capability as a special kind of capability and its importance in organisational theory (Teece,2014; Barreto, 2010).

- Second, dynamic capability construct specifically identifies the desired result, such as, development and utilisation of language capability for international business in the context of this thesis. The role of such specific capability as being to build, integrate and reconfigure internal and/or external competencies, expressly assumes an evolutionary economics perspective (Nelson and Winter, 1982) and hence elucidating the role of organisational mechanisms such as routines, path dependency and organisational learning.

- Third, dynamic capabilities explicitly focus on the changing external environment or market conditions, for instance, introduction of new or substitute products/services, a new venture or international success as is the case in this thesis. This is view of dynamic capability as an extension of resource -based view. Further, it postulates that capabilities are often built, rather than bought, and that their formation and development are not only shaped by a firm's asset position but are path-dependent and is consistent with an evolutionary economics perspective. This continuous development/reconfiguration of existing resources is even more critical in case of SMEs for their relatively low base of resources compared to larger or traditional multinational corporations.

- Fourth, dynamic capability is heterogeneous across firms as they rest on a firm's unique and distinctive processes. This is specifically true for SMEs which differ from large firms in both management and structure (Johanson and Valhne, 2003) and are heavily influenced by the owner-manager's subjective interpretation of business realities.

- Finally, it explicitly states sustained competitiveness (success or value creation) in a firm specific strategic context as a direct outcome of dynamic capabilities (Barreto, 2010; Teece, 2014). In the context of our research, due to their smallness SMEs have less bureaucracy and have flat hierarchies (Heider et al., 2021; Sapienza et al. 2006) that makes them more agile to reconfigure their resources for a specific venture or opportunity.

Thus, functioning as a link between a SMEs resources and its dynamic environment, dynamic capabilities facilitate in developing, adapting, renewing and exploiting the composite resource mix (Eisenhart & Martin, 2000) within an SME and thereby sustaining their competitive advantage. This conceptualisation of dynamic capability as a specific organisational ability/capacity to develop and harness resources by which SMEs alter their resource base to meet organisational needs (see Helfat, 1997; Eisenhardt & Martin, 2000) is most appropriate for our thesis as it identifies capability as a process, while acknowledging the continuous learning or updation within a dynamic environment. As such, dynamic capability is described as a higher-order capability (Danneels, 2010; Ellonen et al., 2011). Thus, the dynamic capability perspective addresses the limitations of RBV as it transforms the static view into a more dynamic approach (see Butler (2001a) and Priem and Butler (2001b) for a summary of RBV critiques).

Similarly, Weerawaderan (2003, p.409) states that a 'distinctive capability is a set of things that organisations do particularly well' in comparison to their competitors and, hence, argues that although capabilities are resource-dependent, it is not only the presence of resources that determines how well a firm performs (Helfat & Peteraf, 2003). Further, Day (2011, p.183) asserts 'capabilities are adaptive and enable the firm to adjust its strategies to fit fast-changing markets'. These new or enhanced capabilities introduce a so-called 'capacity' within the organisation. The capacity literature contributes to international business research as an important determinant of knowledge processes in multinational companies and analyses organisational evolution to adapt to changes in an international environment (Apriliyanti & Alon, 2017). Cohen and Levinthal (1990, p.128) define such a capacity as the 'ability to recognise the value of new information, assimilate it and apply it to commercial ends' and call it absorptive capacity. Furthermore, in the context of this research, Welch and Welch (2018) identify language capabilities within a firm as language capacity. Similarly, dynamic capability

has been identified as 'the capacity of an organisation to purposefully create, extend or modify its resource base' (Helfat et al., 2007). In this sense, researchers agree that capacity (dynamic capability) is a higher-order construct and consist broadly of two dimensions: potential and realised capacity (Zahra & George, 2002).

Researchers also argue that such capacity as a process reflects first, the conditions that facilitate its development, that is, its ability to develop and second, the actual utilisation (the ability to exploit) to enhance performance (Volbedra et al., 2010; Camison & Fores, 2010; Jansen et al., 2005; Cohen & Levinthal, 1990) which we will utilise within an SME context. Therefore, we opt for this specific description of the dynamic capability that is ability/capacity (Helfat et al., 2007; Teece, 2000, 2007; Winter, 2003; Zahra et al., 2006) and aligns with the conceptualisation of Welch and Welch (2018) to understand what constitutes LOC, how resources are developed and utilised within SME to devise solutions for language challenges when exporting (internationalisation).

2.2.2 Potential and realised dimension within dynamic capability literature

Teece et al., (1997) offered a dynamic capability framework where capabilities are idiosyncratic and process- and path-dependent to address constantly evolving environments. Dynamic capability can be categorised into 'capacities to sense and shape opportunities and to seize opportunities and to maintain competitiveness' (Teece, 2007, p.518). In this sense, Teece (2007) and Augier and Teece (2009) disaggregated dynamic capabilities into three dimensions: 1) renewing, 2) augmenting and 3) adapting its core competencies over time, making it a higher-order construct. Similarly, other researchers have argued that capacity is a higher-level construct (Edwards, 2001). For instance, Cohen and Levinthal's seminal paper on absorptive capacity (1990, p.128) defined it as 'the ability of a firm to recognise the value of new, external information, assimilate it and apply it to commercial ends' that is, it identified recognition, assimilation and exploitation as three dimensions. Zahra and George (2002), building on dynamic capabilities, identify four elements of absorptive capacity, namely acquisition, assimilation, transformation and exploitation and further aggregated them into two second (higher) order dimensions: potential and realised capacity. Researchers generally agree that the capacity concept consists broadly of these two dimensions, that is, potential and realised capacity (Zahra and George, 2002; Camison and Fores, 2010).

Potential capacity: The distinction between potential and realised capacity highlights the separate but complementary aspects of capacity. Potential capacity incorporates acquisition and/or assimilation, that is, the ability to acquire and absorb the resources within the organisation for specific purposes (Zahra and George, 2002). In this sense, firms assess the value of new capabilities in relation to their existing capabilities and its potential for a specific purpose, such as internationalisation or innovation. It refers to the exploratory and at the same time contingent character of the capacity construct which is relevant in the international market where external environments may influence capacity development. For example, Pinho and Parange (2016), in their conceptualisation of dynamic internationalisation capability, identify explorative (and exploitative) dimensions for the international performance of SMEs. Further, it is argued that the continuous acquisition and assimilation of capabilities can be resource-heavy, leading to huge cost specifically in resource constraints SMEs. Thus, it is argued that potential capacity needs to be evaluated for its utility to meet a specific purpose or purposes; otherwise, it could entail the huge cost of acquisition without the benefit of effective utilisation.

Realised capacity: Realised capacity refers to the firm's ability to exploit the new or already existing capability (Zahra and George, 2002). A dynamic capability perspective emphasises that competitive advantage does not come from 'possession of the resources but from their use' (Ambrosini & Bowman, 2009, p.31) and that their value will depend on how efficiently and effectively they are utilised and deployed within an SME. Actual utilisation in form of transformation, that is, the adaptation and upgrading of existing resources, while the exploitation of capabilities, that is, deployment of resources in a context-relevant manner (Zahra & George, 2002) leads to gains in the immediate term. For example, Lampel and Shamsie (2003) found that transforming and assembling existing resource bundles was an important aspect of dynamic capabilities in the US motion-picture industry. Hence, it is essential that the vision is not lost in exploitation and utilisation, but that potential capacity is also developed. Furthermore, since potential and realised capacity are fundamentally distinct, implementing and maintaining a balance of these capacities will require resources (Gupta et al., 2006) and SMEs therefore, face greater challenge than larger firms in managing these tensions due to inherent lack of experience and resources (Voss and Voss, 2016). In addition, it is also argued that there is a room for dynamic models that incorporate managerial

intentionality to understand the level of capacity at a unit level (Dasi et al., 2015; van de Bosch et al., 2003) specifically in case of SMEs. This will be further addressed in the measure development Chapter 4.

Keeping in mind the two complementary aspects of capacity, we now move on to briefly address the discussion around key drivers and outcomes in the capacity (dynamic capability) literature.

2.2.3 Dynamic capabilities: Drivers and Outcomes

It is one of the main tenets of dynamic capability is that resources – whether existing or new – are one of the key drivers. In a similar vein, Cohen and Levinthal (1990) and Zahra and George (2002) identify individual prior knowledge, skills and competencies within the organisation as prerequisites for the development of capacity. However, they also refer to 'internal mechanisms that influence' a specific capacity (Cohen & Levinthal, 1990, p.135). Understanding microfoundations of a dynamic capability (Barney & Felin, 2013; Felin et al., 2015; Foss & Penderson, 2014) and mechanisms that are 'distinctly organisational' (Cohen & Levinthal, 1990, p.131; Jansen et al., 2005) has been strongly advised in the strategic and management literature (Felin &Floss, 2005; Martinkenaite & Breunig, 2016). Infact, the need for understanding the individual level competences is more prominent within SMEs due to the influence of personal characteristics of the entrepreneur/key decision maker in decision-making process of SMEs (Kalinic et al., 2014). Further, van den Bosch et al. (2003, p.8) specifically argues to consider two groups of antecedents: (a) prior related skills and knowledge (individual-level antecedents) and (b) internal mechanisms identified as organisational-level antecedents. Furthermore, researchers agree that organisational phenomena such as capabilities are multi-level phenomena (Teece, 2007; Kozlowski & Klein, 2000) implying that a firm's language capability is dependent on actions both at micro and macro level (Martinkenaite & Breuing, 2016).

Thus, it is argued that it is important to understand the individual (micro) level as it provides insights into underlying individual competencies and choices that are ultimately reflected in higher-level performance (Lenka et al., 2018; Gavetti, Levinthal & Ocasio, 2007) within SMEs. It is argued that individual level analysis for antecedents of LOC is even more critical as the knowledge and skills which is embedded within the human capital rests generally with the

entrepreneur (owner-manager) himself within an SME. Moreover, Teece (2014) emphasises the role of the individual in the development and utilisation of such capability. Nevertheless, researchers highlight that, to understand how these resources (RBV) become capabilities, we must understand the importance of a firm's assets (financial, social and technological), processes and mechanisms for the development and utilisation of such capabilities. It is this path-dependent process and the internal mechanisms that are identified as firm-level drivers (Helfat, 1997; Eisenhardt & Martin, 2000; van den Bosch et al., 1999). Further, the capabilities literature identifies organisation learning as a main component of the organisational drivers. Similarly, Minbaeva et al. (2003) argue that learning intent provides the foundation for organisations to develop and utilise capabilities. Infact, it is argued that both individual-level and organisational-level antecedents are important drivers of dynamic capability within SMEs. It is this view that we build on for hypothesis development in Chapter 4. Cohen and Levinthal (1990, pp.131–135), for example, explicitly argue that an organisation's absorptive capacity has both individual and organisational antecedents.

Similarly, what differs from Teece et al., (1997) and colleagues and Eisenhardt and Martin (2000) and colleagues' conceptualisation briefly discussed above, is the purpose of the construct itself (see above Table 2.2). This gives us an insight into what these intellectual groups conceived as the effects of dynamic capability.

2.2.4 Outcomes and effects of dynamic capability

The two main approaches to the relationship between dynamic capability and performance can be identified as direct relationship between a firm's dynamic capabilities and its performance and competitiveness (Zollo & Winter, 2002; Teece et al. 1997) or the indirect relationship between dynamic capabilities and performance (e.g. Eisenhardt & Martin, 2000; Zott, 2003; Xie et al., 2018) via a modified bundle of resources and routines within a firm. Nevertheless, it is argued that the relationship necessarily depends on the nature of the definition itself. Several definitions cited in Table 2.2 above include an explicit purpose for dynamic capabilities. In Eisenhardt and Martin (2000) definition, the aim of dynamic capability is to change the resource base configuration not only to match but also to create market change and opportunities, whereas Zahra et al. (2006) postulate development and exploitation to achieve the desired outcomes for the principal decision-makers. For Teece et al. (1997, p.516), the purpose of developing capabilities is 'to address rapidly changing

environments', while Zollo and Winter's (2002) definition identifies improved effectiveness as a key outcome. Finally, Helfat et al.'s (2007) definition necessitates that dynamic capability, as a 'capacity' to develop, modify and upgrade the resource bundle within a firm, is 'purposefully' made (Barreto, 2010). Thus, we argue that a specific capability/capacity such as LOC must integrate its strategic purposes, for which it aims to build, develop, modify and utilise capabilities, that is international activity within an SME.

2.2.5 Capabilities and Internationalisation

Dynamic capabilities perspective, as an extension of Penrose's resource based-theory of firm's growth (Penrose, 1960), is one of the most dominant theoretical perspectives on firm growth in the international context (Tan et al., 2020). Within the international context, exogenous factors such as environmental, institutional and political issues, and social factors including location, psychic distance and cultural distance are seen as key constraints to growth, while dynamic capability provides an appropriate theoretical lens to address endogenous factors, such as organisational capabilities and capacities, within a dynamic external (international) environment that can enable international growth and performance (Augier and Teece, 2007). Table 2.3 identifies some of the studies that utilise dynamic capability for firm performance in the international context.

Table 2-3. Dynamic capabilities – dimensions, relationships and outcomes

Authors (Year)	**Dynamic capability Dimensions/aspects/elements**	**Relationship examined**	**Key Findings**
Xie et al., (2018)	Knowledge Absorptive Capacity Knowledge acquisition, knowledge assimilation, knowledge transformation and knowledge exploitation.	Relationship between dimensions of knowledge absorptive capacity & firm innovation.	Based on 379 high-tech companies in the electronic information industry in China the four dimension has significant and positive relationship with innovation performance while Knowledge transformation and exploitation mediates the relationship between knowledge acquisition and assimilation and innovative performance.
Luo (2000)	Dynamic Capability Capability possession deployment (distinctive resource allocation) and upgrading (dynamic learning).	DC and International expansion and global operations.	Capability possession, deployment and capability upgrading is a necessary condition for sustained success in today's world economy characterized by increasing technological advancement and business globalization.

Schilke (2014)	Alliance Learning -	Second order DC and Alliance portfolio performance (satisfaction and goal fulfilment).	Alliance management capability (first order dynamic capability) partly mediates the relationship between second order dynamic capability (alliance learning) and strategic alliance portfolio performance (n=279). Also, the findings indicate that alliance learning, and alliance management capability can be sometimes substitutes rather than complementary for strategic alliance portfolio performance.
Khan & Lew (2018)	Dynamic Capability - Network Development Capabilities Sensing, seizing and reconfiguration.	Dimension of DC and International New venture (INV) performance.	Based on 34 interviews within 8 IT companies suggest dynamic capability and leaderships are crucial for survival of international ventures from developing economies.
Pinho & Parange (2016)	Dynamic Internationalisation Capability Exploitive (threshold and consolidation) and explorative (value-adding and disruptive) DIC	Dimensions of DIC and SME International performance.	Based on the studies on 109 Portuguese SME exporter, the results show that Value-adding capabilities and Disruptive capabilities (exploitative) and Consolidation capabilities (exploitative) have significant positive relationship with international performance while Threshold capabilities (exploitative) has insignificant positive relationship with international performance.
Mitrega et al., (2012)	Networking Capability Initiation, development and termination.	Business performance in SME.	Relationship initiation capability, relationship development capability and relationship termination capability significantly impact on overall performance (market share, growth and profitability).
Liao et al., (2009)	Dynamic Capability Opportunity recognition and opportunity capitalisation	DC and Firms Innovation	Firms opportunity recognition and capitalisation dimension of the dynamic capability have positive and significant effect on Firm's innovation (n= 120)
Hernandez-Linares et al., (2021)	Dynamic Capability Sensing, learning, integrating and coordinating.	DC and SME performance.	Based on n=509, the results shows that learning and integrating components of dynamic capability has significant and positive relationship with SMEs performance while sensing and coordinating does not. Also, market orientation moderates these relationships.
Heider et al., 2021	Dynamic capability	Business model innovation in SMES	Sensing and seizing components of dynamic capability significantly enhance value creation while the

			reflection as a components of DC is insignificant.
Wojcik, & Ciszewska-Mlinaric (2020)	Multi-level Dynamic Capability Individual-level cognitive and organisational-level behavioural elements.	Individual and organisational behaviour (DC) and Export performance (SMEs)	Based on 93 Polish exporters, the results find that individual level cognitive elements (global mindset & strategy as a stretch) have positive effect on organisational level behaviour (Partnering capability & business modelling) which has significant positive effect on export performance.
Zahra & George (2002); Zahra et al., (2016); Liao et al., (2003)	Absorptive Capacity Potential and Realised; acquisition, assimilation, transformation and exploitation	Knowledge transfer, Exploratory and exploitative innovation SMEs Performance.	Acquisition and assimilation as potential capacity have direct and significant relationship with realised (transformation and exploitation) while all four have positive impact on knowledge transfer.
Minbaeva et al. (2003); pg 20	Employee ability; Employee motivation.	Effect of employee motivation and ability (both senders and receivers) on absorptive capacity.	Based on data set of 92 subsidiaries of a Danish MNC subsidiaries, the research indicates higher the subsidiary employees' ability to absorb knowledge the higher the subsidiary employees' motivation to absorb knowledge

The Table 2.3 above presents some of the empirical research within the dynamic capability literature in the context of SMEs and internationalisation; some more specifically elucidating the role of dynamic capabilities for SMEs performance and internationalisation than others. For instance, absorptive capacity has been studied extensively within SMEs context (Flatten et al., 2011; Zahra et al., 2009; Gray, 2006; Liao et al., 2003;) to assess innovation, strategic alliances and addresses firm performance as an outcome variable of the absorptive capacity. Similarly, Heider et al., (2021) indicates positive relationship between dynamic capabilities, business model innovation and value creation within German SMEs. Further, Hernandez-Linares et al., (2021) explored the role of sensing, learning, integrating, and coordinating dimensions of dynamic capability on market orientation and SMEs performance. Likewise,

Wojcik & Ciszewska-Mlinaric (2020) provides evidence for a multi-level framework of dynamic capabilities and its positive relationship with export performance. These studies indicate dynamic capability is specifically relevant for SMEs (Sapienza et al. 2006, Doving & Gooderham, 2008; Heider et al. 2021), given their vulnerability to competition and environment changes due to limited resources, capabilities, and market power (Alcalde-Heras et al., 2019; Drnevich & Kriauciunas, 2011; Wang et al., 2011; Wade & Hulland, 2004).

Thus, the general framework of dynamic capability recognises the difficult-to-imitate combination of dynamic capabilities and resources as a foundation for competitive advantage in international markets. Indeed, the more diverse the nature of the international market, the more critical dynamic capabilities become for business and financial performance in international markets (Rugman & Verbeke, 2002; 2004). In other words, capability theory (dynamic capability) provides an appropriate lens to understand the firm-level mechanisms 'to allow (strategic) management theory to inform a deeper understanding of durable firm-level competitiveness' (Teece, 2014, p.348) in an international context.

2.2.6 Language capabilities and international business

This study recognises the languages as a capability within an organisation needed for successful international activity. In international business and marketing studies, the focus has been primarily and necessarily within organisation dynamics in multinational corporations, leading to a different conceptualisation of language use, such as corporate language, the national language of a multinational corporation, and English as the language of global business or lingua franca (Brannen et al., 2014). Furthermore, language is also referenced from the perspective of a common corporate language (Simonsen, 2009), language barriers (Harzing & Feely, 2008), a key aspect of culture (Brannen, 2004), language fluency (Barner-Rasmussen & Bjorkman, 2007) and is focused on the cultural identity of the organisation. In addition, research addressing languages specifically within SMEs necessarily study the linguistic skills of the owner/manager to ascertain the role language plays in their export performance (see William & Chaston,2004). Further, the literature also indicates that lack of (foreign) language skill can contribute to perceived 'psychological distance' for managers (Dow & Karunaratna, 2006; Swift, 1991; Turnbull and Welham, 1985) especially within SMEs. Table 2.4 below summarises some of the key language studies within international business.

Table 2-4. Language studies –Level of analysis, relationships and findings

Authors (Year)	Firm/individual level	Relationship examined	Findings
Tenzer et al., (2014)	Multi-level qualitative study	Influence of language barriers on Trust formation within MNC	Based on 90 interviews with team members, team leaders and senior managers in 15 multi-national teams with 3 German automotive companies, the results show that cognitive and emotional reaction to language barriers effect their intention to trust and hence trust formation in multi- lingual settings.
Barner-Rasmussen et al., (2014)	Individual level qualitative study	Role of language and cultural skills on boundary spanning activities- an individual can perform within an organisation.	Based on 145 semi-structured interviews within four Finland based multinationals, the research clearly establishes that both cultural and language skills are important for boundary spanning functions such as exchanging, facilitating, linking and intervening. However, it is language skill that better facilitates more complex boundary spanning functions such as facilitating and intervening.
Hurmerinta et al., (2015)	Individual level	Matching linguistic knowledge and opportunity recognition and exploitation	Linguistic knowledge of the decision-maker is related to opportunity recognition and exploitation in international business.
Turunen & Nummela, (2017)	Individual level qualitative study	Entrepreneurial capabilities and opportunity recognition and exploitation and networks	Based on (n=3) three illustrative case studies, findings indicate that these firms internationalise through utilising their location-bound resources effectively and by investing in developing value-added services. However, an attractive location and good connections are not sufficient for international opportunities to emerge; it requires entrepreneurial capabilities in order to both recognise and exploit the opportunities. Moreover, the recognised opportunities do not result in viable business without the support of extensive networks, both locally and internationally
William & Chaston (2004)	Individual level Descriptive studies	Linguistic skill and overseas experience of the owner/manager and export intelligence generation and use.	Based on ANOVA analysis, the research found support for relationship between overseas experience and export intelligence generation and use. Linguistic skills, on the other hand, made

			little difference to the level of export information gathering, some difference to decision-making behaviour, but a significant difference in the level of positive use of export information.
Tenzer & Puldoko (2017)	Multi-level qualitative studies	Language disparity and formality within MNC and its relationship with Power dynamics	Based on qualitative interviews (n=90) the findings suggest language proficiency disparity and formality in language structures leads to increasing influence on power dynamics with a multi-national teams.
Foreman- Peck and Zhou (2015)	Firm level Econometric analysis	Language skills, investment in language skills and export intensity (ratio between exports and total sales)	Using the Elan survey of European exporting SMEs, the result clearly shows that firms with language investments and performances would achieve an export ratio 37 percentage points higher than those with none of them, without reducing their domestic turnover.

As seen in the Table 2.4 above, contemporary scholars in the field have studied languages as a source of trust and cooperation (Tenzer et al., 2014), boundary-spanning skills (Barner-Rasmussen et al., 2014) international opportunity recognition (Hurmerinta et al., 2015), individual linguistic skills and networks (Turunen & Nummela, 2017) and language capital (Welch & Welch, 2008). Also, the language complexities in international marketing have been studied in the context of branding and advertising (Abruzzini, 1967; Noriega & Blair, 2008; Hornikx et al., 2017; Nederstigt & Hilberink-Schulpen, 2018). This group of studies adopted a social identity perspective (Giles, 1977; Gasiorek et al., 2015) and/or a resource-based view (Teece et al., 1997) to explain the eminent role of languages in large multinational corporations.

While scholars agree that there is a need for more attention to illuminate the importance of languages in international performance (cf. Tenzer et al., 2017), the approaches taken to illustrate this are varied. Barner-Rasmussen et al. (2014, p. 889) define linguistic competency as 'the extent to which an individual knows and is able to manipulate the linguistic and semantic signals that together constitute a particular language, so as to be able to transfer meaning in that language'. This definition is important in further specifying the functions of language: exchanging, linking, facilitating, negotiating and with relevance in the international business dynamism of multinational corporations. The results clearly reveal language skills to be crucial in more complex boundary-spanning skills such as intervening and facilitating. The

study also identified the need for language skills over and above cultural skills and utilises social identity perspective and capabilities (resource -based view) literature.

Turunen and Nummela (2017) identifies language skills enable global mindsets and a global network and note the interplay between resource -based view and networking in internationalisation. In addition, Hurmerinta et al. (2015) demonstrate how language competencies facilitate cultural awareness, enabling recognition of international market opportunities.

Language capability, in this sense of international business, is studied from a corporate (common) language perspective and is defined as "language formally designated for verbal and written use by an MNC's focal unit (headquarters or overseas subunit) within this unit and with the rest of the MNC network" (Luo & Shenkar, 2006, p.325). This definition illustrates the importance of a common language – local, foreign or English as lingua-franca – for employee-to-employee communication in multinational corporation settings.

Peikkari, Welch & Welch (2014, p.157) suggest that foreign language capability can facilitate the "ability of a firm's representative to interact and to collect relevant information". This definition is relevant yet limits the role of language to interaction and collection of information.

Welch & Welch, (2008,2018) adopt language capital and LOC to explore language competence within an organisation. Welch and Welch (2008, p. 355) defined language capital as "aggregate possession of relevant foreign language skills by its employees". However, it argues that language operating capacity is different from language capital in the sense that it is not sufficient simply to have language skills (capital) within the organisation; effective utilisation is equally important. Further, incorporating the process literature (Langley et al., 2013), Welch & Welch (2018) conceptualised LOC as a new multi-dimensional construct for language capabilities within a firm. LOC is defined as 'language resources that have been assembled in a form that MNE can apply, in a productive, context relevant manner, as and when required throughout its global network' (Welch & Welch, 2018 pp.2–3). In similar vein, Piekkari et al. (2013, p.780) identify a theoretical model of translation process within a multinational corporation as language absorptive capacity and refer it as 'the ability of a MNC to absorb and use information and knowledge that cross language boundaries – either

entering or moving around the organisation.' Further it is argued that an organisation that has operations internationally needs linguistic competence, as languages act as 'the total system within which knowledge transfer takes place' (Welch & Welch, 2008, p.354).

Despite the prolific work done specifically in the last decade with regard to role of languages in international business and management, which indeed has tremendously enhanced knowledge base, the research has been conducted from varied perspective largely within large multinational firms but also in SMEs. These studies utilise some concept of individual linguistic competence/ distance to understand firm level outcomes. Further, some utilise econometric analysis of languages in a country specific context, empirical evidence for the role of (foreign) languages from a capability perspective within international business is missing. Hence, we utilise the dynamic capability perspective to understand the role of languages in international business performance, more specifically SMEs as it is acknowledged that it would be 'interesting to study language effects in other firms, particularly small and medium enterprises.' Tenzer et al. (2017, p.837).

2.3 SME and internationalisation

SMEs play a very crucial role in the economy (OECD, 2005). Research show they represent private sector businesses disproportionately and are integral to job creation (almost 60%). In 2019, out of 5.9 million private business in United Kingdom, SMEs accounted for 99.9%. SME's combined revenue was £2.2 trillion, which is 52% of the total private sector turnover in UK (Chris Rhodes, 2017). Another study by Centre for Economics and Business Research (CEBR) indicate SME contribution to economy was at £202billion in 2016 which can increase to £241 bn by 2025 which is 19% increase over 10-year period. This clearly demonstrates the vital and potential contributions to be made by SME in UK economy. Research further suggests that in UK around 75-80% of new SME close within ten years of inception (Wright et al, 2015) for various reasons including lack of growth. Further, studies have found strong link between exports and growth for SMEs in UK (Lu and Beamish, 2001). Moreover, considering the role SME play in the UK economy, and the role their internationalisation can play in terms of sustained competitiveness and long- term sustainability (Cerrato and Piva, 2012; Webster and Deshpande, 1989), it is imperative to explore capabilities that can enhance international performance specifically among SMEs.

A predominant concept in organisational and entrepreneurial studies posits that the ability of firms to respond to new opportunities and exogenous threats through endogenous strategic actions, by developing and deploying organisational capabilities (Autio et al., 2010; Levinthal, 2000; McMullen & Shepard, 2006) leads to firm performance (Knight & Cavusgil, 2004; Zahra et al., 2006; Bingham, 2009) in international markets.

The literature in international business offers wide scope of internationalisation such as International entrepreneurship (IE), BornGlobals (BG) and narrower ones which tend to focus specifically on exporting (Monolova and Manev, 2004). In this research, we follow this narrower focus for SMEs' performance in internationalisation, that is, export performance. The Table 2.5 below summarises some the key studies that discusses export performance.

Table 2-5. Export Performance

Authors	Year	Relationship examined	Findings/discussion/conclusion
Dhanraj & Beamish	2003	Relationship between firms resources, export strategy (degree and intensity of internationalisation) and export performance	Based on n= 70 (USA) and n= 87 (Canada), the study identifies the positive relationship between enterprise, size and technological intensity to export strategy which in turn has significant and positive relationship with export performance (profit, growth & market share)
Crick	1999	Relationship between use of language, perceived importance and benefits of foreign language and export activities.	Based on n=185 UK SMEs the research suggests there is no difference in perceived importance and benefits of foreign language among different groups, however actual use of foreign language is enhanced for firms with more export activities.
Shoham et al	2002	Relationship between firm's strategic competence and export performance	Based on discriminant analysis indicate that firm's strengths and strategic response are related, and it has impact of strategic response to export performance is different for defenders, prospectors and analysers.
Rose and Shoham	2002	Relationship between market orientation (3 dimensions) and export performance (sales, profit and growth.	The quantitative study (n= 124) of Israeli exporters indicate change in export profit, export profit, change in export sales were significant and positively related to overall market orientation, intelligent generation and responsiveness but not dissemination
Constantine et al	1996	Understanding the impact on multiple determinants (firm characteristics, perception variables and export commitment) of export performance	Based on n= 87 of Greece exporters, the research finds national policy (stimuli) has positive while information/ communication has substantial negative impact on export performance. Further marketing capability has positive and export planning and control has negative and significant relationship with export performance. Also, firm size and export experience was found to be insignificant.
Morgan et al	2004	Antecedents of export venture performance	Building on 17 interviews with CXO's and n= 287 export venture managers, the research

			indicate that export venture performance has positive and significant relationship with positional advantage within the market and competitive intensity of the export market has significant moderating effect on positional advantage in export market.
Zou et al	2003	Relationship between export marketing capability (product development, distribution, communication & pricing). Positional advantage (low cost and branding) with financial performance in export.	The research provide evidence for positive and significant relationship between all dimensions of marketing capability & financial export performance such that positional advantage mediates the relationship between export marketing capability and financial performance.
Morgan et al	2014	Determinants of the export market & financial performance	Researchindicate that effective implementation of planned export marketingstrategy contributes to export market and financial performance, and that marketing capabilities play an important role in enabling effective marketing strategy (n=219)
Beleska-Spasova et	2012	Relationship between firm resources and export performance	Based on n=356 British exporters, the four resources/capabilities: managerial, knowledge, planning, and technology, have a significant positive direct effect on export performance, while relational and physical resources exhibited no unique positive effect. We also find that the firm's export strategy mediates the resource–performance in the case of managerial and knowledge-based resources.

As seen in the table above, variety of export measures and determinants (antecedents) are employed in export performance studies, which reflects the complexity of the export performance concept itself. Numerous determinants of export performance, both internal (RBV theory) and external environment specific (Contingency theory) have been identified with inconsistent findings (O'cass & Julian, 2003; Morgan et al., 2004) (for full review, please refer Chen et al., 2016) Further, the research suggest that the measures can be subjective (new market entry, revenue or growth relative to competitors etc), objective (degree of internationalisation, actual sales, actual profits etc) and composite measures (which tries to capture both perception variables as well as economic variables like sales and profits), for e.g., Zou et al., (1998) EXPERF which is multi-dimensional composite scale consisting of financial export performance, strategic export performance and satisfaction with export venture (Sousa 2004; Beleska-Spasova, 2014) Similarly, Morgan et al., (2004) utilises multidimensional of measure of export performance and include indicators such as export sales, export profit, export sales growth and new market entry.

Exporting- traditionally is the most common form of internationalisation for SMEs (Leonidas et al., 2011), primarily because it involves less risk and is less resource-intense than more complex forms of internationalisation such as foreign direct investment or franchising. Exporting is defined as 'selling products/services via direct and/or indirect methods to overseas markets' (Leonidou et al., 2010, p. 79)and is different from internationalisation in scope (Kahiya et al., 2020). Despite varied motivations – including increased sales revenue, diversification of the market, reduced dependence on the domestic market, improved productivity or competitive advantage gained from export experience (Leonidou, 2004; Love & Manez, 2019) – exporting is not easy for smaller firms who face multiple barriers (Francioni et al., 2016; Leonidas et al., 2007).

Further, SMEs, in general and specifically in the international context, are particularly vulnerable due to 1) liabilities of smallness: resource constraint (Buckley, 1989; Calof, 1994; Kahiya, 2013), 2) lack of international knowledge (Lu & Beamish 2001) and 3) sensitivity to external influences (Cheng & Yu, 2008). The 'liability of smallness' refers to the limited ability of firms in terms of the number of strategic opportunities and options available to them, due to a lack of resources (Clegg et al., 1996; Hannan & Freeman, 1984). This further constrains them in accessing external resources (finance, technology, customers, suppliers, partners) as external parties find it difficult to understand the overall prospects of such SMEs. Sensitivity to external influence implies that SMEs are characterised by their inward focus and lack of long-term planning which make them susceptible to any changes in their environment (Cheng & Yu, 2008). Furthermore, they may not be able to compete with larger firms as they not prepared for institutional changes in the markets (Schwens et al., 2011). Further, a lack of prior knowledge and information in the international market (Lu & Beamish, 2001)can lead to internal uncertainty about the processes involved in internationalisation and impact on effective decision-making (Hesterly & Zenger, 1993). This lack of international knowledge and imperfect access to information (Costa et al., 2016) has been identified as one of the main deterrents for internationalisation within SMEs (Hsu & Ziedonis, 2013).

Within SME literature, research identifies both external and internal factors affecting their internationalisation such as the decision-maker's characteristics age, education and (foreign) language proficiency (Kalinic et al. 2014; Cannone & Ughetto, 2014) and the existing and new networks and relationships (Leonidou, 1995; Steinhauser et al., 2021). As clear from

discussions in above sections, research in the field of languages is largely focussed on larger firms while limited research focussing on decision-maker's proficiency in (foreign) linguistic competence within SMEs in UK and export performance, the results of which is mixed (see William and Chaston, 2004), possibly because such approach can lead to 'language similarity path' (Welch & Welch, 2017, p. 4) and selection of (international) market purely based on linguistic competence may not lead to successful international performance (Hurmerinta et al. 2015).

Hence, building on the existing research on languages in international literature and grounded in the dynamic capabilities (Teece et al. 1997; Zollo and Winter, 2002), this research conceptually develops and empirically assesses the language capabilities (LOC) within an SME and examines the relationship between language capabilities (LOC) with conceptually identified and related variables of interest. Furthermore, we also identify the key drivers and relevant outcome variables of language capabilities within an SME context (see Chapter 5 for conceptual model development).

2.4 Critiques related to the capability perspective

Despite the strong application to languages, resource-based view and dynamic capabilities literature has some weaknesses. The capability perspective contributes by providing a process perspective, a framework for transitioning individual level skills and capabilities at a firm level (Stigliani & Ravasi, 2012) and emphasizes on organisational factors for capability building (interdependent) which are important for this research; these theories have been challenged for being at 'too high a level' or being too abstract to study empirically (Schreyogg & Kliesch-Eberl, 2007) The key relevance and uniformity of a theory lies in its recognition of the laws of relationships among its variables (Fry & Smith, 1987) and it is argued that dynamic capabilities literature, at least in its initial conceptualisation, lacked clear and a priori statements regarding the relationships among the key constructs of interest (see Table 2-2). This has, however, been partly resolved by recent suggestions from researchers that identify the specific nature and/or relevant context for the development of a capabilities construct (Wang & Ahmed, 2007; Easterby-Smith et al., 2009; Barreto, 2010; Breznik & Hisrich, 2014). For example, the alliance learning process is identified as a dynamic capability crucial for a firm's overall alliance success (Kale & Singh, 2007), the inclusion of innovation as important in

absorptive capacity (Jansen et al., 2005) and language capabilities in the context of internationalisation (Welch & Welch, 2018)

Moreover, researchers often argue that it is difficult to identify which resources become valuable and unique, and how. This is an important issue that researchers want to address; they argue that the capability literature needs to identify these resources and how they individually and collectively account for specific or overall performance, rather than judging this ex-post: that is, as the performance is successful, the resources responsible for it are labelled as valuable or, similarly, that failure invariably means the absence of a specific capability. Nevertheless, this has been partly addressed by the development of a conceptual model (presented in Chapter 5) that identifies not only the aspects of language capability but also the micro and macro mechanisms (antecedents) through which firms develop such capabilities. Welch & Welch (2018) also point to the difficulty of both studying and evaluating language capabilities in the sense that they identify that it is individuals that possess these skills but that organisations play a critical role in their development and utilisation.

In summary, while there is growing interest in language capabilities in internationalisation and international performance, the research field is still immature. Numerous perceptions exist of what constitutes language capabilities within a firm since they have primarily been studied at an individual level within multinational corporations (Tenzer et al., 2017; Welch & Welch, 2018). Similarly, some authors also equate language capabilities with language boundary skills within the firm and language performance within global teams (Klitmoller & Lauring, 2013; Hinds et al., 2014; Cohen & Henderson, 2017). Language boundary skills or language capital, for example, can be measured in various ways, but these miss the organisational aspects of capability building (see Levinthal & Cohen, 1990). Despite the growing interest in language research in international context, thus, there is a lack of empirical research on *how to measure language capability and how it is built (antecedents)* within a firm (see Schreyogg & Kliesch-Eberl, 2007).

Hence, we argue that a capability-based lens is the most appropriate to examine the drivers of internationalisation for firms (Zahra et al., 2006) and is utilised in the context of this study, where we try to understand the role of languages for internationalisation performance (exports) among SMES in the UK.

2.6 Conclusion

It is argued that the success of international business does not depend only on its distinctive, difficult-to-imitate, return-generating combination of resources but also on its ability to develop and utilise critical capabilities to match the external environment (Sui & Baum, 2014; Eisenhardt & Martin, 2000). The importance of the exploitation of capabilities is highlighted by its consistent presence in the varied dynamic capabilities explored in organisational theory. The relevance of the dynamic capability literature is accentuated in the present world economy, characterised as it is by increasing global competition. Hence, a contingency perspective on capability development and utilisation is needed (Luo, 2000). As with any other distinct capability, organisational learning is a key component of the dynamic capability perspective for sustained competitive advantage. Thus, as a priority, new capability development through internal and external learning provides the basis of organisational sustained competitive advantage in international markets. Having discussed the theoretical framework for this study, we now move on to discuss the methodological considerations in the next chapter (Chapter 3).

Chapter 3 -Research Methodology

3.1 Introduction

The purpose of this chapter is to address the overall methodology utilised to study LOC. The chapter begins with a philosophical discussion around the research paradigm and the rationale for the chosen methodology. Next, we discuss in detail mixed-methods research, that involves supportive semi-structured interviews (a qualitative approach) with the corroboration of a literature review for the conceptualisation of the construct and item generation for the measurement development. We then discuss the quantitative approach involved in this study (exploratory factor analysis for scale purification, confirmatory factor analysis for scale validation and nomological validity test using multivariate regression analysis). The chapter concludes with discussion on ethical considerations for the study.

3.2 Paradigm, Epistemology and Ontology

A typical research design finds its basis in epistemology – the theory of knowledge and how it is created – and ontology, the reality. Decisions on which research paradigm to follow and which methodology to adapt are dependent on the purpose and focus of the research (Lee & Lings, 2008). The purpose of this section is to, therefore, outline the research paradigm, the methodological approach adopted in this study. A research paradigm considers 'a set of ideas, theories and methods used in a science' (Lee & Lings, 2008, p.38) and forms a conceptual and philosophical framework for any research.

Ontology refers to a set of beliefs on the nature of reality: whether it is objective and independent of the researcher's view, or subjective – created in the researcher's experience (Lee & Lings, 2008). The subjective view takes an interpretivist approach and provides for an individual viewpoint on the social phenomenon being studied. It enables the researcher to understand the processes or constructs of human behaviour using first-hand, subjective information provided by the participants themselves.

Objective view- point, conversely, is studied from a functionalist approach and believes that social phenomena can be studied and explained through social interactions. Further, it assumes rational human behaviour with a focus on hypothesis testing.

Epistemology follows from ontology (Lee & Lings, 2010) and focusses on assumptions about what is acceptable and valid knowledge and what it is possible to know about reality (Saunders et al., 2012).

The two most popular approaches in social science research are positivism and realism (Lee & Lings, 2008). Positivism refers to scientific methods in which reality 'must be investigated through the rigorous process of scientific enquiry' (Gray, 2013 p.20). Positivists claim that reality consists of 'what is' and can be directly observed (Lee & Lings, 2008) and, therefore, that it is external to the researcher and objective.

Realism, as an extension of positivism, is a theory of scientific knowledge in which reality (ontology) is real, albeit can be studied only imperfectly and probabilistically (Healy & Perry, 2000). The current research adopts a pragmatic realist approach as it acknowledges the 'paradigm wars' i.e. the existence of a 'real world' and allows for a social interpretation of the same. Further, this combination of the 'real' and 'interpretivist', collectively called 'pragmatic realism', is considered a sound research methodology (Watson 2013) and enables the researcher to adopt a more practical approach to the research, offering both academic legitimacy and practitioner's acceptance. Pragmatism or pragmatic realism emphasises the need for multiple measures and the triangulation of results to achieve a knowledge creation process. Often paradigms are embedded in a particular area of research. For example, research paradigms in international marketing and entrepreneurship have traditionally originated from the field of economics, with a strong focus on empirical work leading to positivism and have steadily moved to post-positivist ways of exploring social reality, such as realism, critical realism and pragmatic realism. International marketing and strategy research attempts to explain and understand complex social phenomena within this realm of realism (Hunt, 1991; Peter, 1992; Perry, Riege & Brown, 1999). Since LOC is a relatively new concept within the internationalisation literature, it warrants further understanding to develop the theory and a clear construct for operationalisation. Therefore, a strong conceptualisation and measure of language capabilities is needed for this research to provide empirical evidence and potentially enable generalisation of the findings to a larger population.

Hence, a pragmatic realist paradigm rooted in realism is adopted in this research to explore LOC at a firm level, an approach dominant in current research in organisational studies and business literature (Haack, 1999; Watson 2013).

As we see the boundaries of the paradigms blurring which are tied to the methodological approaches (qualitative or quantitative), a mixed-methods approach that combines both quantitative and qualitative research strategies to some extent acknowledges the complexity of the social phenomenon to be studied. These methodological approaches (qualitative or quantitative) are not deemed mutually exclusive in a mixed-methods approach (Bryman & Bell, 2015; Johnson, Onwuegbuzie & Turner, 2007); rather, they are considered to be complementary by acknowledging the overlap in some common ground and is a contrast to the views of advocates of the incommensurability of paradigms, epistemologies- 'paradigm wars' and world views (Bryman, 2004). We will now discuss the inductive and deductive approach available for the development of a new scale and its relationship in the context of this research.

3.3 Deductive and Inductive approach

Following recommendations for scale development, a two-stage scale development process (Churchill, 1979; Gerbing & Anderson, 1991; DeVellis, 2003) will be utilised to develop the new construct of LOC and to study the relationship between the relevant constructs. The overall stages in this process are scale item generation, scale purification and validation.

Hunt (1991) suggests two approaches to scale development (item generation) but also assessing relationship that are less established empirically, that is inductive and deductive. Inductive method concerns itself with emphasis on individual responses to identify the measures of interest, with less emphasis on prior literature. This inductive approach is necessarily related to theory building and is embedded in grounded theory. The process often begins with qualitative data collection which is then analysed to facilitate the formation of a new theory. Theoretical framework is, generally, an expected end result of such an approach (Bryman & Bell, 2015). This is similar to the interpretivist approach and is not needed or suited to answering our research questions.

The deductive approach, conversely the approach utilised in this research, emphasises on the importance of prior theory and literature for the phenomena under investigation, through a thorough and extensive review of the literature to develop a construct definition, which initially guides the development of items. However, as the research topic is under- developed, qualitative research (in-depth interviews) has been utilised to facilitate this initial

investigation. Moreover, a deductive approach facilitates features important for scientific endeavour in a realist paradigm, that is, facilitating the relationship among variables, researcher independent (however complete objectivity is difficult as construct needs to be first operationalised) and generalisability that is inference can be made for the population from the sample studied. (Bryman, 2004; Robson & McCartan, 2016). This corroboration of the literature review with qualitative, in-depth interviews to develop, update and validate provides for the initial pool of items under investigation of LOC. Although other forms of qualitative methods, such as focus group was considered earlier, they were not pursued due to practical and technical reasons. It seemed impossible to gather SME owners, managing directors and CXOs under one roof at the same time and the sensitivity of the topic regarding their international markets and performance.

Similarly, antecedents of LOC are similarly investigated through a deductive approach as variables are necessarily explored, built and developed through the literature review and interview data. Finally, to assess the nomological network and the likelihood of how it behaves within relevant and related constructs in the context of SMEs' international performance were utilised from the literature, an important aspect of the development of a valid measure (Cronbach & Meehle, 1955).

The overall aim of this thesis is to first develop a valid and parsimonious scale of LOC that could facilitate the quantitative assessment of the level of language capabilities within a firm and then explore the relationship between its antecedents and outcome variables. For this purpose, it is paramount that the measure captures the full domain of the construct definition and is parsimonious for application in strategy as practice. Hence, following the recommendation of Churchill (1979), and Rosenzweig and Roth (2007), two-stage scale development (presented in Figure 3.1 below) was utilised to develop and validate a measurement scale for LOC, making it a mixed-methods deductive approach.

Furthermore, we concur with Edmondson and McManus (2007) proposition that research that introduces and studies new constructs in already established relationships or otherwise requires both qualitative and quantitative methods of data collection.

3.4 Choice of Research Design

According to its purposes the research can be broadly categorised as descriptive, exploratory and explanatory and the research's methodological design needs to be consistent with purposes of the study (Lee & Lings, 2008). Descriptive research concerns itself with 'drawing a picture' of the phenomena being studied, while exploratory research tries to answer 'what' and explanatory research 'why' and 'how' types of question. The objective of this research was not only to explore the construct of LOC within SMEs but also to understand the necessary conditions under which language capabilities exist and its effects on outcome variables.

Often, these categories are blurred in actual research settings such that Iacobucci and Churchill (2010) recommend that exploratory research (a literature review) provides for strong foundation on which new research project are built. Next, we discuss several research designs available to researchers which can be further distinguished as two broad constituents of qualitative and quantitative research designs for specific purpose, and each associated with their advantages and disadvantages. As discussed briefly earlier, a mixed-methods approach has been adopted (Johnson et al., 2007). Such an approach is appropriate when developing a scale, as it facilitates both exploring the concept via a literature review and interviews and hypotheses testing through an appropriate quantitative measure. As a result, semi - structured interviews (qualitative) in corroboration with a literature review and for item generation, and survey questionnaire for exploratory factor analysis, confirmatory factor analysis and hypothesis testing (quantitative) were used to assess the psychometric properties of the scale and explore relationships among the variables studied. The mixed-methods approach is discussed below.

3.5 Research Methodology – Mixed-Methods Research

When two or more methods are used to answer a research problem, it is called mixed methods research. Mixed-methods research can be strategically utilised to fulfil the purpose of the research project and combines both quantitative and qualitative methods (Goforth et al., 2017). The main purpose of the mixed method research is to maximise the strengths and minimise the weaknesses associated with only quantitative or exclusively qualitative research (Creswell, 2015).While both qualitative and quantitative methods have their own

epistemological and ontological assumption, they are not viewed as fixed propositions. The scope of this study (scale development) warrants the use of mixed-methods research where preliminary study (qualitative analysis) shall be utilised further develop the theory of the key construct within the context, followed by quantitatively induced hypothesis testing. The findings of such study will then be more meaningful and lead to a significant contribution to the interpretation of the social phenomenon being studied (Edmondson & McManus, 2007). Proponents of mixed-methods research (MMR) identify three types: quantitatively driven MMR, qualitatively driven MMR and equal status MMR (Johnson et al., 2017).

The methodology is invariably guided by the maturity of the topic of interest and arguably an intermediate theory, where there is some prior work in the extant literature but not enough is available to base the hypothesis testing, conclusion or validate the phenomenon in general or say, in a particular setting. For instance, literature may have focused on one particular setting, such as multinational corporations while completely ignoring SMEs. This provides for an opportunity to further develop the theory as it may not be feasible to interpret the true meaning in a separate setting. Therefore, before moving on to correlations and hypothesis testing (quantitative) studies, it is recommended to advance the understanding of the theory with help of qualitative studies. Further, the emphasises on the fit for the research purposes rather than methodologically driven approach is adopted as propagated by Lee and Lings (2008).

For the purposes of this thesis, the theory in research fits the intermediate approach and the adoption of quantitatively driven mixed methods research is appropriate (Johnson & Onwuegbuzie, 2004). The novelty of a key independent variable and lack of measurement require that the quantitative studies are preceded by qualitative studies to understand the nuisance and facilitate the development of a measure (Creswell & Clark, 2007). Further, Morgan (1998) suggests that it is paramount not only to clarify the sequence but also the priority (qualitative versus quantitative). Since the topic of interest, LOC, has been recently conceptualised in a multinational corporation setting with no measurement tool yet, its conceptualisation within SMEs warrants initial qualitative analysis (interviews) to ensure the development, better understanding and adaptability of the construct to SMEs. Further, keeping in mind the scope for practice, quantitative -focused research is utilised to develop a

measure and explore the relationships between antecedents, the key construct and the outcome variables.

An extensive literature review was conducted for theoretical definition; qualitative data collected through in-depth semi-structured interviews, quantitative data collected for the investigation of the scale's psychometric properties with the help of techniques such as exploratory factor analysis for data reduction, reliability and validity of the scale with confirmatory factor analysis (Churchill, 1979; Gerbing & Anderson, 1991; Rosenzweig & Roth, 2007; DeVellis, 2003). (See Figure 3.1 for methodological approach and choice of parameters adapted in this research)

Social theories often fall along a continuum, with mature theories (well-developed theories studied over time with established measurable constructs) on one end and infant theories which are generally, novel or much less explored on other. Intermediate theories fall between these two ends of the continuum where although some prior work has been conducted, they require further explanation or reconceptualisation for better understanding. The development of explanatory frameworks to identify new relationships among variables. Intermediate research, in this sense, draws on existing literature, often from a distinct stream of literature, to propose the reconceptualisation of an existing construct to provide a better understanding of the construct itself but also the relationships among variables such as the necessary conditions for the construct or its impact on relevant outcomes (Edmondson & McManus, 2007). LOC can be considered to be somewhere between a nascent and intermediate theory as it was first conceptualised in 2017 but has been developed on long winded work on language relevance in the international business context (Tenzer et al., 2017).

The lack of measurement and novelty of the key construct of interest (LOC) requires a extensive literature review along with qualitative interviews to further develop the construct in the SME context while a quantitative method is required for empirical testing. Such an integrated approach is important for construct development and reconceptualisation and to establish the validity and reliability of the new construct. This will eventually facilitate a better explanation of the topic of interest and also the associated relationships. Further, disciplines dominate in the organisational performance literature is organisational capabilities literature, which provide theoretical frameworks for the development and testing of hypotheses in order to predict the antecedents and outcomes of LOC. Nonetheless, since the research lacks

a conceptualisation of LOC within SMEs and there is no valid measurement scale, in-depth interviews (qualitative) will precede a survey (quantitative) to facilitate better understanding of the concept.

It is important to mention here that the qualitative interview approach adopted in this research does not attempt or claim to provide explanations for the phenomenon being studied but aims to ground the LOC construct in reality.

Hence, we can safely infer the methodology for this research is mixed-method with a focus on quantitative methods, specifically a combination of in-depth, semi-structured interviews and a survey. Based on Morgan's (1998) classification of priority and sequence decisions, the platform for a multi-strategy approach is provided and both methods will be discussed in detail in subsequent sections and chapters.

3.5.1 Qualitative Research

Qualitative research often, are exploratory and concerns with understanding a social phenomenon from an individual perspective; that is, it is subjective. Further, it is suitable for little-known topics that require further discovery (Iacobuccci & Churchill, 2006). This research adopts qualitative study to facilitate the emergence and exploration of the topic under investigation – LOC – and to validate the construct within an SME context. In semi-structured interviews, a set of questions act as a rough guide but the sequence and specific framing may vary from respondent to respondent, allowing for a richer description of the phenomenon.

Semi-structured interviews are adopted in this research as a supportive method to allow the researcher to gain in-depth insights into the phenomenon studied. Further, it gives respondent a flexibility to talk and express freely, allowing for possible discoveries that the researcher may not have anticipated. Finally, it enables probing (follow-up) questions to add richness to the data. This semi-structured approach adopted shall facilitate a more authentic perception of LOC among SMEs and to fully develop a measure for LOC (Bryman, 2004).

Following the qualitative study, which along with the literature review facilitates the development of a detailed questionnaire, quantitative study is carried out for scale purification, validation, nomological and hypothesis testing.

3.5.2 Quantitative Research

Several quantitative approaches are available to the researcher, with each having its own advantages, disadvantages and suitability for the research purposes. These can be broadly classified as experimental (causal design) versus survey (relationship design) and longitudinal vs cross-sectional.

Experimental design is suitable in establishing cause and effect with a relatively small number of independent variables. Due to the inherent requirements of the multistage-scale development process (Churchill, 1979; DeVellis, 2003), experiment design is not deemed appropriate in this study. Moreover, this laboratory-based design is unsuitable to test multiple independent variables with the key construct – LOC –while controlling for several other independent variables at the same time.

On the other hand, survey or questionnaire design is appropriate for this study; they fit its purposes by simultaneously assessing the key antecedent and outcome variables of LOC and also facilitating the development of a valid scale.

Although LOC was be developed using both semi-structured interviews and quantitative methods (Churchill, 1999), the relationship between antecedents, the key construct (LOC) and outcomes were studied using regression analysis. As a result, this research naturally is based on a quantitative research design (Malhotra & Birks, 2006) and, more specifically, a survey research design as it also aims to assess the nomological network of LOC. Furthermore, surveys are far less resource- and time-consuming (Harvey, 1987) and also can be seen as being more objective (Lee & Lings, 2008 In addition, they allow researcher to collect a large amount of data (Jobber, 1989) which helps to resolve generalisability issues (Iacobucci & Churchill, 2010). The two main types of survey research design in social science – cross-sectional and longitudinal – will be discussed in the next section.

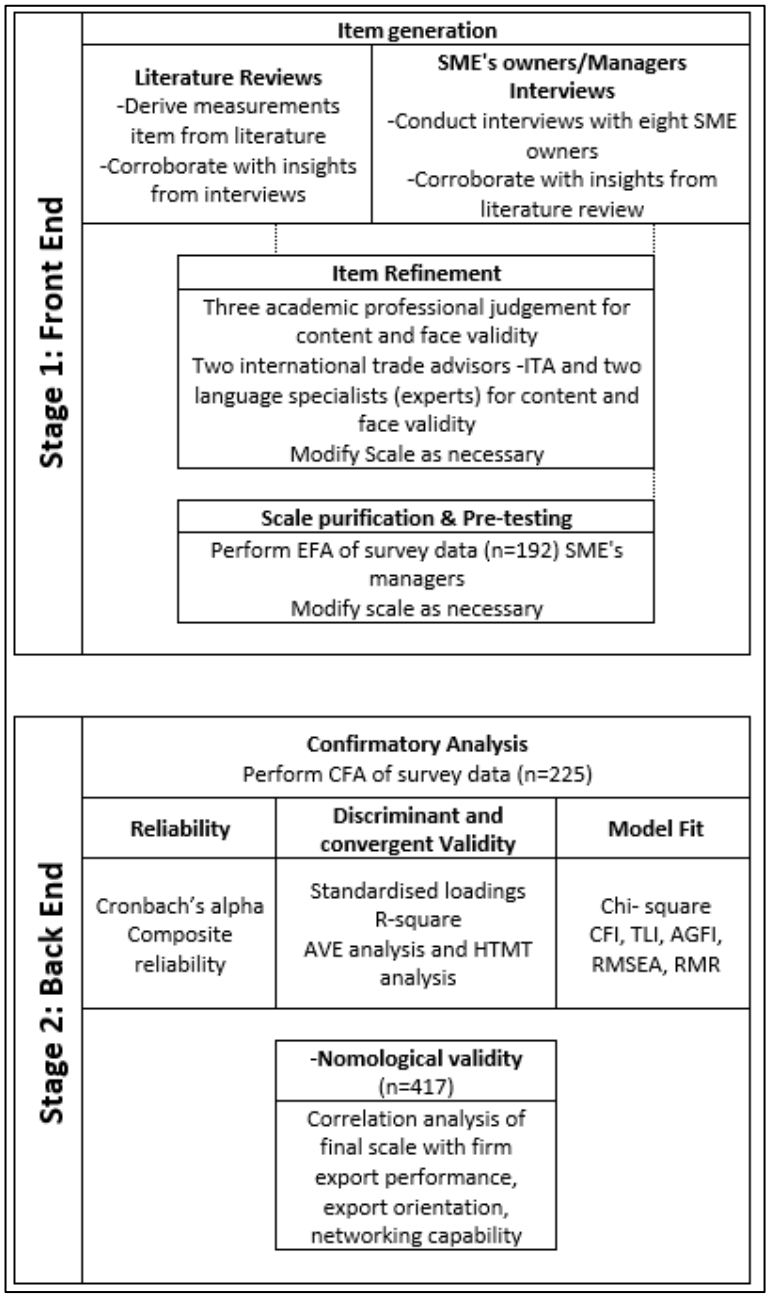
3.5.3 Cross-Sectional and Longitudinal Data

The main consideration in choosing between cross-sectional and longitudinal data relates to the availability of primary or secondary data at more than one point of time. Longitudinal data are often used in the economics and finance fields of social sciences where panel data are available, or the purpose is to study a phenomenon over a period of time, requiring follow-up with same respondents multiple times (Lee & Lings, 2008). Conversely, cross-sectional

research design refers to the collection of data on all variables at a single point in time to understand the relationship between several independent and dependent variables. In terms of LOC, cross-sectional design will allow researchers to draw inferences regarding the association between antecedent and outcome variables. Further, cross-sectional surveys are far less resource- and time-consuming (Harvey, 1987), enabling the collection of a large amount of data (Jobber, 1989) which helps to resolve generalisability issues (Iacobucci & Churchill 2010). Nevertheless, the cross-sectional survey approach has its own limitations, specifically regarding causal implications among the variables. Since the cross-sectional approach is based on correlation between the variables under investigation, any inference of causality can only be based on the study's underlying theory (Edwards & Bagozzi, 2000). Further, it is argued that any common method bias associated with such approach (Jarvis et al., 2003) could be addressed by utilising a variety of procedural survey design techniques during data collection (MacKenzie, Podsakoff & Jarvis, 2005) as addressed in Chapters 5 and 6. However, Rindfleisch et al. (2008) suggest that that cross-sectional data may not be as susceptible to method bias problems where relationships between the constructs are expected to be large in magnitude.

Hence, primary data collection through a cross-sectional survey design supported by semi-structured interviews is followed in this research for scale development and nomological validation of the LOC. A visual model of the two- stage scale development methodology (Churchill, 1979; DeVellis, 2003) is presented in Figure 3.1

Figure 3-1. Methodological approach



The above Figure 3.1 presents visual model for the methodological approach undertaken within this research and outlines the two- stage scale development approach (Churchill, 1979; DeVellis, 2003), namely 'Front-end' and 'Back-end' along with regression analysis to study the relationship between the newly developed LOC, its antecedents, and the outcome variables. The 'Front-end stage' involves extensive literature review in collaboration of semi-structured interviews which forms the basis for conceptual development of LOC construct within SMEs

and generation of items based on the conceptual model (see Figure 5.1) identified during the literature review. This is covered in Chapter 2 and Chapter 4 & 5 within the thesis. Next, with the help of expert judges, items were refined and reworded for accuracy and clarity which in our study were three academicians who are well versed with the topic, two industry experts (International Trade advisors from British Chamber of Commerce) and two language experts. This was followed by the pre-testing the survey questionnaire before making it live on Qualtrics for quantitative data collection. The data collected was then utilised to conduct a preliminary assessment of the constructs in the exploratory factor analysis (see Chapter 4 & 5 for details). The 'Back-end' stage involves conducting confirmatory factor analysis (CFA) to examine and test the psychometric properties of the construct in the study and assess validity, reliability and model fit to assess for three set of variables: LOC, the antecedent variables, and the outcome variables. Followed by the assessment of nomological validity of the newly developed scale (see Chapter 4 for details on CFA). Finally, multiple regression analysis along with moderation and mediation process were utilised to assess the relationship between LOC, its antecedents, and consequences (Chapter 8).

Having discussed methodological approach employed in this study, we now discuss ethical consideration for the study in the following section.

3.7 Ethical Considerations

In order to ensure the research complies with ethical guidelines, the research application has been approved by the University Research Ethics Committee, Aston University. The approval was granted on 15 March 2019 (Ref. 29:11/18).

The main ethical considerations in this research are informed consent, confidentiality, anonymity and data storage policy, each of which is discussed below. Informed consent refers to obtaining verbal or written consent from the research participants and 'entails giving sufficient information about the research and ensuring that there is no explicit or implicit coercion so that prospective participants can make an informed and free decision on their possible involvement' (ESRC, 2010). Participants must also be informed of their right to withdraw at any time during or after the data is collected.

To address this issue, a separate compulsory informed consent document was provided for participants to read and sign before the interview was conducted (see Appendix 1). For the quantitative survey, compulsory informed consent was integrated into the questionnaire itself (see Appendix 5) where details including the email of the researcher were included. To ensure the confidentiality and anonymity of the respondents, neither the name of the participant nor the name of the company was recorded in accordance with GDPR guidelines.

Finally, another important consideration is with data storage. In accordance with the Aston Business School research ethical guidelines, it is proposed that the data will be kept in electronic format for at least five years, and hard copies of the consent form, interview recordings and transcription will be stored for two years before they are destroyed.

3.8 Conclusions

The chapter presented an overview of the research methodology adopted in this thesis. The chapter provided the discussion of philosophical considerations, the choice of research design, a broad view of the methods employed for data collection and ethical considerations. More detailed descriptions of the specific methods utilised is presented in the corresponding chapters (Chapter 4, Chapter 6, Chapter 7 and Chapter 8). The following chapter (Chapter 4) presents the development of LOC scale process, followed by Chapter 5 which presents the hypothesis and model development through literature reviews and in corroboration with interviews which forms the basis for subsequent chapters in this research.

Chapter 4- Language Operating Capacity: A Scale Development

4.1 Introduction

The previous chapter outlined the overall research design and methodological considerations for this thesis. The purpose of this chapter is to present the scale development of LOC measurement. Valid and reliable measurement lies at the heart of any scientific endeavour (Hair et al, 2010). Hence, it is important that a systematic approach to developing conceptually relevant, psychometrically sound measurement instruments (Churchill, 1979; DeVellis, 1991). To operationalise distinct construct such as LO-C, we followed a two stage, multi- item scale development approach as proposed by Rosenzweig and Roth (2007) and Walsh and Beatty (2007). Building on theoretical framework of dynamic capabilities and literature review conducted in Chapter 2 and the steps outlined in Figure 3.1 (Chapter 3) is adapted and utilised to develop a two-stage scale-development process (Churchill, 1979; DeVellis, 2003), we first introduce the LOC as a distinct capability and identify the domain of the construct within dynamic capability literature. Next, we discuss the sampling for the interviews and present the findings of the semi-structured interview which validated and facilitated the generation of the items. Further, we employed factor analysis for scale purification (EFA) and scale validation (CFA) before moving on to assess nomological validity and predictive validity and concludes with a conclusion.

4.2 Language Operating Capacity as a distinct capability for internationalisation

4.2.1 Conceptualisation of LOC and its dimensions

When firms want or choose to operate in the international market, the notion of language similarity or difference may influence the choice of markets. The process through which an organisation implements languages in internationalisation has been described as a 'language coping mechanism' (Welch & Welch, 2018, p.3). As described by Welch & Welch (2017), organisations restore to the language similarity path, use of intermediaries, website translation, common corporate language and are reactive towards language needs in internationalisation. Since different perspectives have been utilised to study language, language as a multi-dimensional construct in business is vaguely defined at the conceptual

level and there is need for a proactive approach to languages in internationalisation. Here, initial work by Welch & Welch (2018) is important as they explore language capabilities at a firm level and termed it as LOC.

LOC is defined as "language resources that have been assembled in a form that MNE can apply, in a productive, context relevant manner, as and when required throughout its global network" (Welch & Welch, 2018, pp.2–3). An organisation with international operations needs linguistic competencies, as languages act as 'the total system within which knowledge transfer takes place' (Welch & Welch, 2008, p.354). This definition of LOC is the most appropriate to understand the role of linguistic competence at a firm level, as it recognises that although linguistic competence inherently rests within individuals (i.e. individuals develop, maintain and use their linguistic competence), organisations also play a role in the development and effective utilisation of such individual competences. It also establishes LOC as a process that facilitates communication and knowledge transfer within multinational corporations.

LOC or language capabilities relates to not only appropriate deployment and recognition of a resource with linguistic competence in international markets but also includes identification of the training required to facilitate cross-broader interaction and access. It also requires an awareness of the related technology and services available to be used in the right place and situation. Further, it refers to ability to respond in time in the appropriate language to enable the timely execution of tasks and activities within the international context. This could involve the use of translation services in the near future or investing in language training; for example, cross-language negotiation requires responses in the customer's language. Furthermore, the ability to make use of linguistic competence in business, social and cultural settings leads to connective capacity i.e. being able to make sense of exactly what is said and relating to others (Zahra & George, 2002). Hence, LOC includes motivation, and the preparedness of individuals and management to use language resource for international purposes: language resources consist of individuals' foreign-language skills as well as an organisation's language-centric technology, policies and systems. However, Welch & Welch (2018) did not empirically validate the LOC concept. Hence, this thesis aims to build on the concept of LOC within an SME context and empirically expand Welch & Welch's work (2018) by developing a measure of LOC. We developed LOC, a measure instrument and its dimensions to assess the role of language

capacity at a firm level and test its impact on international performance (specifically exports) among SMEs. To this end, we shall develop this concept within the context of SMEs by drawing on the capability literature. Another important issue to address is the utility of LOC in practice and how to operationalise and measure it (Corley & Gioia, 2011), suggesting a need to deconstruct the construct first and identify its key features to measure LOC as a whole within a firm.

According to Slater et al. (2006), a firm's capability is a distinct ability to develop and utilise such capabilities and is linked to performance. As capability literature evolved, scholars have introduced distinct capabilities, such as absorptive capacity to influence organisational level performance like innovation or strategic alliance. The capacity literature contributes to international business as an important determinant of knowledge processes in multinational companies and analyses organisational evolution to adapt to changes in an international environment (Apriliyanti & Alon, 2017).

On a similar note, the process literature examines 'how and why things emerge, develop' (Langley et al., 2013, p.1) Further, process construct is operationalised as variables which are measured and explicitly observed 'to explain why an independent variable causes a dependent variable' (Van et al., 1992). With the notable exception of Welch & Welch (2018), scholars have ignored the process aspect of language capabilities at a firm level, and languages competence has been addressed as a 'boundary-spanning skill' (Barner-Rasmussen et al., 2014). Dynamic capability view offers an appropriate lens to examine how individual competencies, together with organisational interventions, influence organisational capacity (Zahra & George, 2002). From this theoretical perspective, we redefine LOC as a concept that can capture SMEs level of language capabilities and recognise LOC as a unit-level (i.e. firm-level) process. As a social process perspective to languages within the organisation variable, and in line with the capacity literature (Cohen & Levinthal, 1990; Zahra & George, 2002; Jansen et al., 2005; Camison & Fores, 2010; Welch & Welch, 2018) that explains how firms assimilate and utilise capabilities such that both motivation and preparedness to develop such capacity and the actual utilisation of capacities can be studied (Welch & Welch, 2018), we define **LOC** as:

Motivation and preparedness towards developing language-related capabilities (ability to develop) as well as the actual utilisation of language capabilities (ability to exploit) within the organisation.

This definition of LOC is about a firm's ability to develop language-related capabilities as well actual utilisation of the capabilities and is about the perception of policies and practices of employees and management alike towards the role of languages within the organisation for international marketing and business performance. That is, it is ability to develop and exploit language capabilities to enable firm's internationalisation as and when necessary.

Furthermore, researchers agree that capacity as concept is a higher-level construct and consists of two dimensions broadly: - potential and realised capacity (Zahra & George, 2002). Researchers also argue that such capacity, as a process, reflects, firstly, the conditions that facilitate its development, that is, the ability to develop and, secondly, its utilisation, or ability to exploit, to enhance organisational performance (Volbedra et al., 2010; Camison & Fores, 2010; Jansen et al., 2005; Cohen & Levinthal, 1990). Therefore, we opt for this specific description of capability, that is, capacity and, in line with Welch & Welch's (2018) conceptualisation to understand how firms develop and utilise resources within the organisation to devise solutions for language challenges when exporting.

Accordingly, LOC is theorised to comprise two aspects: 1) motivation and preparedness and 2) actual utilisation of language within the organisation that reflects higher-order latent variable. Since it is developed utilising the work of Welch & Welch (2018), it is important to identify the difference from the original work: first, this new definition acknowledges LOC as universal language capability indeed, that can be utilised both in SMEs and large multinational firms for internationalisation and is not restricted to application only within multinational corporation, however, it is conceptualised and empirically assessed within an SME context for the purpose of this research. Secondly, the number and types of dimensions differ as does, thirdly, the operationalisation of the construct (Camison & Fores, 2010), that is, the way in which the elements emerge. Despite these differences, there is much in common with Welch & Welch's (2018) articulation of the construct. First, both conceptualise LOC as a firm-level construct and recognise that, although individuals possess language skills, contextual drivers are equally relevant and will facilitate the development and utilisation of the languages within

the organisation for internationalisation and second that both constructs are multi-dimensional.

Clearly, the intangible nature of the LOC presents challenges in its conceptualisation and dimensions. The capability literature facilitates such conceptualisation by focussing on the micro-foundations and is attributed as a 'mediating range of phenomena' relating to performance (Lewin et al., 2011). LOC as a firm-level construct comprises two aspects: motivation and preparedness for language-related capabilities, and utilisation (the ability to exploit) of those capabilities within the SME for achieving better international performance.

4.3.2 Motivation and preparedness

The first dimension is motivation and preparedness. A key element that is consistent across theories of capabilities is the ability to develop, and we argue that this begins with motivation and preparedness to develop capabilities. This is specifically true for language capabilities in the context of SMEs as they are small indigenous units which operate independently. In contrast, multinational corporations are by design multi-lingual. Also due to constraints among SMEs (Maekelburger et al., 2012), it is necessary that firms realise the relevance of languages for international marketing and business performance but also are willing and prepared to invest their limited resources in the development of language competencies within the organisation for internationalisation. This motivation and preparedness come from not merely acknowledging that language diversity (Henderson, 2005) exists when internationalising but also understanding the pervasiveness and persistence of language requirements for international performance.

There is one important but minor theoretical variation, that is inclusion of a motivational facet. Motivation and preparedness to develop are critical in the context in which LOC is used in this study. Welch & Welch (2018) utilise LOC within a multinational corporation context, where there is an underlying assumption that multiple language skills exist (Luo & Shenkar, 2006; Fredriksson et al., 2006). In contrast to large, established firms, SMEs may or may not have language skills and hence it is important to include motivation as a factor to develop LOC within SME.

4.3.3 Actual Utilisation

The second dimension is the ability to utilise or exploit, which occupies a central position in the LOC construct, representing realised capacity (Zahra & George, 2002) as it refers not only to the firms' ability to assimilate but to utilisation in the firm's context, in the sense that being able to utilise existing or developed language competencies for international performance will indicate how much LOC exist, i.e. level of LOC within the organisation (Barner-Rasmussen et al., 2014; Schildt et al., 2012).

This conceptualisation of LOC and its two factors- motivation and preparedness, and ability to exploit are in line with the capacity literature and strongly supported by a social practice view. It builds on a proposition that language is not merely a 'functional' or 'structural' construct and studies languages as social phenomena within the firm (Karhunen et al., 2018). This conceptualisation also integrates with the role of organisation mechanisms on languages (Bjorkman et al., 2007) and acknowledges languages at the firm level as a process where motivation and preparedness, along with utilisation, enable firms to address current issues in international marketing and internationalisation.

LOC, as theorised by Welch & Welch (2018, p.6) is a theoretical construct. It is, therefore, necessary to understand its nature, that is, the forms in which it is present within the SMEs. This is distinct from its antecedents or consequences (Bosch et al., 2003) which forms another important contribution of this study, that is specifically identifying individual and firm level antecedents that can facilitate LOC along with the specific strategic outcomes of LOC within the context of SMEs internationalisation (Chapter 5). In addition, this new conceptualisation of LOC is identified within a SME as its motivation and ability to utilise and develop language-related capabilities. This definition of LOC further facilitates its operationalisation and is testable, as recommended by Shenkar et al. (1995). That is, this definition of LOC is an appropriate lens through which to understand and measure language capabilities at a firm level, as it recognises that although linguistic competencies lie inherently within an individual, organisations also play a role in the development and effective utilisation of such individual competences for internationalisation. In this context, the presence of strong LOC might be indicative of how effectively language challenges and diversity in various international markets are managed but also exploited for specific international market strategies.

4.3.4 The capacity and organisation's performance link

The capacity literature in distinct capability strongly correlates with numerous output criteria of interest (Bjorkman et al, 2007; Gupta and Govinddarajan,2000). Previous research has shown that capacity constructs are appropriate for predicting organisational performance such as intra/inter organisational learning (Andersson et al., 2016) strategic international alliance such as IJV and cross border mergers (Chang et al, 2013) knowledge sharing (Anh et al., 2006) and innovation performance (Tsai, 2001). In a similar fashion, a firm's language operating capacity is likely to relate to relevant output, such as the extent to which firms are able to generate, disseminate or respond to relevant information in international markets or networking capability for export performance (export sales, profit and growth) International performance thus, are assessed with help of export performance with regards to export sales, profit and growth, export orientation (Cadogan et al, 1999; Cadogan et al,2009) and organisation networking capability (Luo et al, 2008; Park and Luo, 2001) to determine the ability of language operating capacity to facilitate international performances.

4.3.Scale development and Validation: a two -stage process

4.3.1 Stage 1: Item and scale construction

The primary purpose of the first stage is to provide a conceptual foundation for LO-C construct and arrive at representative measurement item pool that captures the construct interest. (Churchill, 1979; Devellis, 1991; Netemeyer et al.,2003) which is discussed in the above section. We derive initial measurement items from a comprehensive investigation of the capacity literature (Zahra and George, 2002; Camison, 2005; Camison and Forbes, 2010) and research on language skills in an international business context (Piekkari et al, 2015; Barner-Rasmussen and Björkman, 2005; Welch and Welch, 2018,2008; Reiche et al, 2015; Brannen et al, 2014; Barner- Rasmussen et al, 2014). We further conducted semi-structures interviews to obtain views and validation in the SMEs context of what was available within language literature heavily focussed on large multinational corporation and limited research within SMEs (Churchill, 1979; Netemeyer et al., 2003).

4.3.2 Semi-structured interviews

We conducted face-to-face semi-structured interviews with eight decision-makers (CXO level) from SMEs in manufacturing, engineering, services and the food and retail industries. The

interviews utilised an interview guide (Miles and Huberman, 1994) which started with warm greetings and giving brief explanation of the purpose of the research, accompanied by Informed consent, participant brief and general 'ice-breaker' questions followed by participant background details including age, qualification, professional experience, and number of languages spoken. Then we moved to specific questions regarding existing export markets and international experience while prompting the participant to talk through the last export venture decision making process, modes of communication, their perception of role of languages in their exporting activities and what has been done to address language needs if any identified during the process (see Appendix 4). The interviews lasted ranging from 40 minutes to 75 minutes. Of these eight participants, six were male and two female. All were owners or managers of SMEs ranging from seven to 58 employees. Information regarding the eight interviewees is presented in Table 4.1 below.

Table 4-1. Description of Interviewees

Firm	Age	Gender	Designation	Industry Experience (years)	Sector	No of employees
Company S1	58	M	Director	20	International HR	6
Company S2	46	M	Director	20	Engineering	40
Company S3	56	M	Managing director	32	UV lighting	7
Company S4	35	F	Director	17	Private small business	2
Company S5	-	M	CEO	14	Retail	58
Company S6	60	M	CEO	30	Agri-technology	4
Company S7	42	F	Managing Director	15	Food and Beverages	13
Company S8	31	M	Operations Director	14	Engineering	5

We recruited above participants for the interview with the help from British Chamber of Commerce and the university contacts, however, as a prerequisite, all respondents were working within an independent SME (less than 250 employees and not part of multinational corporations) and had some exporting experience in the UK (purposive sampling). Moreover, all interviewees had total work experience of more than ten years and held decision-making positions, including CEO, Managing Director or Sales and Operations Director. Hence, each interviewee was knowledgeable about the research topic (Churchill, 1979) and representative

of the sample of exporters that we target in the survey later (Rosenzweig and Roth, 2007). Table 4.2 below presents illustrative examples of interview extracts.

Table 4-2. Excerpts from interviews

	Extracts from interviews
Linguistic competence	'I believe we have at least five European languages that can be spoken by people in the office or understood at least. That doesn't mean that they are expert in languages … I would probably say if nobody here at language skills, I don't think we would be able to operate. I would probably say that 20–25% of the time we would have language issues.' (S1) '… a major retailer who is Jamaican and I speak Jamaican with him on the phone, we have a rapport, and I think that a lot of companies trying to export or exporting forget that …'(S5) '…conversational fluent in Italian before moving out there…' (S2) '…I found out the value of learning, 'Hello, goodbye, thank you', in any language and when I learned to say, 'Hello, goodbye, thank you', in Danish, different culture, different, totally different, people warmed to me….' (S5)
Cultural knowledge and skills	'… language but personally I try to include cultural as well as language … but the language would help you understand the culture'. (S1) '…picking up the nuances of culture without really understanding language is, is impossible…' (S2) 'culture and languages are deeply embedded in …' (S5) '… language helped you build a ladder to make sense of cultural...' (S7)
Training	'I've learnt the language and I've also chosen to work with Turkey.' (S7) '... experience in Italy in learning how to speak Neapolitan … after six months of accelerated learning…' (S2) '… So I took on an accelerated learning programme in Spanish to then go out and lead the business.' (S2) '… a number of employees we got into language training'. (S2)
Role of technologies like google translate	'… only thing is China, what we use, we chat and that's got a translation thing … it translates what he says and then (it) he'll translate mine, what I say.' (S7)
Willingness to invest (hiring and language service providers)	'… China for two years and I took my own translator with me ...' (S6) '… we would always give preference to hiring somebody, if we have two equally competent candidates and we had one with language skills, it is more likely that we would select a candidate with language skills…' (S1) '… We have used translation companies … to have the operating manuals and instructions in the right language … Well some years ago, we did quite a lot but that when we had this particular ... we had to translate into Russian and French and...' (S3) ' … in China, which is where we went, people would walk around with their interpreter. So an American buyer will be walking … walk around with their interpreter to communicate with the buyers … with the manufacturers …' (S7) '…they couldn't speak English. So I hired a translator for the day and we used the translator.' (S3)
Awareness of challenges	' … when you're trying to convey technical things in English to somebody who doesn't speak fluent English, it's a lot harder … small talk is fine …' (S8) ' … but when it comes to do with the institutions, that's not the clients that we're dealing with there, it's a government body or it's a financial institution or some sort and we have to be aware of the languages ...' (S1) 'But we just make sure that our boxes that we bring along is … has got the languages … that you're targeting … for instance when you're exporting to

	UAE you can't just have Arabic on there because there's a lot of expats … we've got at least five languages on each box …' (S7) ' … we are thinking of adding other languages soon on social media. Like we'll have English and then we may have French and Arabic maybe…' (S7)
Utilisation of language capabilities	'So, for example. France, Germany, Italy or anywhere else in Europe that is the language you are dealing with them in. So, that's where critical language requirement comes in, when we're dealing with the corporates…' (S1) 'You could pick up the phone and try and talk to a tax office in Italy, you wouldn't get very far. You might be lucky and find somebody who speaks English on the telephone but no, without the language skills … we wouldn't be able to deliver the work at all.' (S1) ' … learn and if I didn't speak the Turkish language, I wouldn't have done the business I could have…' (S7) ' … We're just updating the website now and what we're doing is we're having it in Spanish and Mandarin and this will be a flagged Spanish and Mandarin …. it shows we're an international business, it shows we care…' (S5)
Networking capability(relationship)	'… you know, we were just talking. Then I said, you know, I basically said, 'Oh, can I have a cheese and ham toasty', in Portuguese and the guy was like, 'You're speaking Portuguese'. I told him I spent a lot of time in Porto and it, it just became a different conversation, completely different conversation...' (S5) '…if they're speaking from a Turkish language person to another Turkish language person and it's their first language, they will have a different relationship…'(S7) ' … Scandinavians speak good English, better English than we do, they speak the Queen's English almost [laugh], and I learned very quickly that even the ones that speak English, they didn't speak to me, and I found out that Danes, I found out the value of learning, 'Hello, goodbye, thank you', in any language and when I learned to say, 'Hello, goodbye, thank you', in Danish, different culture, different, totally different, people warmed to me….' (S5)

The interviewees talked at length about their perceptions of the role languages play in internationalisation with the help of prompts from the interviewer regarding specific international market or venture and supplemented the insights from prior research. Before the analysis of interviews, the data was transcribed by an independent transcriber and requested to include as much contextual information as possible and to eliminate the researcher's subjectivity. Data was read and re-read to identify and classify the scripts of text within broad categories which were then identified within one of the variables of interest. As seen from the interview extracts in Table 4.2, there is anecdotal evidence for awareness of language challenges and utilisation of language capabilities, linguistic competence, cultural intelligence (individual level drivers) and training as well as readiness to invest in language resources such as hiring a linguistic for their translation needs. The scripts of text were also utilised where appropriate for the item generation of the new construct in collaboration of existing literature. For instance, linguistic competence has one of the items as simple greetings such as hello and thank you (S5) or website translation in LOC (S5). Interestingly,

networking and culture were the two most important aspects within the interviews and is not surprising given the extensive study we find in the extant literature. These have been identified as antecedent and outcome variable for LOC respectively within the conceptual model (Chapter 5).

The limitations of the sample size (n=8) were recognized in that it is too small and may not be representative of the population. However, the focus of this qualitative research was to explore and strengthen the knowledge base of LOC. Therefore, the focus was not generalizability to the population but instead validation to theory (Bryman, 2008).

Explored through extensive literature review and supported by qualitative interviews informed the conceptualisation of the newly developed construct and the hypotheses development (chapter 5) which were tested through a multiple regression analysis in Chapter 8. Furthermore, corroboration of the respondents input with the initial measurement of items from literature review resulted in a pool of 17 item across the two -dimensions. Chan (1998) proposes utilisation of referent shift consensus model when collecting individual responses while formulating the key constructs at a unit level. Because our target construct is at a firm level, we use the firm as referent in formulating the items. Use of 'we', 'our organisation' in our survey design is conceptually appropriate as the aim is to assess the variable of interest at a level (i.e., firm level) for a respondent within the firm.

Finally, before proceeding to item purification and validation stage of scale development, expert judgements for content and face validity were checked by three faculty members at the university, two language experts, and two international trade advisors from British Chamber of commerce. The experts commented on the wording, relevance and appropriateness of each items for alteration, clarification and proof -read before they were included in the final pool of 17 items for the first phase of the study. Below is the table of final pool of 17 items utilised in the survey questionnaire for scale purification & validation using factor analysis after feedback from expert judges (n=3 academicians, n=2 language experts, n=2 International trade advisors) as part of face validity & content validity.

Table 4-3. List of Items with its source & code

Items	Source	Code
In our organisation, we are aware of complexities around languages when conducting international trade and business activities.	Self-developed and adapted from Camison & Fores, 2010; Zahra & George (2002); Schneider et al. (2005); Welch & Welch (2018).	LOC01
In our organisation, we frequently make use of foreign languages for various activities, e.g. communication.	Self- developed (Interview)	LOC02
In our organisation, we have translated our product/service manuals, packaging materials or website into foreign languages for the use of our international customers.	Self -developed (interview)	LOC03
In our organisation, we actively invest in resources with language awareness/capabilities for our international market.	Self-developed and adapted from Camison & Fores, 2010; Zahra & George (2002); Schneider et al. (2005); Welch & Welch (2018).	LOC04
In our organisation, we are aware of language challenges when exporting.	Self-developed and adapted from Camison & Fores, 2010; Zahra & George (2002); Schneider et al. (2005); Welch & Welch (2018).	LOC05
In our organisation, we encourage people to learn and use our international customer's language for simple expressions, such as hello, thank you etc.	Self -developed (interview)	LOC06
In our organisation, we hire people with multi-lingual exposure/experience to focus on exporting/ international trade.	Self-developed and adapted from Camison & Fores, 2010; Zahra & George (2002); Schneider et al. (2005); Welch & Welch (2018).	LOC07
In our organisation, we have deputed, hired an employee with foreign language skills relevant to the customer to promote and manage the international market.	Self -developed (interview)	LOC08
In our organisation, we promote endeavors/attitude towards learning and understanding an international customer's language.	Self-developed and adapted from Camison & Fores, 2010; Zahra & George (2002); Schneider et al. (2005); Welch & Welch (2018).	LOC09
In our organisation, we seek to support/invest in services from experts/translation companies to overcome language barriers.	Self-developed and adapted from Camison & Fores, 2010; Zahra & George (2002); Schneider et al. (2005); Welch & Welch (2018).	LOC10
In our organisation, we are encouraged to share our experiences, whether personal or professional, about exposure to different languages.	Self-developed and adapted from Camison & Fores, 2010; Zahra & George (2002); Schneider et al. (2005); Welch & Welch (2018).	LOC11

In our organisation, we understand the complexities that language differences can create in international markets.	Self-developed and adapted from Camison & Fores, 2010; Zahra & George (2002); Schneider et al. (2005); Welch & Welch (2018).	LOC13
In our organisation, we are open to people with different language capabilities and encourage and utilize their diversity to achieve our organisation objectives in international markets.	Self-developed and adapted from Camison & Fores, 2010; Zahra & George (2002); Schneider et al. (2005); Welch & Welch (2018).	LOC14
In our organisation, we envision hindrance/disruption to our exporting/international trade when we/our representative are not able to manage local language complexities.	Self-developed and adapted from Camison & Fores, 2010; Zahra & George (2002); Schneider et al. (2005); Welch & Welch (2018).	LOC15
In our organisation, we are committed to enriching language competence awareness to facilitate international trade/exporting.	Self-developed and adapted from Camison & Fores, 2010; Zahra & George (2002); Schneider et al. (2005); Welch & Welch (2018).	LOC16
Our organisation publicly recognises those who are knowledgeable and contribute towards language competencies.	Self-developed and adapted from Camison & Fores, 2010; Zahra & George (2002); Schneider et al. (2005); Welch & Welch (2018).	LOC12

4.4 Sample and survey design

A pilot study of 12 respondents who were similar to larger target sample were approached for pretesting of the survey design (Fink, 2003; Willis,2005). Post which, e-survey was administered by uploading on Qualtrics.com and promoted through various channels like Facebook, LinkedIn, ATC in two waves. Churchill, 1979 and DeVellis, 2003 strongly recommend pragmatic approach for data collection (separate datasets) for scale purification and scale validation. Therefore, wave 1 is utilised for scale purification (EFA), while wave 2 data for confirmatory analysis (CFA and nomological validity) is used. Wave 1 web-based survey was opened in December 2019 and closed in March 2020 while wave 2 was completed in November 2019.Total responses collected were 1325 on the day of closure, 68% of responses were less than 50% complete and were unsuitable for inclusion in the analysis. Additionally, after careful investigation of data, seven additional responses had to be deleted for reasons such as non-engagement, and non-responsiveness to the key construct itself, leaving us with total of 417 responses.

Please note, from 417 retained for analysis, missing completely at random (MCAR) test was conducted, less than 2% in all 417 cases and 0.375% of total values were incomplete. We

performed Little's MCAR test where, a $^{x}2$ (Chi-Square - 261.316) was insignificant at p> 0.05 (p=0.240) for df=246, suggesting that data is truly MCAR and hence EM (Expectation-Maximization) imputation method was utilised using SPSS 26. This resulted in 192 completed responses in wave 1 for exploratory factor analysis and 225 in wave2 for confirmatory factor analysis, that is total of 417 responses. Considering our narrowly defined construct, and reasonable no. of items, a sample size b/w 100 to 200 is adequate for item purification and factor analysis (Netemeyer et al., 2003). The respondents were owners, managing directors, CXO's level respondents from SME's ranging in size from less than 10 employees to 250 employees, across different sectors such as manufacturing (28%), information technology (14%), finance (8%), automotive (4%), retail (25%) and other (21%). Also, the sample represents England 58%, London (England) 23%, Scotland 11%, Wales 6% and Northern Ireland 2% to obtain wider participation across UK. This suggests that our sample can be considered representative of the population of UK SME exporters.

4.5 Scale Purification (exploratory factor analysis)

Exploratory factor analysis is a statistical approach to estimate and empirically identify the underlying structure among the variables, that is, it primarily facilitates the process of analysing the interrelationships among variables, making it an interdependence multivariate technique. Principal component analysis – a type of exploratory factor analysis – determines the relationships among the variables and provides empirical estimates of the structure of the variables, enabling summated/composite scales which further facilitate hypothesis testing (explained in Chapter 8). Exploratory factor analysis is very important in two-stage, new scale development processes namely 'Front end' and 'Back end' (see figure 3.1 for details) and is recommended by Rosenzweig and Roth (2007) and Menor and Roth (2007). It is used to analyse the interrelationships among large variables by defining a set of variables that are highly correlated, forming them into groups (factors), while also identifying uncorrelated factors. The conceptual foundation of the underlying relationships among these variables, principal component analysis, can help identify and estimate relationships to form groups of variables (factors) that collectively represent a meaningful composite/summated variable (factors).

In this sense, exploratory factor analysis (or principal component analysis) differs from confirmatory factor analysis in that it allows possible relationships among variables to be estimated and revealed.

LOC has been theorised as a two-dimensional construct: motivation and preparedness, and utilisation, we utilise a scale purification process – exploratory factor analysis – using the first wave (n=192). One of the key purposes of factor analysis is to identify interrelated set of items/variables and it is paramount that the variables are sufficiently correlated to produce representative factors. This was initially analysed using a correlation matrix of all the variables. Churchill (1979) and DeVellis (2003) strongly recommend a pragmatic approach for data collection (separate datasets for, scale purification and scale validation). Therefore, Wave 1 is utilised for scale purification (exploratory factor analysis) while Wave 2 data is used for confirmatory analysis (confirmatory factor analysis and nomological validity). Two statistical techniques are used to measure the overall intercorrelation: the Kaiser-Meyer-Oklin test (KMO) and Bartlett's test of sphericity. Both these techniques are discussed briefly below. Table 4.4 presents the results of KMO and Barlett's test of sphericity using SPSS 26 to assess the suitability of factor analysis for the given dataset (n=192).

Bartlett's test of sphericity: examines the overall significance of all correlations within the correlation matrix**.** That is, it provides a statistical test of whether the correlation matrix has a significant correlation among at least some of its variables/items. Bartlett's test examines (H_1) whether there is significant correlation among the variables, and the Chi-squared test with a *p*-value < 0.01 indicates that the hypothesis has been accepted and there is a significant relationship among the variables.

Kaiser-Meyer-Oklin (KMO): another method to measure the degree of correlation in the data set and the appropriateness for conducting factor analysis is the KMO measure of sampling adequacy, which measures the proportion of variance among variables that may be common. The measure ranges between 0 to 1, where 1 represents that a variable is perfectly predicted by the other variable with no error. A general rule of thumb is, a KMO score above 0.90 is excellent, 0.70 or above is good while score between 0.50 and 0.70 are acceptable and those below 0.50 are unacceptable (Hair et al., 2010; Field, 2009). The table 4.4 below presents KMO measures of sample adequacy along with Barlett's test for LOC.

Table 4-4. KMO and Barlett's Test (n=192)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.951
Bartlett's Test of Sphericity	Approx. Chi-Square	2272.686
	Df	136
	Sig.	0.000

The KMO measure of sample adequacy is above 0.90, which is considered excellent (Field, 2009) and Bartlett's test of sphericity has a *p*-value of < 0.05 which indicates a relationship between items. Therefore, it was appropriate to conduct factor analysis for our purposes.

4.5.1 Determination of the number of factors

Exploratory factor analysis concerns itself with identifying the best linear combination of variables/items such that the total variance explained is maximum for the construct. In this sense, the first extracted factor is the single best summary of the factors; however, every additional factor identified incorporates some additional variance from what remains from the explanation of previous factors (orthogonal rotation). The process continues to extract smaller and smaller proportions of variance until all variance is explained. The key decision for the researcher is how many factors to retain or extract from this process which can explain a substantial portion of the total variance across all items/variables. Consideration of the theoretical foundation, i.e. how many factors there should be conceptually, plays a critical role in such decision-making along with empirical evidence. Multiple criteria are utilised for the number of factors to be extracted: latent root criterion, scree test criterion, parallel analysis and percentage of variance explained. We shall discuss these four in some detail as we utilise them in our analysis.

Latent root criterion, also known as eigenvalue criterion, is utilised to retain factors with eigenvalues/latent root values greater than 1. The rationale for this is that any factor to be retained should account for the variance of at least a single variable/item. In principal component analysis, each variable contributes a value of 1 to the total eigenvalue. Hence, factors with an eigenvalue higher than 1 are retained, while eigenvalues smaller than 1 are disregarded as insignificant. This is most suitable when the number of variables is between 20 and 50, and could lead to more or fewer factors depending on the number of variables/items. Researchers argue that the eigenvalue criterion, although widely reported in

factor analysis, should not be used as a sole criterion for deciding the number of factors (Hair et al., 2010).

Percentage of variance explained aims to achieve a certain amount of total variance explained to ensure practical significance for interpretation. There is no absolute threshold, but social sciences research considers a factor solution that explains 60% (or sometimes less) as satisfactory. Furthermore, it is recommended that communalities i.e. the communality of each variable to the related factor is also considered to identify the number of factors to be extracted (Hair et al., 2010).

As detailed in the above sections, we use the eigenvalue/latent root criterion and principal component analysis to identify the basic structure within the datasets. Tables 4.5 below present eigenvalues/latent root criterion:

Table 4-5. Two factor LOC and Total variance

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
LOCu**	9.400	55.297	55.297	9.400	55.297	55.297
LOCm*	1.313	7.721	63.018	1.313	7.721	63.018

***LOCm= motivation and preparedness. **LOCu = actual utilisation**

The Table 4.5 indicates utilisation dimensions of LOC explains 55.297% of variance with Eigenvalue of 9.4 while motivation and preparedness dimension of LOC explains additional 7.721% of variance. Collectively, the two- factors of LOC explains 63.018% variance in the LOC construct.

Parallel Analysis is a technique that helps researchers in determining the number of factors to retain in Principal Component and Exploratory Factor Analysis using Monte Carlo's simulation (Horn, 1965). This technique involves comparing the observed eigenvalue extracted from PCA with those obtained from uncorrelated variables. Within this technique, factor was considered significant if the associated eigenvalue was bigger than the mean of those obtained from the random uncorrelated data. Below presented is analysis from the Parallel Analysis at 95th percentile using SPSS 26. The associated Eigen value (raw data) higher than the mean of those obtained from random uncorrelated data (percentile) reveals one factor solution while Eigen values identify two factor solution. This clearly poses challenges to identification of the LOC as conceptualised. However, Turner (1998) notes that parallel

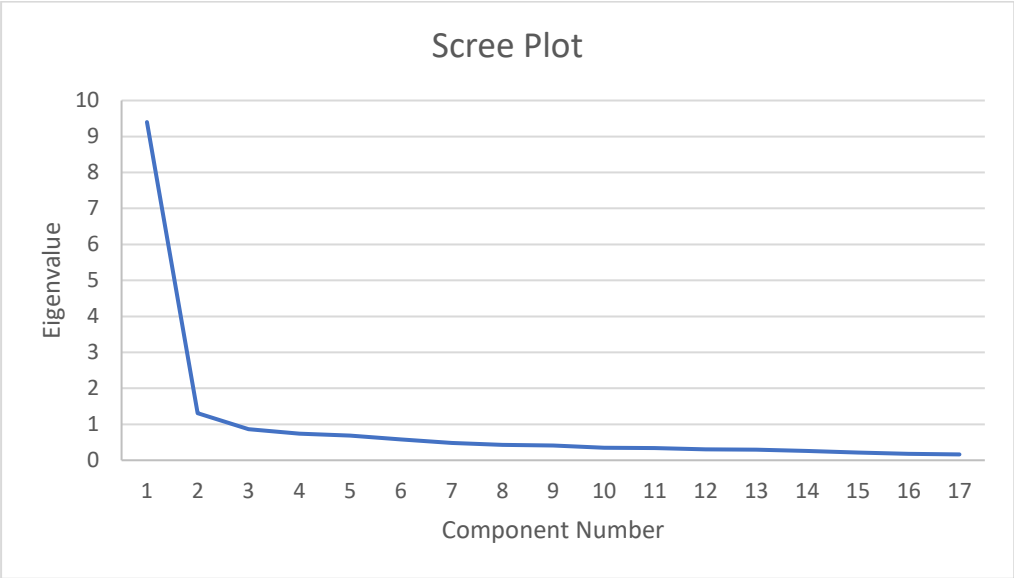
analysis though an important technique to identify number of factors, leads to under identification of factors especially in the cases where the first factor explains the large variance mainly due to interdependent nature of Eigen values. Infact, if we note the variance explained by the first factor is as high as 55.297% (see Table 4.5) which might explain this unexpected result. Moreover, under extraction of dimensions is potentially more serious than over extraction as former can lead to loss of relevant information and substantial distortion in the solution (Ruben-Daniel and Pedro, 2007).

Table 4-6. A Parallel analysis obtained from Monte Calro's method on LOC measure (17 item scale)

Root	Raw Data	Means	Percentile
1.000000	9.400471	1.553416	1.658242
2.000000	1.312637	1.433388	1.511899
3.000000	0.866985	1.342996	1.407387
4.000000	0.737770	1.267919	1.328016

Scree test criterion involves identifying the optimal number of factors that have a substantial amount of common variance; it seeks to extract all the factors that can be extracted from component analysis until the amount of unique variance in the factors starts to dominate the common variance. The scree test involves plotting the eigenvalues with the number of factors in the order of extraction; the shape of the scree plot helps to identify the cut-off point known as the inflection point. The inflection point is a point where the plotted scree curve begins to flatten. All factors above the inflection point are retained while those after the inflection point are disregarded. This is illustrated with an example below from the study. Generally, the scree test results in more factors to be considered for inclusion than the eigenvalue criterion (Hair et al., 2010). The scree plot test presented in Figure 4.1 below is for LOC dimensionality.

Figure 4-1. Scree Plot for LOC



The scree plot figure 4.1 suggest three factor solutions for LOC with graph significantly flattening after the third dimension indicating more common variance than unique variance.

Finally, Hair et al., (2010 p.122) recommends that a subjective judgment should be made by the researcher as to the number of factors to retain in addition to the variance explained by the factor solution. Therefore, after consideration and collaboration for theoretical consideration, eigenvalues criterion and percentage of variance explained, two- factor solution explaining 63.018 % of variance is identified.

4.5.2 Sample ratio relative to construct items

For any quantitative research, the strength and predictive validity of the results are highly sensitive to the sample size. Factor analysis identifies the basic structure of the model and estimates the latent construct. These are utilised at a later stage to calculate summated or factor scores for utilisation in dependence techniques (more in Chapter 8). Sample size consideration is necessary both in absolute terms and in relation to the number of variables in the model. In absolute terms, factor analysis is not appropriate for sample sizes smaller than 100; larger samples are preferable. In addition, an acceptable sample size should have a minimum of five cases/responses per variable i.e. a ratio of 5:1 (Hair et al. 2010)

For our purpose, this study has 56 variables/ items, leading to a minimum requirement of 280 cases. Although the total sample size is 417, for exploratory factor analysis we use the data collected in Wave 1 (n=192), while Wave 2 (n= 225) is used for confirmatory factor

analysis. This poses some challenges to us in terms of the sample size. However, pairing the variables into three main constructs – LOC, its antecedents, and outcomes as three core constructs measurement to be studied– we not only address the sample size issue (LOC has 17 items, five antecedents have 21 items and outcomes has 18 items) but also a recommendation of pairing the constructs into more manageable segments (see chapter 6 & 7) for factor analysis and Chapter 8 for hypothesis testing. Furthermore, the sample of 192 (wave 1) & 225 (wave2) is considered adequate for exploratory factor analysis and confirmatory factor analysis respectively for the LOC measure (17 items) considered in this chapter.

4.5.3 Factor rotation method

The factor rotation method uses a combination of orthogonal and oblique rotations available to simplify the factor loadings and the structure of the relationship between variables and factors. Orthogonal rotation assumes the factors are not correlated, i.e. correlation among factors is zero, while oblique rotation allows for correlation among factors. Factor rotation also facilitates for better interpretation of factors by redistributing the variance from unrotated factors to achieve simpler and theoretically more meaningful factor pattern. (Hair et al., 2010).

Orthogonal factor rotation is a method where the axes among the factors are maintained at 90 degrees, thus fulfilling the assumption of zero correlation among factors. However, when the theoretical and initial screening of data indicates correlation among the factors, it is advisable to use an oblique factor rotation which allows for correlation among factors). Three major orthogonal rotation methods widely available in statistical software packages are Quartimax, Varimax and Equimax, while the two most common oblique techniques are the Direct Oblimin and Promax rotation techniques.

Oblique techniques are best suited for social science researchers as, in real-world scenarios, very few constructs are completely unrelated. The oblique Promax technique is used in this study to derive theoretically meaningful constructs, as underlying factors can rarely be assumed to be unrelated (Hair et al., 2010). Since we use oblique rotation, we shall discuss briefly the two most common oblique techniques available: direct oblimin and Promax.

In direct oblimin rotation, since the factor axes indicate correlation among factors, they can take any position. Delta controls the degree of correlation among the rotated factors. Delta values can range from -0.8 to +0.8 depending the data. However, a delta value of zero, which is the default in SPSS, results in highly correlated factors. The issue of the delta value of zero sometimes leads to large negative values where the factors are more unrelated than related. More importantly, with direct oblimin deriving highly correlated factors, additional care needs to be taken to validate the oblique rotated factors (as discussed in Chapter 6).

Promax oblique rotation uses kappa values, and the optimum kappa value is that which gives the simplest structure with the lowest correlation among factors. The default kappa value of 4 is recommended by its developers as providing the optimum solution with the least correlation among factors (Hendrickson and White, 1964). We employ, as mentioned, factor matrix (Promax oblique rotation) with principal component analysis in SPSS 26 to identify correlations between variables and factors that also incorporate the unique variance and the correlation of factors for our exploratory analysis in this chapter.

4.5.4 Factor loadings

Factor loading concerns with the correlation between individual items/variables and related latent factors and is important to understand the nature of the particular factor. Loadings indicate the degree of correspondence between the variable and the factor: higher the loading, the better the representation of the factor by the item/variable. When assessing significant factor loadings, any factor loadings above 0.40 without cross-loading on other factors are significant and should be retained. Cross-loadings are moderate factor loadings that load significantly on more than one construct. It is recommended that any factor loading less than 0.4 can be regarded as insignificant as it does not provide a sufficient explanation of the factor (Field, 2009). However, research also indicates that significant loading threshold could be different for different sample sizes (that is 0.30 for 350, 0.40 for 200, 0.45 for 150 and 0.55 for 100 and so forth) (Hair et al., 2010).

We used exploratory factor analysis with principal component analysis and Promax (oblique) rotation on the 17 LOC items. The Promax technique is used in this study to derive theoretically meaningful constructs. Although underlying factors can rarely be assumed to be unrelated, the Promax technique facilitates an optimal solution with the least correlation

among factors (Hair et al., 2010; Hendrickson and White, 1964). Factor loadings for the exploratory factor analysis are reported in Table 4.7 below:

Table 4-7. Factor Loading

Exploratory factor analysis Summary Language operating climate (n=192)		Coefficients		
		LOCm	LOCu	Communalities
Utilisation of language resources (LOCu)				
LOC02	In our organisation, we frequently make use of foreign languages for various activities, e.g. communication.		0.726	0.679
LOC03	In our organisation, we have translated our product/service manuals, packaging materials or website into foreign languages for the use of our international customers.		0.699	0.542
LOC04	In our organisation, we actively invest in resources with language awareness/capabilities for our international market.		0.876	0.786
LOC07	In our organisation, we hire people with multi-lingual exposure/experience to focus on exporting/ international trade.		0.807	0.732
LOC08	In our organisation, we have deputed, hired an employee with foreign language skills relevant to the customer to promote and manage the international market.		0.846	0.729
LOC10	In our organisation, we seek to support/invest in services from experts/translation companies to overcome language barriers.		0.86	0.511
LOC15	In our organisation, we envision hindrance/disruption to our exporting/international trade when we/our representative are not able to manage local language complexities.		0.719	0.484
LOC16	In our organisation, we are committed to enriching language competence awareness to facilitate international trade/exporting.		0.548	0.762
LOC12	Our organisation publicly recognises those who are knowledgeable and contribute towards language competencies.	0.433	0.407	0.605
Motivation and Preparedness (LOCm)				
LOC01	In our organisation, we are aware of complexities around languages when conducting international trade and business activities.	0.908		0.649
LOC05	In our organisation, we are aware of language challenges when exporting.	0.618		0.456
LOC06	In our organisation, we encourage people to learn and use our international customer's language for simple expressions, such as hello, thank you etc.	0.83		0.698
LOC09	In our organisation, we promote endeavors/attitude towards learning and understanding an international customer's language.	0.58		0.647
LOC11	In our organisation, we are encouraged to share our experiences, whether personal or professional, about exposure to different languages.	0.715		0.57
LOC13	In our organisation, we understand the complexities that language differences can create in international markets.	0.849		0.598
LOC14	In our organisation, we are open to people with different language capabilities and encourage and utilize their diversity to achieve our organisation objectives in international markets.	0.731		0.594
LOC17	In our organisation, we openly share our thoughts/help each other with language/linguistic challenges.	0.841		0.672

All item loadings were higher than 0.30 and loaded exclusively on one factor, except items LOC12 and LOC16. However, to create a strong scale, we dropped any loadings and cross-loadings lower than 0.40 (Anderson & Gerbing, 1988) leading to LOC16 loading exclusively to a factor unexpectedly however LOC12, loaded on both factors (greater than 0.4) highlighted in Table 4.7 above, was retained at this point to be assessed in confirmatory factor analysis. As recommended by Hair et al., (2010), communalities for all items exceeded the acceptable threshold of 0.4.

Since exploratory factor analysis is an initial development process, we retain cross-loadings of LOC12, however, closer inspection of the item in question leads to suggestion to be included in factor one and this was further examined in confirmatory factor analysis. The total variance explained is 63.018%, providing strong evidence for internally consistent scale. Further, the scale demonstrates robust internal consistency with Cronbach's alpha (0.948) that exceeded the recommended threshold of 0.70 (Robinson et al., 1991). The first stage results, based on literature review, expert judges – scholars in university(n=3) language experts (n=2) and international trade advisors (n=2) and face to interview with SME's decision makers (n=8) and exploratory factor analysis (n=192), thus provide a tentatively reliable and valid scale as a basis for the second stage analysis- CFA

4.6 Scale Validation (examination of the Psychometric Properties of LOC factors)

The two- stage scale development process consisting of 'Front End' and 'Back End' (see Figure 3.1 for details) (Rosenzweig & Roth, 2007; Walsh & Beatty, 2007) requires validation of the scales to be used before the nomological validity of the theoretical constructs is tested. In this chapter, we present the factor loadings using confirmatory factor analysis (maximum likelihood) and correlational analysis to assess the validity – content validity, convergent validity, discriminant validity and reliability of all three main categories of the model: the newly developed construct of LOC in this chapter, its antecedent constructs (key drivers), and outcome variables in the Chapter 7. These validity tests enable the researcher to measure the extent to which the scale measures what it aims to measure. Furthermore, we shall report

model fit, modification indices and estimates such as chi-squared to assess the psychometric properties of the these measurement constructs.

Construct validity is essential for structural validity of the construct. It refers to the 'degree to which a set of measured variables actually represent the theoretical latent construct' in the study. Multiple components of construct validity include content validity, convergent validity, discriminant validity and nomological validity (Hair et al., 2010).

Content validity, or face validity, is the extent to which the contents of the item are consistent with and contribute towards the theoretically constructed latent construct (Hair et al., 2010). Pre-testing and expert judges are used to assess where and whether the items collectively represent the construct theoretically and practically.

Convergent validity aims to measure correlation among the items within the construct i.e, whether the items within the construct correlate with one another to form a single latent construct (Campbell & Fiske, 1959). The size of factor loadings is important for convergent validity, as higher factor loadings indicate that the items converge better on a common point, that is, the latent construct. Convergent validity is further concerned with how well, statistically, they share the variance, i.e. how well the items collectively explain the variance for the latent construct. The average variance explained (AVE) is used to evaluate the common variance among the items (Hair et al., 2010). AVE is calculated as the mean variance extracted for the items in the construct and is a summary of convergence (Fornell, 1981).

Discriminant validity, in contrast, refers to the extent to which the latent constructs are unique and not similar to one another. This generally means the items within the construct correlate highly with one another but low with the items of another construct. Many measures have been recommended to test discriminant validity, including heterotrait-heteromethod and monotrait-heteromethod loadings and heterotrait-monotrait (HTMT) methods which are discussed in detail later sections in this chapter.

Reliability is a degree of consistency between multiple items of a single variable and is often called a measure of internal consistency where items within a single variable are highly correlated. It is a measure of within-scale consistency and applicable to multiple items measurement constructs only. Cronbach's alpha and composite reliability are two important statistical tools to measure internal consistency. Cronbach is popularly utilised in the

exploratory stage and has been reported and discussed in the previous chapter; however, the key issue with Cronbach being that is its positive relationship with a number of items in the scale and assumption of same factor loading on all items within the factor (Cortina, 1993). Hence, it is advisable to also utilise other tools, such as composite reliability, to measure the internal consistency (Fornell & Larcker, 1981).

Composite reliability concerns with the internal consistency of a measure i.e. how well theoretical latent construct correlates with the measured items of the same construct. It is measured using standardised squared multiple correlation and ranges between 0 and 1. Composite reliability greater than 0.7 is considered robust (Hair et al., 2010). Cronbach's alpha, however, is a measure of reliability concerned with the consistency of the scale and indicates a correlation between individual items or indicators of a scale. A high Cronbach's alpha score suggests higher internal consistency; as a general rule, an acceptable Cronbach's alpha is 0.70 or above (Robinson et al., 1991).

Having conducted the preliminary technique exploratory factor analysis (n=192) to estimate the structure of the variable studied, using principal component analysis, we move now to assess the goodness of fit of theoretically and empirically derived scales. To confirm our initial assessment of scale and test the psychometric properties of LOC and its two dimensions, we conducted confirmatory factor analysis on data obtained in the second wave (n=225).

4.6.1 Reliability Measure - Cronbach's alpha

Cronbach's alpha concerns with the internal consistency of the constructs and is calculated through the mean of correlations among pairs of items and the number of items in the scale. It is estimated for LOC using SPSS26 and is recommended as an initial measure for reliability and scale development (Churchill, 1979). The Cronbach's alpha of LOC is 0.943, which is above the acceptable threshold of 0.7 (Nunnally, 1978). The high alpha score indicates a strong internal consistency. Table 4.8 below shows an item analysis of each item of the newly developed scale.

Table 4-8. Details of Item analysis: corrected item total correlation for LOC

Item-Total Statistics						
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted	Type
LOC01	58.00	161.013	0.623	0.534	0.940	High Reliability
LOC02	58.62	151.960	0.725	0.601	0.938	High Reliability
LOC03	58.41	153.378	0.663	0.490	0.939	High Reliability
LOC04	58.69	153.526	0.739	0.600	0.938	High Reliability
LOC05	57.95	161.663	0.573	0.498	0.941	High Reliability
LOC06	58.16	155.629	0.688	0.519	0.939	High Reliability
LOC07	58.61	151.265	0.711	0.656	0.938	High Reliability
LOC08	58.63	151.137	0.710	0.685	0.938	High Reliability
LOC09	58.38	155.219	0.735	0.580	0.938	High Reliability
LOC10	58.56	152.854	0.748	0.620	0.937	High Reliability
LOC11	58.34	156.823	0.640	0.484	0.940	High Reliability
LOC12	58.42	154.128	0.750	0.599	0.937	High Reliability
LOC13	57.98	160.669	0.621	0.573	0.940	High Reliability
LOC14	58.06	159.630	0.614	0.454	0.940	High Reliability
LOC15	58.58	157.539	0.595	0.413	0.941	High Reliability
LOC16	58.35	152.549	0.802	0.677	0.936	High Reliability
LOC17	58.11	159.185	0.633	0.514	0.940	High Reliability

Above Table 4.8 presents acceptable (more than 0.50) corrected item-total correlation indicating high internal consistency. Cronbach's alpha for two factors of LOC was also calculated using SPSS26 and was above the acceptable threshold of 0.70 (Nunnally, 1978). It is important to note that the sum for both factors was calculated before computing the reliability measure in SPSS.

Details of factor analysis: corrected factor total correlation for LOC (Motivation and Preparedness – LOCm, and Utilisation – LOCu)

To supplement our initial assessment of the scale reliability of our two-dimensional LOC, we derive a composite reliability (CR) coefficient (Fornell & Larcker, 1981) from confirmatory factor analysis in AMOS 25. As presented in Tables 4.9 and 4.10 below, CR for both dimensions exceed the common threshold of 0.70 (DeVellis, 1991) indicating good construct reliability for the LOC two-dimensional construct.

Table 4-9. Factor Loading based on the Confirmatory Factor Analysis

Language operating capacity (n=225)	Standard loading	Critical ratio	R^2	Mean	SD
Items					
Utilisation of language resources- LOCu					
LOC02	0.774	-	0.600	3.373	1.219
LOC03	0.707	11.132**	0.499	3.578	1.237
LOC04	0.771	12.359**	0.594	3.298	1.116
LOC07	0.757	12.089**	0.573	3.378	1.276
LOC08	0.776	12.464**	0.602	3.364	1.285
LOC10	0.799	12.918**	0.638	3.427	1.140
LOC15	0.620	9.567**	0.384	3.409	1.103
LOC16	0.816	13.267**	0.666	3.644	1.085
LOC12	0.761	12.178**	0.580	3.573	1.071
Motivation and Preparedness- LOCm					
LOC01	0.715	-	0.511	4.00	0.853
LOC05	0.659	9.417**	0.435	4.04	0.878
LOC06	0.720	10.277**	0.518	3.827	1.074
LOC09	0.748	10.668**	0.559	3.609	1.034
LOC11	0.672	9.599**	0.452	3.653	1.075
LOC13	0.705	10.064**	0.497	4.009	0.876
LOC14	0.658	9.392**	0.432	3.929	0.947
LOC17	0.712	10.161**	0.507	3.884	0.947

****p<0.001**

4.6.2 Convergent and discriminant validity

The use of an independent research sample in each stage of the scale development process restricts common method biases (Rosenzweig & Roth, 2007). For convergent validity, we examine the sign and magnitude of each item loading as we consider each item as a separate approach to measure the dimensions. Each individual item loading is more than 0.50 and statistically significant at $p < 0.05$. Furthermore, the R^2 value for all items is more than 0.35 (Iacobucci & Churchill, 2010; Rosenzweig & Roth 2007) (see Table 4.9 above). The AVE for LOCm (motivation and preparedness) is 0.489, and the AVE for LOCu (actual utilisation) is 0.571 as seen in Table 4.10 below. These results mean the LOCm dimensions just meet the cut-off value of 0.5 (Fornell & Larcker, 1981), while the LOCu exceeds it.

Table 4-10. Convergent and discriminant Validity

	Composite reliability	Average Variance Explained	1	2
1.Utilisation of language resources- LO-Cu	0.923	0.571	0.756	
2.Motivation and Preparedness- LO-Cm	0.884	0.489	0.872	0.699
HTMT Ratio (Discriminant Validity)				
	1		2	
1.Utilisation of language resources- LO-Cu	-			
2.Motivation and Preparedness- LO-Cm	0.867		-	

Note: The square root of the average variance extracted is on the diagonal and in bold

For discriminant validity, Fornell and Larcker (1981) criterion indicates concerns for discriminant validity as Table 4.10 above illustrates the square root of AVE for both dimensions (LOCu=0.756 and LOCm=.0699) is less than the correlation between the dimensions (CorrLOCu xLOCm= 0.872). However, Hensler et al., 2015 identified that the above method to assess discriminant validity may not be accurate and recommended the HTMT ratio approach. The acceptable statistical threshold for the HTMT ratio of the correlation varies, with a conservative HTMT threshold at 0.85 (Kline, 2011) and a liberal threshold at 0.90 (Gold et al., 2001; Teo et al., 2008). Since the threshold is upheld, the two factors are statistically different from one another. However, it is acknowledged that they are highly correlated, as expected for two dimensions of a second-order construct. Furthermore, Tucker Lewis Index (TLI)/NNFI=0.912> 0.9, further indicates strong convergent validity.

4.6.3 Model fit Indices

To provide support for the conceptualisation of the LOC – a two-factor solution for LOC, we assess its model fit and its two dimensions with several model fit indices and statistical measures. We conducted confirmatory factor analysis on a two-factor solution with all 17 items and 15 items (LOC12 was dropped due to cross-loadings and LOC16 loaded unexpectedly on LOCu in the exploratory factor analysis). Given that in confirmatory factor analysis multiple models are plausible for the same dataset, two model fits were presented (see Table 4.11), tested and model invariance compared to accept or reject a particular model.

Table 4-11. Model fit indices and chi-squared difference of measurement equivalence

Model	Chi-square (df)	Diff in chi square (df)	NNFI	CFI	RMR	RMSEA
First-order model (Base Model with all 17 items)	288.56 (118)	-	0.912	0.960	0.044	0.059
First order model (without LOC16 and LOC12)	215.384 (89)	73.176 (29)	0.918	0.931	0.062	0.080

As seen in the Table 4.11 above, Chi Square assess overall fit-with large significant chi -square (df) = 288.56 (118); p< 0.001 indicates poor fit for the first-order base model (all 17 items). However, sensitive to sample size the Chi-squared test of model fit may erroneously reject a valid model (Gatignon, 2010) especially for larger sample sizes, while smaller sample sizes may lack statistical power (Byrne, 2001). Hence, it is recommended to consult other measures of model fit, that is, relative fit indices (Hair et al., 2010; MacCallum, 1990) for more robust evaluation of the model fit. Similarly, Kline (2005) recommends the use of multiple measures of model fit in tandem before rejecting or accepting them, such as the Comparative Fit index (CFI) (Bentler, 1990), and the Normed Normal Fit Indices (NNFI) /Tucker Lewis Index (TLI) for these indices; closer coefficients to unity indicate good fit, with acceptable levels of fit being above 0.9 (Marsh, Bella & McDoanld, 1988). Further, Diamantopoulos and Siguaw's (2000) RMSEA (root mean square error of approximation) based on non-central chi-squared distribution is considered as the most informative fit indices as it is based on number of estimated parameters. A smaller RMSEA is preferred, with an acceptable threshold of less than 0.08 (MacCallum et al., 1996). A small RMS (root mean residuals value less than 0.05) represents a moderate fit (Hu & Bentler, 1999).

Relative fit indices for two-factor LOC with all 17 items (base model) represent the goodness-of-fit index (GFI=0.922 <0.95), comparative fit index (CFI=0.960 >.9) and adjusted goodness-of-fit index (AGFI=0.896 >0.8); all are well above their respective threshold values (Hair et al., 2010) except the value of GFI, which is slightly below the recommended threshold value. Further, good fitting models have small root -mean square error of approximation (RMSEA) is 0.059 >0.01 for the base model but below the <0.08 (MacCallum et al., 1996). However, the alternative first-order model (without LOC16 and LOC12) has RMSEA of 0.08. Likewise, the root mean square residual (RMR) of the base model yields an acceptable result 0.044 <0.05, indicating an acceptable model fit (Hu & Bentler, 1999) while RMR is 0.062 for alternative

first-order model indicating very strong support for the base model with all 17 items and its two factors and is accepted. Further, we utilise the change in CFI instead of Chi-square (df) test as it erroneously rejects the large sample size models (Byrne, 2001). It is suggested that if the change in CFI is smaller or equal to 0.01, then the change in model does not deteriorate from the original (base) model (Cheung & Rensvold, 2002). Since the change in CFI is much more than the recommended 0.01 for alternative first-order model, we do not accept the alternative model (with 15 items). Nevertheless, there is strong support for first order, two-factor solution (base model) and is accepted.

In addition, we also assessed model fit indices for second order LOC construct (indirect reflective factor structure) as reported in Table 4.12 below.

Table 4-12. Model fit indices for second order LOC construct

Model	Chi-square (df)	GFI	NNFI	CFI	RMR	RMSEA
Second order model	359.751 (119)	0.818	0.877	0.893	0.064	0.095

As seen in Table 4.12 above, Chi Square assess overall fit-with large significant chi -square (df) = 359.751 (119); p< 0.001 indicates poor fit for the second order LOC construct. Nonetheless, relative fit indices were also computed for second order model (higher order indirect reflective LOC construct) and indicates goodness-of-fit index (GFI)=0.818, comparative fit index (CFI=0.893), adjusted goodness-of-fit index (AGFI)=0.766 and Normed Normal Fit Indices (NNFI= 0.877); which are slightly below the acceptable limit of 0.90(Marsh, Bellaand &McDoanld, 1988). Further RMSEA = 0.095 is slightly above the acceptable limits and RMR= 0.062 is within the acceptable limit of 0.80 (Hair et al, 2010) for a strong model fit. Nevertheless, it is an acceptable model fit (McCallum et al., 1996).

Having established a two-factor structure for the LOC construct (as indicated in the base model in Table 4.11 above) and second order LOC construct (see Table 4.12), we move to check for nomological validity for the construct in the next section.

4.6.4 Nomological Validity

With regard to testing nomological validity, we assessed whether the second-order LOC construct was positively associated with conceptually related yet different constructs; that is, we determined whether the LOC construct (summated scale) as a measure for language capacity is empirically related to theoretically related constructs such as linguistic

competence and cultural intelligence. Table 4.13 illustrates, the correlation between these conceptually related yet distinct construct is corrLOC xLC =0.643 and corrLOC xCI =0.665 demonstrating strong nomological validity.

Table 4-13. Construct intercorrelations (nomological validity)

Construct	Mean	S.D	1	2	3
1. Language operating capacity (second-order construct)	3.647	0.779	0.794		
2. Linguistic competence	3.649	1.085	0.643	0.748	
3. Cultural intelligence	4.007	0.583	0.665	0.583	0.617

Note: The square root of the average variance extracted is on the diagonal

4.6.5 Predictive validity

Finally, to test predictive ability, we assessed whether LO-C construct was positively associated with relevant outcome variables. Consistent with view that firms' distinct ability to develop and utilise capabilities is linked to performance (Slater, et al, 2006; Andersson et al., 2016), we expect that better the level of LO-C within a firm corresponds with better international performance outcomes. We, therefore, ask 225 respondents also about their perception of their organisation export performance (export sales, growth and profit) and networking capability on multi- item Likert scales (1= strongly disagree to 5= strongly disagree). The Pearson's correlation indicated that LO-C related positively with both export performance (r=0.475, p< 0.001) and networking capability (r= 0.363, p<0.001). That is, LO-C performs well within the nomological network and constitutes a reliable, valid scale for predicting international performance within SMEs.

Table 4-13: Construct intercorrelations (predictive validity)

Construct	**Mean**	**S.D**	**1**	**2**	**3**
1. Language operating capacity (second order construct)	3.6465	0.779	**0.794**		
2. Networking capability	3.7704	0.889	0.636	**0.655**	
3. Export Performance	3.27	0.7728	0.475	0.351	**0.755**

Note: The square root of the average variance extracted is on the diagonal

4.7 Conclusion

The central objective of this chapter was to establish the groundwork for the research, that is, to conceptually develop and empirically assess LOC, how it is developed within the firm and its role on international performance. Using a systematic scale development process (Churchill, 1979 & DeVellis, 2003), we conceptually develop a two- dimensional measurement scale for language capabilities within an SME called LOC and establish not only structural validity of the scale with the LOC scale with the help of exploratory factor analysis and confirmatory factor analysis. The study also validates nomological network of the proposed concept with related constructs such as linguistic (language skills) and culture intelligence but also confirms the ability to predict the international performance within SMEs. We shall utilise this 17 item LOC measurement scale for hypothesis testing (Chapter 8) but first, we move to the discussion for hypothesis and model development in the next chapter.

Chapter 5- Hypothesis and Model Development

5.1 Introduction

The previous chapter presented the development of LOC measurement scale which is a key construct in this thesis. The purpose of this chapter is to bring together the discussion from the theoretical framework (Chapter 2) to create conceptual model that guides this research. Hence, the chapter builds on the existing capability literature, through which language research can be advanced by bringing in theoretical arguments that support the antecedents and outcome variables explored in this study. As a result, a set of hypotheses is presented to inform the understanding of the relationship between the key drivers (antecedents) and outcome variables.

5.2 Hypothesis Development

Drawing on the existing research, this section further develops the concept of LOC through developing the drivers important for it within a firm. These are categorised as antecedent constructs, thus addressing the second research aim. Following this, the third research aim is addressed: to establish the outcome variables of LOC.

5.2.1 Antecedents (drivers) of LOC

A firm's LOC refers not only to motivation and preparedness to acquire language related skills but also to its ability to exploit for international business performance. We argue that the ability to assimilate, develop and utilise LOC in an efficient, timely manner is largely a function of its antecedents (Zahra & George, 2002), Indeed, van den Bosch et al., (2003) recommend considering two clusters of antecedents: prior related knowledge and skills (individual drivers), and contextual mechanisms such as team/firm/organisation-level drivers. Hence, we discuss both clusters in the context of the new construct of LOC.

Building on the existing literature on the antecedents of capability literature; through a review of the language literature in international business and marketing, we identify the key drivers of language capacity within a firm as linguistic competence, cultural intelligence, willingness to invest, in training and technological awareness. Further, we identify LOC as a process and the idea is implicit in the notion that the ability to develop and utilise LOC within an

organisation is controllable and we identify it with process theory. The theory addresses 'how and why things' emerge and develop (Langley et al., 2013, p.1) and focusses on the activities underlying change within the organisation. This aligns with the theoretical underpinning by Welch & Welch (2018) in their seminal work of initial development of the said construct. We develop LOC's antecedents from the perspective that it has both individual (human) and contextual (organisational) antecedents that assist not only its development but also its utilisation. Later in this section, we discuss the factors that influence LOC at the organisational level, that is, how LOC differs from its antecedents. First, however, we discuss the individual drivers (micro- mechanisms).

5.2.2 Individual drivers

Despite a focus on organisational level mechanisms (Cohen & Levinthal, 1990), researchers are increasingly aware of the importance of micro-foundations and the need to build individual-level foundations for a firm-level phenomenon such as organisational capability. Abell (2008) argues that it is important to explain and build individual-level drivers in order to explain macro-level constructs such as capabilities. Indeed, for capabilities to be meaningful, it is important to define the micro-level, or individual-level, mechanisms through which they exert their influence on performance (Lane et al., 2006; Lewin et al., 2011, Minbaeva et al., 2013; Adedapo Oluwaseyi et al., 2017).

At the elemental level, some form of linguistic competence or cultural intelligence (individual antecedents) is required to recognise the areas where improvement is needed in international communication. Thus, prior linguistic competence and/or cultural intelligence confers the ability to recognise and understand the importance of new opportunities and challenges in the international market and utilise these to develop LOC.

i) **Linguistic competence** refers to a (foreign) language skill for the purposes of effective communication within an international context (Hurmerinta et al., 2015). We identify various definitions and approaches to linguistic competence (see Chapter 2) and adopt that used by the Common European Framework for References for Languages (CEFR) for different levels of language competence as it can be adapted and applied for all languages (CEFR, n.d.). In this study, linguistic competency is not about complete proficiency in another language but sufficient competence to allow effective communication when working in an international

business context (Piekkari et al., 2013; Clarke, 2000). In other words, we employ a narrow interpretation of language proficiency and disregard other levels of linguistic competence such as higher levels of reading and writing. It is argued that understanding, speaking and communicating are the most important for language capability at a firm level (Hurmerinta et al., 2015).

The first antecedent in our model is, thus, linguistic competence. Individual (foreign) linguistic competencies comes either implicitly from personal predisposition or from the professional exposure or a committed effort to learn the specific language. This makes the individual aware of the complexities arising from language challenges in the international market. Individuals with linguistic competence can act as 'language nodes' (Feely & Harzing, 2008) and 'boundary-spanners' by using their linguistic competence for exchanging, linking and facilitating communication when needed (Bordia & Bordia, 2015). This knowledge and awareness of the challenges that language poses in an international context directly affect the firm's motivation to develop and utilisation of language capabilities. Hence, the following is hypothesised:

H1: Linguistic competence is positively related to LOC

ii) **Cultural Intelligence** refers to 'a person's capability for successful adaptation to new cultural settings, that is, for unfamiliar settings attributable to cultural context' (Earley & Ang 2003, p.9). Similar to linguistic competence, cultural intelligence is an individual-level construct and enables individuals with cognitive and behavioural abilities to understand the actions and behaviour of others even where their personal experiences are different. Thus, cultural intelligence enables individuals to work efficiently with those from different cultures (Ott & Michailova, 2018) and enhances the ability to use language capabilities effectively and efficiently in business and socio-cultural contexts. We use the construct developed by Thomas et al., (2015) of the cultural dimension SFCQ (short-form measure of cultural intelligence) which has three components: cultural knowledge, cross-cultural skills and cultural metacognition. Cultural knowledge refers to the understanding of cultural differences around the world. Cross-cultural skills are the ability to adapt behaviour to suit international customers, while metacognition implies an awareness of the impact that culture has on individual behaviour. We use SFCQ as it is parsimonious and links culture to action. Indeed,

we believe that any study on language capability is incomplete without cultural context and that linguistic competence is less effective without cultural awareness; thus, studies on language in international business invariably include culture even if only implicitly; for instance, Hurmerinta et al., (2015) use contextual knowledge to represent culture and Welch & Welch (2018) utilise language in context.

Cultural intelligence reduces complexity by better understanding different forms or ways of conducting business within an international context. Further, individuals with cultural intelligence can utilise their cultural metacognition in contexts where they do not have specific knowledge of the culture to understand this complexity (Barner-Rasmussen et al., 2014). Cultural intelligence directly affects the ability to develop LOC in the firm as it facilitates the firm's awareness of the role of languages in an international context (van den Bosch et al., 1999; Voldebra et al., 2010). In addition, cultural intelligence as a composite (cross-cultural knowledge, skill and metacognition) individual-level construct enables better utilisation of languages in an international context by adapting communication in the context of cultural differences in the international market and, thus, facilitating the utilisation of language capabilities within the firm for international performance. Hence, the following is hypothesised:

H2: Cultural intelligence is positively related to LOC.

5.2.3 Contextual/organisational drivers

Previous research states that organisational mechanisms influence organisational capabilities and capacity in specific ways (Eisenhardt & Martin, 2000; Henderson & Cockburn, 1994) and strongly recommends exploring the organisational drivers that affect different dimensions of the capacity construct (Jansen et al., 2005), such as the new LOC construct in this study. Further, it is argued that the key characteristic that makes organisational capabilities unique from its resources is its organisational embeddedness (Amit & Schoemaker, 1993; Srivastava et al., 2001). Indeed, Welch & Welch (2018) strongly argue that it is not sufficient to have individual resources such as linguistic competence or skills; the organisation must play a critical role in their development and utilisation. We identified three key organisational factors – the willingness to invest, training, and technological awareness and we aim to study

their effect on LOC, that is on motivation and preparedness and utilisation of LOC within a firm. Research suggests that the development of organisational capabilities requires costly investment and systematic and purposeful learning (Winter 2003, Zollo & Winter, 2002). Thus, we identify willingness to invest and training as two organisational drivers of LOC. However, it is also argued that 'whether these capabilities are developed or not depends on cost and benefits of investment relative to ad hoc problem solving' (Winter 2003, p.991). Hence, technological awareness of linguistic services acts as an important firm-level driver for LOC. Firms may randomly or regularly utilise these technological services, which are often instantly available and free of charge when faced with language challenges in international context. Hence, we argue that linguistic competence and cultural intelligence are necessary but not sufficient conditions for developing and utilising language capacity; organisational or contextual factors (Lane et al., 2006; van den Bosch et al., 1999; Volberda et al., 2010) such as willingness to invest, training and technological awareness play a crucial role in the development of firm's language capacity for international performance (Welch & Welch, 2018). We discuss each of these contextual drivers below.

iii) **Willingness to invest** refers to a readiness to invest in language services either through the translation of relevant documents, for example, operation manuals, website translation or packaging, or hiring an individual with the necessary linguistic competence. Willingness to invest in linguistic competence is essential for LOC, i.e. motivation and preparedness and l utilisation of language capability within the organisation. Acquiring a linguistically competent resource may bring additional cost or, when there is an urgent/immediate need for a conversation in the home language of the parties involved in exports, such as customers, government agencies or local competitors – may require firms to be willing to use translation services through translation companies at a cost. For instance, empirical research demonstrates that language-sensitive recruiting facilitates the ability/capability for knowledge and information transfer (Peltokorpi, 2017; Peltokorpi & Vaara, 2014; Welch & Welch, 2018). Further, in line with the RBV literature, the development of language capabilities requires investment (Cohen & Levinthal, 1990; Cohen & Henderson, 2017; Grant, 1996b; Jansen et al., 2005). Hence, we argue that willingness to invest in linguistic competence will directly impact the ability to develop LOC. Furthermore, the willingness to invest in such competence necessarily indicates the perceived financial relevance of language

in activities in the international market, leading to the utilisation of LOC within a firm. Hence, the following is hypothesised:

H3: Willingness to invest is positively related to LOC.

iv) **Training** for existing or new resources in linguistic competence refers to a systematic approach to learning and development to improve individual, team and organisational effectiveness (Goldstein & Ford, 2002). Training for linguistic competence refers in this study to the encouragement, support and facilitation of staff development through systematic language-training courses, online or otherwise, aimed specifically at international business development and performance. Researchers argue that training employees with the required skills and competences enable the development of organisational capabilities (Cohen & Levinthal, 1990; Jansen et al., 2005). Indeed, Alvarrez and Lopez (2005) and Gypali et al. (2018) suggest learning-to-export as an important precursor for the development of capabilities, products and services. Similarly, Minbaeva et al. (2003) demonstrate that training, among other HRM practices within foreign subsidiaries of a multinational corporation, is critical for the development of absorptive capacity. Training is important for LOC, where work assignments are based primarily on technical and management competence. It may become inevitable that organisations provide training in foreign languages in case of interaction with international parties, such as government agencies, customers, competitors or creative directors. In a similar vein, a study by Peltolorpi (2017) suggested that training in relevant and requisite language competence enhances organisational capability to transfer knowledge and information. Further, utilising the organisational learning theory for the development and utilisation of language capabilities, we argue that:

H4: Training for languages is positively related to LOC

v) **Awareness of technology and linguistic services** refers to knowledge of technology-facilitated services in languages, including translation companies or computer-assisted (machine-learning) services such as Google Translate, WeChat or any similar platforms or services available at firm level. In the case of international business, where there will be a

need for interaction with third parties such as government agencies, customers and competitors, firms need language capabilities, i.e. an ability to develop and exploit such capabilities to communicate and articulate products and services effectively. In such scenarios, firms may choose to adopt and utilise readily available, free, computer-assisted translation programmes or hire services from translation companies or computerised translation services, collectively called 'technological and linguistic services'. These readily available free services are intuitive and easy to use (Cascio & Montealegre, 2016). More specifically, the adaptation of such technology will also depend on efficiency (time taken to complete a task), efficiency (error rate) and user satisfaction (Gillan & Bias, 2014). Language technologies such as GoogleTranslate or WeChat may play a role by enabling people to work in an international context and facilitate the use of language capabilities within an organisation (Barley, 2015). For instance, as noted by Piekkari et al. (2013), the communication and transfer of information in an international context are still inconvenient and expensive despite developments in freely available machine translation. However, awareness of these available technologies will not only facilitate the utilisation of LOC within a firm but also enable effective decision-making. For instance, technology awareness may help identify situations in which such technological services can be applied. Further, technological awareness may bring benefits from the application of technology which is often free or at minimal cost to improve LOC within the firm (Hsieh & Tsai, 2007; Kyrgidou & Spyropoulou, 2013). Thus, it is argued that:

H5: Awareness of technology and linguistic services is positively related to LOC.

5.3 Consequences of LOC (The capacity and organisation's performance link)

The capacity literature as a distinct capability strongly correlates with numerous output criteria of interest (Bjorkman et al., 2007; Gupta & Govindarajan, 2000). Previous research has shown that capacity constructs are appropriate for predicting organisational performance such as intra/inter-organisational learning (Andersson et al., 2016), strategic international alliance such as international joint ventures and cross border mergers (Chang et al., 2013), knowledge-sharing (Thuc Anh et al., 2006) and innovation performance (Tsai, 2001; Jansen et al., 2005). In a similar fashion, a firm's LOC is likely to relate to relevant output, such as the extent to which firms are able to generate, disseminate or respond to relevant information in

international markets; export orientation or networking capability for export performance, thus, are assessed with regard to export sales, profit and growth and export orientation (Cadogan et al., 1999; Cadogan et al., 2009) and organisational networking capability (Luo et al., 2008; Park and Luo, 2001) to determine the ability of LOC to facilitate international performance.

5.3.1 International marketing perspective- Export Market Orientation and Networking capability

Johanson and Valhne's internationalisation process (1977, 2009) has suggested that firms internationalise incrementally through limited commitment, and this has been vehemently questioned in recent literature especially after the advent of the concepts of born-global and International New Ventures (INVs). However, we argue that, in the case of most SMEs, this could be and is generally the case. Exporting as a mode of entry is appropriate for SMEs wishing to internationalise as it offers more flexibility with the minimum possible resource commitment and risk (Boso et al., 2012; Czinkota, 1994; Sousa & Novello, 2014). Indeed, research by Baum et al. (2015) finds that 50% of small firms internationalise incrementally and only 15% can be categorised as truly 'born global'. Dhanraj and Beamish (2003) suggest that most traditional SMEs adopt exports as a strategy for internationalisation and growth. Further, a European Commission report on SMEs in 2016/2017 suggests that exports were one of the main drivers for economic growth in the EU nations between 2008 and 2016.

International marketing holds a prominent place in the internationalisation process and plays an important role in establishing relationships and interaction with foreign entities such as buyers, sellers or distributors. Furthermore, the international marketing literature focusses specifically on a firm's ability to use its resources to perform marketing functions to understand and fulfil international market customer needs competitively and sustainably (Morgan et al., 2018). International marketing enables the identification and generation of market intelligence and opportunities in international markets that can facilitate market orientation (Narver & Slater, 1990; Kohli & Jaworski, 1990). As discussed in above section, exports are the most attractive method of internationalisation for SMEs. Various studies have suggested direct and indirect relationships between marketing capability and business performance (Blesa & Ripollés, 2008; Vorhies & Morgan, 2005).

In the following section, we try to understand the marketing capabilities that facilitate export performance. Exploring the antecedents of export performance in the marketing literature, Morgan et al. (2004) identify capabilities and resources, and a competitive strategy that mediates how well these resources are planned, allocated and implemented to match market requirements. This also involves the establishment and maintenance of relationships with key channel members in the target export market (Cavusgil & Zou, 1994). Capabilities crucial to exporting are i) information capabilities that enable firms to acquire information about key stakeholders such as consumers, competitors, distribution channels and the environment in target market to reduce uncertainty in export marketing; ii) relationship-building capabilities or networks with key actors including customers, distributors, structural and legal intermediaries to enable a better understanding of and response to export market requirements, and iii) product development capabilities that involve designing and modifying the product in accordance with the requirements of the target market (Morgan et al., 2018; Kaleka & Morgan 2017). We argue that the first two of these – information capabilities and relationship-building networks – are crucial to export marketing and performance, and language capability can play a key role in international markets.

5.3.2 LOC and International Performance

The positive relationship between language capability and international business performance (Brannen et al, 2014) within large organisation such as globalised team-performance (Hind et al., 2014; Chen et al., 2006), trust and cooperation (Cohen & Henderson, 2017; Tenzer et al., 2014), source of power (Marschan-Piekkari et al., 1999) and international opportunity recognition (Hurmerinta et al., 2015) has been carried out identifying the relevance of languages in international context.

International performance, like any other performance as a construct, is difficult to operationalise as it may refer to different aspects of organisational effectiveness, such as revenues, profits, new market entry, etc. (Gil-Pechuan et al., 2013). Furthermore, SMEs are generally privately owned and, therefore, not required to provide detailed financial information. Furthermore, they are more often not willing to provide financial information such as revenue (sales) and return on investment. To address this issue, researcher concur

with statements that employ wide variety of subjective measures, such as managers' perceptions, rather than objective performance measures (Stoll and Ha-Brookshire, 2011; Murphy et al., 1996). For export (international performance is measured with four items using Cadogan et al., (2009) and Morgan et al., (2012 b) and includes performance indicators such as export sales, export profit, export sales growth and new market entry to encompass the multidimensionality of performance measures (Morgan et al., 2004).

In addition to multi-dimensional export performance measure, we identify export (market) orientation as an important construct for the study. Export (market) orientation encourages continuous market research and is a behavioural construct (Cadogan et al., 2009). Since we focus on capabilities and resources relevant to competitive positioning and strategy for SMEs in an international context, export orientation can be considered as important for strategic decision-making among exporting firms (Navarro et al., 2014; Ipek & Peynirci, 2020) and may have influence for actual export performance such as sales, profit and new market entry of such firms in an international context (Cadogan et al., 2016; Katsikea, Theodosiou & Makri, 2019; Makri, Theodosiou & Katsikea, 2017).

Export (market) orientation, first developed by Cadogan and Diamantopoulos in 1995, has three crucial behaviour components – Export Intelligence Generation (EIG), Export Intelligence Dissemination (EID) and Export Intelligence Responsiveness (EIR) – and is focused on customers, competitors and the environmental changes affecting the organisation and its dynamics. It is widely accepted that SMEs, through their limited liability of foreignness and their small size, find it difficult to internationalise. Further, the dynamism and complexity of the export environment (Cadogan et al., 1999) leads to increased information requirements. The problems associated with market intelligence in the international context with regard to low availability, accessibility and quality of information are well documented (Paul et al., 2017; Lisboa et al., 2011). However, these limitations can be counterbalanced with the development of unique international marketing capabilities (Morgan et al., 2018), such as language capabilities, that will enable firms to generate, disseminate and respond effectively to information from customers, competitors and environmental changes in the international market affecting firm export performance. We argue that LOC affects firms' ability to respond, design and implement competitive product- market strategies (Hsu & Ziedonis, 2013) in international markets through capturing and dissemination of export market intelligence

(Rakthin et al., 2016). Furthermore, Kwon and Hu (2000) and Olabode et al., (2018) suggest that exporters' capabilities enhance their export (market) orientation. In line with the dynamic capability literature, firm performance results from unique resources and capabilities. The determinants of export performance have been identified as firm-specific capabilities developed with specific goals (Sousa et al., 2008). Indeed, some researchers argue that language capabilities can be influential antecedents to export performance (Stoian, Rialp & Rialp, 2011) and that firms in possession of unique dynamic capabilities (Eisenhardt & Martin, 2000; Teece et al., 1997; Teece, 2007) such as LOC can directly influence international business performance (Makadok, 2001; Zahra & George, 2002; Jansen et al., 2005; Welch & Welch, 2018). Hence, we hypothesise that:

H6: LOC is positively related to export orientation.

H7: LOC is positively related to export performance.

5.3.3 LOC and networking capability

A prominent perspective in international business studies is that of the network approach (Coviello & Munro, 1997; Fletcher, 2008). Johanson and Valhne's (2009) model of internationalisation is embedded in social exchange and network theory (Cook & Emerson, 1978; Granovetter, 2005). Accordingly, researcher recognises a stream of literature in international business on Social Network Theory (SNT), which sees society as a set of networks, ties or relationships between individuals. The four fundamental principles of SNT are the independence of actors, relationships leading to a flow of resources and knowledge, constraining and/or enabling individual actors, and the generation of long-term ties and networks. The two main perspectives of SNT are Strength of Weak Ties by Granovetter (1973; 1983; 2005) and Structural Holes Theory (Burt 1982; 2004). However, we do not adopt Social Network Theory, and a complete review of this theory lies beyond the scope of this study. Instead, we use the 'networking capability perspective', which emphasises behavioural aspects rather than other related concepts such as relationship marketing orientation (Sin et al., 2005) or the relationship orientation proposed by Palmatier et al. (2006). Indeed, networking capability is perceived as an important capability in international business that

facilitates the identification of opportunities and enables firms to respond quickly to them (Knight & Liesch, 2016; Solano Acosta et al., 2018).

Networking capability perspective (Mort & Weerawardena, 2006; Mitrega et al., 2017) aims to understand relational capabilities (Morgan et al., 2018) with suppliers, business customers and competitors and aligns with the dynamic capability perspective, used as the theoretical underpinning for this research. In this sense, networking capability refers to the relational capability of a firm to interact with customers, suppliers and competitors among others, while the export market orientation of the firm reflects its strategic posture and behaviour of the firm to continuously engage in market intelligence generation, dissemination and its responsiveness to such intelligence to adapt its offerings for the international market and export commitment (e.g. Navarro et al., 2010) and export channel selection (e.g. He et al., 2013). This ultimately may influence on the firm's international performance in terms of export sales, export profit and export growth (Paul et al., 2017; Murray et al., 2011).

Network capabilities refers to 'abilities to initiate, maintain and utilise relationship with various external partners' (Walter, Auer & Ritter, 2006, p.546). Network capability in business, first conceptualised by Mort and Weerawardena (2006), refers to initiating, developing and terminating business networks (Mitrega et al., 2012) through which resources and information can flow from one point to another across in both formal and informal, direct and indirect networks (Ford & Mouzas, 2013). Research suggests that social network is critical for organisational exchanges aimed at long-term economic benefits (Mu, 2013; Johannisson et al., 2002), rendering networking capability important for business performance. Although the social network concept originates from interpersonal social relationships, its applicability in business and marketing related phenomena especially B2C and B2B is well documented through explanation of the network embeddedness of actors (van den Bulte & Wuyts, 2007; Wuyts et al., 2004; Swaminathan & Moorman, 2009; Yu et al., 2011). In this sense, networking capability in the business context can exist at distinct levels, with personal as well as professional connections and with multiple stakeholders such as suppliers, customers or competitors.

We utilise the networking capability construct developed by Peng and Luo (2000a), Park and Luo (2001) and Luo, Hsu and Liu (2008) in international markets to measure networking capability. Networking capability has been shown to have direct and indirect links with new

venture performance (Mu, 2013), product development (Mu et al., 2017), foreign market entry in small firms (Karami & Tang, 2019), international expansion (Torkkeli et al., 2012) and sales growth in small firms (Parida et al., 2016). Further, the role of SME networks in innovation has been examined (Wincent et al., 2010; O'Dywer et al., 2011; Thorgen et al., 2009) and the role of networking ability in Chinese SMEs through uncertainty reduction and information about foreign markets during various phases of internationalisation (Xie and Amine, 2009; Tang, 2011). Similarly, studies have shown networking capability to be a critical factor for the internationalisation process (Galkina & Chetty, 2015; Johansson & Valhne, 2009) and that networking with potential stakeholders can enhance international performance (Lu & Beamish, 2001; Karami & Tang, 2019).

Additionally, in international business studies, research studies suggest that language capabilities can facilitate networking capability in foreign markets (Barner-Rasmussen & Bjorkman, 2007) and enhance internationalisation. Furthermore, Marschan-Peikkari et al., (1999, p.1), using in-depth case studies of 25 units of operation from Finnish multinational corporation Kone Elevators located in 10 countries in Europe, Mexico and south-east Asia, concluded that language is a facilitator, enhancing networking and international performance within the organisation. Building on available empirical evidence that affective networks (formal and informal) are characterised by a tendency of individuals to associate disproportionately with others who are similar to themselves (Lazarsfeld & Merton, 1954; Golub & Jackson, 2012), it is argued that language capabilities not only facilitate better communication and understanding but enhance the networking capability of the firm. The idea that actors distinguish between 'same' and 'different' others in terms of the probability of making connections has been empirically demonstrated in the case of friendship patterns (Marsden & Campbell, 1987; McPherson, Smith-Lovin & Cook, 2001). Moreover, even in formal settings, people prefer to interact with colleagues who have lives similar to their own because they are more likely to share mutual interests and concerns (Barigozzi et al., 2012) illustrating that language capabilities can foster and enhance networking capabilities which may not otherwise be possible. Indeed, social connections and interaction are facilitated by the principle of homophily: 'birds of a feather flock together' (in McPherson, Smith-Lovin & Cook, 2001, p. 382; Granovetter, 2005). Furthermore, research shows that linguistic homophily can facilitate networks (Kovacs & Kleinbaum, 2019) and, hence, we argue that

(common) language capabilities, by allowing people to communicate more easily, provide a basis for social interaction i.e sense-making and understanding, which are critical for networking capability (Tenzer & Pudelko, 2013, 2014). Welch & Welch (2018) also indicate that language capabilities facilitate networking capability and performance in the international context. Thus, we argue:

H8: LOC is positively related to networking capability

5.3.4 The moderating effect of networking capability

The central foundation of networking capability is Social Network Theory (Burt, 1982; Granovetter, 1973, 1983), which helps firms to build and maintain relationships with stakeholders such as customers, suppliers or competitors for the transmission of knowledge and information in international markets (Adler & Kwon, 2002; Inkpen & Tsang 2005). Network capability facilitates relationship initiation, development and termination (Mitrega et al., 2012); it is equally important to strengthen existing relationships as to initiate new ones or identify new prospective partners for business performance. LOC is the ability to develop and utilise language capabilities to facilitate internationalisation as and when necessary. Language capabilities give the firm the ability to understand and adapt its behaviour according to its counterparts in a manner that would not otherwise be possible. In this sense, it is argued that language capability will have a stronger influence on export performance and export orientation in the presence of networking capability; that is, networking capability enhances the relationship between LOC and export performance.

H9: Networking capability positively moderates the relationship between LOC and export performance.

Similarly, language capabilities can facilitate market information to reduce uncertainties in international market (Xie & Amine, 2009) while networking capability enables firms to develop and harness relationships with stakeholders in international markets (Mitrega et al., 2012) which could enhance the ability of the firm to not only collect and disseminate but also to respond to market information relevant for internationalisation because of the positive

relationship between international stakeholders. In this context, we hypothesise, the higher the networking capability, the stronger the relationship between LOC and export orientation.

H10: Networking capability positively moderates the relationship between LOC and export orientation

Drawing on the above discussion, five constructs emerged that influence LOC within a firm: linguistic competence, cultural intelligence, willingness to invest, training and technological awareness. Together, these five constructs summarise individual as well as firm-level drivers for developing LOC within an SME. Export orientation, networking capability and export performance were identified as the outcome variables of LOC within an SME.

With these drivers and outcomes in mind, the study draws on the dynamic capability literature to examine and empirically test the theoretical model presented in Figure 5.1 below.

5.4 Control Variables

For the empirical analysis, we utilise several firm-specific variables (such as the age of the firm, sector in which it operates, exporting experience and number of employees) as control variables; these have been consistently utilised as controls in firm performance (e.g. Hassel & Parker, 2013; Paul et al., 2017).

a) Size of the firm: For this study, firm size is incorporated as a control variable (Narver & Slater, 1990; Lin et al., 2009) measured in terms of the number of employees. Although, SMEs are defined as firms with fewer than 500 employees (OCED), we follow the European Commission (2003) definition of SMEs as having 250 or fewer employees. The size of the firm seems to have an influence on international performance (Hollenstien, 2005) and, specifically, export performance (Higon & Driffield, 2011). The accepted view in the literature is that the size can act as a proxy for the overall resource base (Hassel & Parker, 2013; Coeurderoy et al., 2011): the larger the firm, the more likely that it has better export performance. This is captured as a continuous variable.

b) Age of the firm represents the total number of years in operation (Lin et al., 2008); exporting experience (international) is measured as the number of years a firm has been exporting. Firm age and exporting experience may be considered as a proxy for accumulated experience (Basile, Giunta & Nugent, 2003) and, hence, utilised as a continuous control variable. Indeed, studies reveal export experience measured as the number of years in exporting to be vital for export activities (Cadogan et al., 2002; Paul et al., 2017)

c) Sector represents the industry of the firm as a categorical variable, with manufacturing, information technology, financial services, automotive, retail and others. A dummy variable was created for all these categories to understand any industry-specific implications for, for example, manufacturing versus services or otherwise on the role of LOC on export performance.

Previous research indicates that size and age (experience) have a direct impact on firms' internationalisation (Lefebvre & Lefebvre, 2002; Cavusgil & Nevin, 1981; Chetty & Hamilton, 1993) and growth and performance (Steffens et al., 2009; Bottazzi & Secchi, 2005). The choice of control variables was guided by two-folded purpose, first understanding the true effects of LOC on international performance measures and also choosing factors that are in general, considered important influencers of (export) performance, such as size, experience and sector (Terjesen et al., 2013; Keupp & Gassmann, 2007).

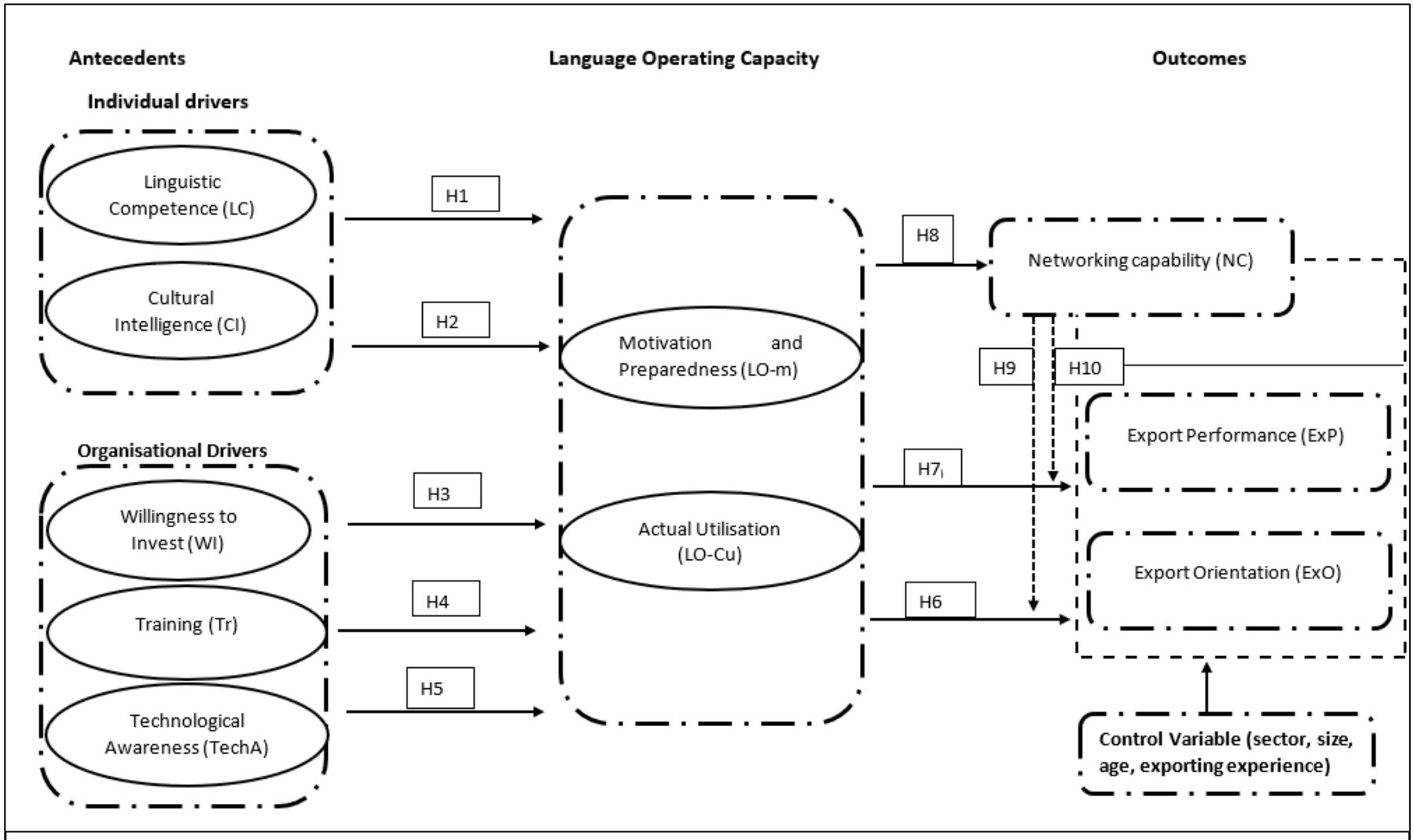


Figure 4-1. Theoretical model: Antecedents, language operating capacity and outcomes

5.5 Conclusion

The central objective of this chapter was to establish the groundwork for the research, that is, by employing theoretical considerations, a set of formal hypotheses were developed. The antecedents (linguistic competence, cultural intelligence, willingness to invest, training and awareness of technology and linguistic services) were conceptualised as directly associated with LOC. Subsequently, LOC was conceptualised as having a direct effect on the outcome variables (networking capability, export orientation and export performance). Furthermore, moderating effect of the networking capability on export performance and export orientation were also explored. In addition, a number of control variables were utilised to study the effect of LOC on outcome variables. The chapter concludes with a conceptual model (see Figure 5.1) developed to study the relationship between the key construct – LOC – its antecedents and outcome variables.

Chapter 6- Exploratory Factor Analysis

6.1 Introduction

The prior chapters discussed in detail the theoretical framework which guided the conceptual model for the research. The aim of this chapter is to discuss the methodologies adopted in the exploratory factor analysis and detailed procedures and operationalisation of the employed constructs. The chapter also discusses the processes followed to generate the required data including the research design, the design and the administration of the web-based survey. The chapter concludes by reporting the statistical properties of the measures used to study the constructs and their relationship. The chapter also reports the initial factor analysis of each of the scales using exploratory factor analysis (principal component analysis) to be utilised in the later stages of analysis.

6.2 Overall Methodological Considerations

As discussed in Chapter 3, we employed a cross-sectional survey design, raising a number of important issues – such as face-to-face or online data collection, response rate, questionnaire design – which will be discussed before moving on to the exploratory factor analysis discussions.

6.2.1 Method of data collection

Various methods of data collection can be used in a cross-sectional design, including personal interviews (face-to-face or a telephone, Skype, Zoom, Microsoft Teams, etc.), focus groups, (online or physical) surveys or experiments. Experiments are employed as they facilitate to establish strong causal inferences which will not be discussed here as they are beyond the scope of this thesis.

The method employed in this research was a web-based online survey, created on Qulatrics.com after the initial questionnaire was ready to be administered. The web- based survey was selected as a method of data collection for two main reasons: firstly, it enables wider participation – to collect data from across the UK would not otherwise be easy, being time-consuming and expensive (Iacobucci & Churchill, 2010) Another, equally important, reason was that the survey was aimed at decision-makers from SMEs in a wide range of

industries; online web-based surveys facilitate this as they give respondents space and time to finish the questionnaire at their own convenience and without interruption. This was clear from the response times: some respondents completed the survey in less than seven minutes while some took well over 15 minutes. Essentially, online surveys provide respondents with the space to express their views which is important for any data collection methodology. Moreover, the turnaround time for a web-based survey is short and, with wider participation, therefore ideal for our population. Initially, we utilised databases from the Aston University open library link to select the population sample and send emails; however, we soon realised that this was not sufficient due to the low response rate. Hence, we had to look for alternative strategies, such as promoting the survey through personal Facebook posts, specialised LinkedIn groups, British Chamber of Commerce and ATC contacts, seminars and webinars.

Further, web-based questionnaires provide a level of anonymity, leading participants to be more open and truthful in their responses. This is particularly important when asking sensitive questions (Dillman, 2007). Nevertheless, limitations do exist, including a low response rate and non-response bias (Hair et al., 2010; Diamantopolous & Schlegelmich, 1996). We address these issues in the following sections. Pre-testing was employed to address some of the issues with the survey questionnaire (Iacobucci & Churchill, 2010).

6.2.2 Main questionnaire

In a survey questionnaire, data was collected at one given point and aim to measure the relationships between variables. To achieve any scientific measurement, measures for all variables of interest identified in the theoretical model (Chapter 5) was carefully identified and designed, as they form the basis of the scientific endeavour.

Therefore, questionnaire design is a critical step and the researcher must spend time designing, checking and rechecking the questionnaire. Key issues to consider while designing questionnaires are the content and flow, its construction and length. We shall discuss these briefly below.

6.2.3 Constructs: Measures, Descriptions and Sources

Variables identified in the theoretical model need operationalisation and the first step is an accurate definition of each variable of interest, as confusing, unclear definitions can lead to inaccurate measurements in the theoretical model and have serious consequences for the

validity of the research itself. In this research, most constructs have been operationalised by carefully selecting pre-existing scales and adapting these to fit the definition of the constructs where possible. Furthermore, latent constructs which are difficult to observe directly are better served by using multi-item scales, as measurement error tends to decrease as the number of items increases (Churchill, 1979). It is equally important to ensure an adequate number of items per construct and, generally, at least three items are recommended to measure a latent construct as a collective set of items, or indicators as they are sometimes called, represents the latent construct better than any single item (DeVellis, 1991).

It is important to note that LOC is developed using the steps outlined by Churchill (1979) and, more recently, DeVellis (2003) for scale development (Chapter 4). Table 5.1 below presents a snapshot of the key constructs, item/indicators per construct and sources identified in Chapter 4 &5 (see Appendix 5- Survey questionnaire for more details).

Individual Constructs

Table 6-1. Details of the variable/construct measures, number of items and sources

Construct **Measure type** **No. of items**	**Items**	**Source**
Outcome variables		
Export Orientation (ExO) Likert scale (1–5) 11 items	• Our top managers/ owners regularly visit our current and prospective export customers • We constantly monitor our level of commitment and orientation to serving export customer needs. • We generate a lot of information in order to understand the forces which influence our overseas customers' needs and preferences • In this company, we generate a lot of information concerning trends (e.g., regulation, technological developments, politics, economy) in our export markets. • We freely communicate information about our successful and unsuccessful export customer experiences across all business functions. • Important information concerning our major export customers is disseminated right down to the shop floor • All information concerning our export competition is shared within this company • When we find out that export customers are unhappy with the quality of our service, we take corrective action immediately • If a major competitor were to launch an intensive campaign targeted at our foreign customers, we would implement a response immediately. • We are quick to respond to important changes in our export business environment (e.g., regulatory, technology, economy). • We give close attention to after sales service in our export markets	Cadogan et al. (1999, 2002).
Networking capability (NC) Likert scale (1–5) 3 items	• Managers at our company have utilized personal/professional connections and networks with managers at: Export buyer/customer (e.g., export market retailer, wholesaler) firms • Managers at our company have utilized personal/professional connections and networks with managers of foreign supplier firms • Managers at our company have utilized personal/professional connections and networks with managers of Export competitor firms	Peng & Luo (2000) a; Park & Luo (2001) Luo, Hsu, and Liu (2008).

Export performance Likert scale (1–5) 4 items	Compared with your industry average, how would you grade your company's export performance over the past three years on the following indicators: • Average Export Sales • Export Profit • Average Export sales Growth • Market Entry (new market)	Cadogan, Kuivalainen & Sundqvist (2009); Morgan, Katsikeas & Vorhies (2012b); Sousa & Novello, (2014).
Language Operating Capacity		
Motivation and preparedness (LOCm) Likert scale (1–5) 7 items	Refer to Chapter 4 for individual items	Self-developed and adapted from Camison & Fores, (2010); Zahra & George (2002); Scheinder et al. (2005); Welch & Welch (2018).
Utilisation of language capabilities (LOCu) Likert scale (1–5) 10 items	Refer to Chapter 4 for individual items	Self-developed and adapted from Camison & Fores, (2010); Zahra & George (2002); Scheinder et al. (2005); Welch & Welch (2018).
Antecedents		
Linguistic competence (LC) Likert scale (1–5) 4 items	• In this organisation, we have people who can use everyday expressions and very basic phrases of foreign customer (market) language for e.g. Hello, Thank you, etc • In this organisation, we have people with good understanding of frequently used expression and communicate using simple vocabulary especially in related matters of foreign customer (market) language • In this organisation, we have people who can understand, read and produce simple text on familiar/interested topics of foreign customer (market) language • Number of languages known (collectively) within the organisation	Self-developed (CEFR* levels).
Cultural Intelligence (CI) Likert scale (1–5) 9 items	• I know the ways in which cultures around the world are different • I can give examples of cultural differences from my personal experience, travel, education, work experience, reading, and so on • I enjoy talking with people from different cultures	Thomas et al., (2015).

	• I have the ability to accurately understand the feelings of people from other cultures • I sometimes try to understand people from another culture by imagining how something looks from their perspective • I can change my behavior to suit different cultural situations and people • I accept delays without becoming upset when in different cultural situations and with culturally different people • I think a lot about the influence that culture has on my behavior and that of others who are culturally different • I am aware that I need to plan my course of action when in different cultural situations and with culturally different people	
Willingness to Invest (WI) Likert scale (1–5) 3 items	• We invest in language translation of relevant documents (e.g., legal documents, marketing strategy/ operations manual / website translation /and packaging) or for any other purposes for our international clients/customers • We are ready to invest in language competencies/services for translation of relevant documents if it can facilitate export/internationalisation growth • We are open to investing from our marketing/operations/strategy budget in language competencies when there is need for the same growth and expansion in international markets.	Self-developed (conceptualised from Barner-Rasmussen et al. (2014) and interviews).
Training for languages (Tr) Likert scale (1–5) 3 items	• In our organisation, we provide training/workshops leading to development of basic knowledge of export market (customer) language. • In our organisation, we encourage training/staff development of basic knowledge of export market (customer) language through courses or online resources • In our organisation, we support training/staff development of basic knowledge of export market (customer) language to undertake courses/ online resources or any such endeavors	Self-developed (conceptualised from Peltolorpi, 2017).
Technological awareness (Tech A) Likert scale (1–5) 3 items	• We are aware of the computer-assisted language technologies like machine translation softwares • We make use of readily available digital technologies like Google Translate, WeChat and others for customer interaction • We are aware of translation companies and the services provided by them	Self-developed (interview)

*Common European Framework for Languages

6.2.4 Questionnaire design and presentation

The physical design of the questionnaire is important as it can have a considerable impact on its look and feel and also on response rates (Churchill, 2010). A logical, well-drafted questionnaire can motivate and encourage respondents to complete the survey (Dillman, 2007). The questionnaire (presented in Appendix 5) was logically arranged by identifying and placing the key variable at the start, after the brief informed consent for voluntary participation and screening questions. Sensitive and confidential questions on sales, profit and personal information were placed at the end of the questionnaire so as to not overwhelm the respondents. Furthermore, careful time and consideration were given to making the choices in designing the web page for the online survey, such as general background, logo, positioning of the progress bar, style and font, and the web -based survey was tested several times with help of colleagues and supervisors to ensure that it worked smoothly before making it live. The anticipated time as per Qualtrics algorithm (iQ score) was a little under 15 minutes would be needed, and this was also tested by colleagues and supervisors. Nevertheless, it was estimated that the average time taken was 15–20 minutes.

To ensure that the respondent's attention was maintained, click 'strongly agree to continue' was utilised randomly in the questionnaire. Consistency and clarity were maintained by professional design in the format and layout of the questionnaire. In addition, a cover letter informed the respondents of the purposes of the research, the time needed for the survey and how their responses would facilitate policy and decision-making at both organisational and governmental levels. Furthermore, respondents were guaranteed anonymity and confidentiality to improve the response rate (Iacobucci & Churchill, 2010). In fact, no identifying information, such as names of respondents or organisations was collected, in accordance with GDPR.

Finally, non-monetary incentives in the form of Amazon vouchers were given to three prize-draw winners to further increase the number of respondents. Indeed, since we collected no identifying information in the survey, respondents who completed the survey were asked to nominate themselves for the prize draw via a different weblink.

6.2.5 Flow of questionnaire

The questionnaire was divided broadly into the following sections: First section starting with screening questions on size (number of employees), exporter or not, UK-registered independent firm. This was followed by general information on the firm, such as sector and number of export countries. The next section labelled as 'Language and language-related constructs (antecedents and LOC) and was followed by performance constructs (outcome variables) and, finally, the participant profile section.

6.2.6 Measure type

Measurement instruments for latent constructs, that is, those which are not observed directly but indirectly through a set of items are primarily of two types: reflective and formative. Reflective constructs are those where items, generally multiple items, collectively reflect the construct, and the construct is viewed as causing the variance in the items (Gerbing & Anderson, 1988). Formative measures represent a set of items collectively causing the construct, that is, for a formative measure, the item forms the latent construct as an index. Since different indicators of formative constructs aim to capture different and specific aspects of the latent construct, it is not necessary that they are positively correlated (Diamantopoulos & Winklhofer, 2001; Jarvis, MacKenzie & Podsakoff, 2003).

Unlike formative measures, for reflective measures a single construct underpins a set of interrelated items and any change in the measurement items affects the construct and vice-versa, that is, any change in the construct will lead to changes in the items itself. Hence, it is recommended that multiple items are utilised especially for reflective measures (Diamantopoulos & Winklhofer, 2001). For example, the linguistic competency construct should measure only linguistic competence and no other latent variable, so that a change in the scores of individual items of linguistic competence should alter the true score of linguistic competence construct only. Since reflective measure items collectively represent the construct and are expected to positively correlate and, thus, are interchangeable, an item can be deleted during the item purification stage if required (Gerbing & Anderson, 1988).

It is further argued that the type of measure is necessarily the discussion where, the construct definition itself presents and misspecification of formative measures for reflective measures or vice-versa could have serious implications for the research findings. (Diamantopoulos, 1999).

Further, this challenge is enhanced for second-order constructs, which is the case for our main construct, LOC, as researchers lack agreement on various types of second-order construct (reflective-formative and reflective-reflective). The formative constructs are relatively less established and in the early stages of adoption (Diamantopoulos & Winklhofer, 2001) and there is no evidence of formative measures in the existing capacity literature. Following current conventions of reflective measures in the extant literature, this research adopts a reflective model rather than a formative model.

6.2.7 Pre-testing of the main questionnaire

Before administering the questionnaire, pre-testing was conducted with 12 respondents who were either the initial interviewees or respondents contacted during the interview process. The number was deemed appropriate, as research indicates that the most appropriate way to test the survey questionnaire is with a similar target audience and any sample number between 5 to 15 is common practice (Fink, 2003; Willis, 2005). The respondents were asked for feedback to help identify errors, time taken and flow of the questions (see Chapter 4 for more details).

6.2.8 Data collection

As discussed previously, this research adopted a web-based survey, and the questionnaire was uploaded on Qualtrics.com. The link was then shared on online portals including Facebook, LinkedIn groups targeting exporters, the ATC website, and was promoted through the British Chamber of Commerce and Aston University contacts. Wave 1 of the web-based survey opened in December 2019 and completed in March 2020, while Wave 2 was started in April and decision to was made to close the survey in in Nov 2020.

A total of 1,325 responses were collected on the day of closure; Of the responses, 901 responses (68%) were less than 50% complete and were unsuitable for inclusion in the analysis (Hair et al., 2010). Additionally, after careful investigation of data, seven more responses had to be deleted for the purpose of statistical analysis, as a result of non-engagement, with respondents not responding to attention question appropriately, and non-responsiveness on items for the key construct, LOC, the final sample consisted of 417 responses (192 from Wave 1 and 225 from Wave 2). Table 6.2 below represents a detailed

analysis of the missing data of the respondents of Wave 1 (n=192) by variable and percentage of missing values.

Table 6-2. Missing Data Analysis (n=192)

Variable	N	Count	Percentage	Variable	N	Count	Percentage
LC01	192	0	0	LOC08	192	0	0
LC02	192	0	0	LOC09	192	0	0
LC03	192	0	0	LOC10	192	0	0
LC04	192	0	0	LOC11	192	0	0
K01	192	0	0	LOC12	192	0	0
K02	192	0	0	LOC13	192	0	0
S01	192	0	0	LOC14	192	0	0
S02	192	0	0	LOC15	192	0	0
M01	192	0	0	LOC16	192	0	0
S03	192	0	0	LOC17	192	0	0
S04	192	0	0	NC01	191	1	0.52
M03	192	0	0	NC02	191	1	0.52
M02	192	0	0	NC03	191	1	0.52
W01	192	0	0	EIG01	190	2	1.04
W02	192	0	0	EIG02	190	2	1.04
W03	192	0	0	EIG03	190	2	1.04
T01	192	0	0	EIG04	190	2	1.04
T02	192	0	0	EID01	190	2	1.04
T03	192	0	0	EID02	190	2	1.04
TECHA01	192	0	0	EID03	190	2	1.04
TECHA02	192	0	0	EIR01	190	2	1.04
TECHA03	192	0	0	EIR02	190	2	1.04
LOC01	192	0	0	EIR03	190	2	1.04
LOC02	192	0	0	EIR04	190	2	1.04
LOC03	192	0	0	Export Sales	190	2	1.04
LOC04	192	0	0	Export Profit	190	2	1.04
LOC05	192	0	0	Export Sales Growth	189	3	1.56
LOC06	192	0	0	Market Entry	189	3	1.56
LOC07	192	0	0				

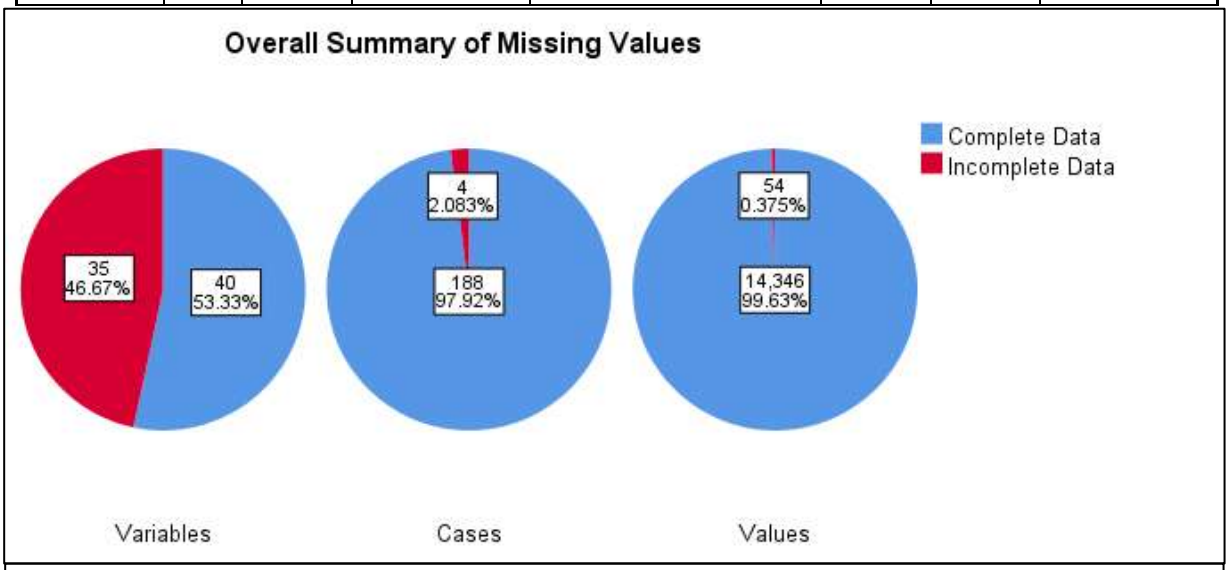


Figure 6-1. Summary of missing values

As a general rule, missing data per variable ranging between 0.4% and 10 % is considered normal depending on sample size (Hair et al., 2010). There can be two impact of missing data.

The first is a practical one – it leads to a reduction in the sample size available for analysis and, in multivariate analysis, may eliminate so many observations that what was a sufficient sample size is reduced to an inadequate sample. For example, 10% missing data at random in a set of five variables can lead to at least one missing value on average in 60% of the cases; thus, in multivariate analysis, the sample size could be reduced as less as 40% from the original sample for some analysis (Hair et al., 2010). It should be noted that Wave 2 (n=225) has a complete data set and will be utilised for confirmatory factor analysis (reported in the next chapter) while Wave I data (n=192) has been utilised for exploratory factor analysis in this chapter.

6.2.9 Missing Data Evaluation

Second, and equally important, is considering that any missing data in a non-random fashion could lead to a biased analysis. Hair et al. (2010) gives an example where missing information on income category tends to be in higher income brackets; thus, missing data in one particular category, such as the outcome variables in our study, could lead to biased analysis. Hence, the treatment of missing data is a critical step before moving towards multivariate analysis.

Missing Values Analysis (MVA) was adopted using PASW SPSS 26 to examine whether the missing data was completely random (Tabachnick and Fidell, 2007). Looking at the table in the above section, researcher is satisfied that the extent of missing data is low. Missing data can be categorised as Missing Completely At Random (MCAR), Missing At Random (MAR) or missing not at random.

MCAR is rare in real-world scenarios and occurs when the observable parameters of interest (data/item-values) occur entirely randomly. Little's MCAR test was used, in which a Chi-squared test was applied where (H_0) states that the data is truly missing at random for the relevant continuous variables in the study: LOC, its antecedents and outcome variables. The Chi-Squared test should result in an insignificant p.005 leading to acceptance of the hypothesis. The result for Chi-Squared test =261.316 was insignificant at $p > 0.05$ ($p=0.240$) for df=246, suggesting that the data is truly MCAR.

Imputation is a method where missing data is substituted with a known value (case substitution and Desk imputation) or calculated value (mean substitution or regression-based approach). There is also an imputation method EM, where E refers to expectation and M for

maximisation. The EM imputation method is an iterative process to find the maximum likelihood estimate of parameters using bootstrapping within the model. If data is MCAR, then many imputation methods are available: if simply MAR or non-random, then methods designed specifically to address these, such as EM should be utilised. However, since the missing data ranges from 0.54% to 1.54% in first sample and there is no missing data in the second wave, we utilise EM techniques (SPSS 26) for the treatment of missing values.

6.2.10 Non-Response bias

Non-response bias occurs 'when characteristics of the respondents are systematically different from the non-respondents' (Hudson et al., 2004, p.237) and can have significant implications for data representation among the chosen sample (Jobber, 1989). However, it is argued that the given sample needs to provide adequate context for theory testing and non-response bias is not a major concern if prior theory is used to develop a model (Morgan & Hunt, 1994). As this research is based on a carefully selected sample frame which is representative of the SME exporters in UK (see Chapter 7 for more details), that is, independent UK SMEs, it provided an appropriate context to test LOC, its antecedents and outcome variables, non-response bias is not considered of greatest importance. Nevertheless, we compared early respondents to late respondents to assess whether non-respondents differed systematically from respondents; this approach of extrapolation assumes that late respondents are similar to non-respondents and was used as an indication of non-respondents (Armstrong & Overton, 1977; Churchill & Iacobucci, 2010). The approach was applied by splitting the sample into two halves, and a t-test result > 0.05 indicates that non-response bias did not appear to raise concerns for our study.

6.2.11 Analysing multi-item reflective measures

Multi-item reflective measures help researchers to understand and estimate a latent construct (non-observable) with the help of multiple variables (observable). It also help in creating a parsimonious construct which can then be utilised to estimate the relationship among the constructs.

However, before any such endeavours are made, multi-item reflective measures must be analysed and tested for psychometric properties. The first step is to identify and extract the significant factor loadings for measurement constructs and to determine the structural

validity of the constructs (n=192), that is, the extent to which scores of a scale indicates dimensionality, attribute or factor being measured. Thus, to factor all items and identify constructs on the basis of factor loadings through exploratory factor analysis. Exploratory factor analysis (principal component analysis) is a multivariate statistical technique that is used to analyse interrelationships among large numbers of observable variables and identify strong patterns among the variables, explaining the variables in terms of their common underlying factors (Field, 2009). Furthermore, principal component analysis with rotation estimates and arranges data in a way that it explains the maximum amount of variance in the sample, that is, it retains the most information in a parsimonious and easy-to-interpret format. This initial structure shall then be utilised to test the psychometric properties using confirmatory factor analysis.

It may be important to note here that most constructs are based on established scales, while LOC and some of the antecedents have been newly developed. Nevertheless, we discuss exploratory factor analysis for antecedents and outcomes – in the following sections (For LOC see Chapter 4).

6.2.13 Data screening/assumption of factor analysis

Initial screening of the data is critical to identify, assess and evaluate the data for basic assumptions underlying multivariate statistical techniques, outliers and missing data, before proceeding with data analysis. Data screening is conducted using SPSS 26 for outliers and missing data. Furthermore, normality of the variance in the data set is assessed using univariate descriptive statistics such as means, standard deviation, skewness and kurtosis for each variable in the study (Pallant, 2004). Skewness and kurtosis facilitate the identification of non-normality: normal distribution is evident if the skewness and kurtosis values are zero. Skewness is a measure of symmetry: it describes whether the values are symmetrical across the distribution or concentrated on either end (left or right) of the distribution curve. Positive skewness indicates that the distribution is shifted to the left while negative values indicate a rightward shift. Kurtosis, conversely, is concerned with the height of the distribution curve, its flatness or peakedness.

We use univariate descriptive statistics in SPSS 26 for data screening and histogram plots and normality plot graphs to visualise the normality of the data set while also identifying any

outliers in the data. As mentioned in previous sections, all key variables were measured on a Likert scale (1–5); we did not identify any outliers in the continuous variables. Nevertheless, some of the descriptive data did have some outliers, such as the age of firm (fewer than 2% of firms were more than 100 years old) and exporting experience (one firm had been exporting for more than 100 years). A closer inspection of these cases did not show any concerns. Indeed, it is recommended to guard against deleting any observations that are valid but explanation (different) and are representative of the population as their presence adds to the richness of the data, that is the widest possible participation (Hair et al., 2010).

In conclusion, the univariate descriptive analysis for most continuous variables did not present any substantive concerns regarding deviation from normality which is important to account for before proceeding with exploratory factor analysis.

Having already discussed exploratory factor analysis of LOC in Chapter 4, we move on now to discuss the exploratory factor analysis for other two categories of variables in the model, , which forms the basis of this chapter:

- The antecedents (key drivers) of LOC
- The outcome (endogenous) variables of LOC

6.3 Exploratory factor analysis: Antecedents of LOC

The correlation matrix, Bartlett's test of sphericity (Table 6.3) and Kaiser- Meyer- Olkin (KMO) indicate the suitability of the data for factor analysis. Specifically, the KMO value of 0.896 exceeds the recommended cut-off of 0.60 (Kaiser, 1970) and is considered excellent (Field, 2009; Hair et al., 2010), and Bartlett's test has statistical significance at 1% p<0.001, Chi-squared (df)=2611.049 (231).

Table 6-3. KMO and Barlett's test for antecedents of LOC

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.896
Bartlett's Test of Sphericity	Approx. Chi-Square	2611.049
	Df	231
	Sig.	0.000

The principal component analysis with all 21 items yielded five factors (Table 6.4 below) with eigenvalues exceeding 1, explaining 39.79%, 12.52%, 7.54%, 5.13% and 4.56% of the variance

which was supported by a scree plot (Appendix 7) and indicating a five-factor solution, with the line flattening significantly after the fifth factor confirm the presence of five factor solution from eigenvalue criterion. The total variance explained by these five antecedents factor is 69.54%.

Table 6-4. Five-factor solution for Antecedents of LOC

Total Variance Explained							
	Initial Eigenvalues			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	8.753	39.787	39.787	8.753	39.787	39.787	7.147
2	2.754	12.520	52.307	2.754	12.520	52.307	6.328
3	1.659	7.542	59.848	1.659	7.542	59.848	5.406
4	1.129	5.134	64.982	1.129	5.134	64.982	1.848
5	1.004	4.562	69.543	1.004	4.562	69.543	1.298

However, the pattern matrix shows a few issues which are discussed briefly here. First, we present below Table 6.5, showing the pattern matrix for antecedents of LOC.

Table 6-5. Exploratory factor analysis Loadings for five-factor solution (antecedents)

Pattern Matrix						
	Component					
	Cultural Intelligence	Willingness to Invest and Training	Linguistic Competency	Technological Awareness (factor 4)	Technological Awareness (factor 5)	Communalities
LC01			0.859			0.715
LC02			0.831			0.763
LC03			0.780			0.798
LC04			0.711			0.585
K01	0.710					0.593
K02	0.641					0.647
S01	0.812					0.675
S02	0.894					0.714
M01	0.712					0.632
S03	0.790					0.670
S04	0.802					0.616
M03	0.790					0.668
M02	0.835					0.711
W01		0.806				0.655
W02		0.875				0.772
W03		0.886				0.764
T01		0.674				0.706
T02		0.601				0.825
T03		0.650				0.727
TECHA01				0.796	0.609	0.739
TECHA02				0.860		0.671
TECHA03					0.776	0.653

As we can see in Table 6.5 above, all item loadings were more than 0.60 and loaded exclusively on one factor, except item TechA01 (highlighted in grey in the above table). However, Willingness to Invest and Training, identified as two separate antecedents, loaded on a single factor. This has been noted to be addressed; Theoretical considerations indicate that though the constructs are quite strongly correlated, these two factors are considered unique and are to be studied separately. Also, since exploratory factor analysis is an initial development process, we retain the cross-loadings at this point and do not merge constructs to be assessed in the next stage (confirmatory factor analysis), addressed in the next chapter. As recommended by Hair et al. (2010), communalities for all items exceeded the acceptable threshold of 0.4 (Hair et al., 2010). The total variance explained is 69.54%, providing strong evidence that the scale is internally consistent.

In the following section, we report the exploratory factor analysis for consequences of LOC.

6.4 Exploratory factor analysis: Outcome variables of LOC

Bartlett's test of sphericity (Table 6.6) and KMO indicate the suitability of the data for factor analysis. Specifically, the KMO value of 0.882 exceeds the recommended cut-off of 0.60 (Kaiser, 1970) and is considered excellent (Field, 2009; Hair et al., 2010), and Bartlett's test statistical significance is- p<0.001, Chi-square (df) =1536.362 (153).

Table 6-6. KMO and Bartlett's Test (Outcome Variables)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.882
Bartlett's Test of Sphericity	Approx. Chi-Square	1536.362
	Df	153
	Sig.	0.000

The principal component analysis with all 18 items yielded three factors (Table 6.7) with eigenvalues exceeding 1, explaining 36.22%, 13.22% and 8.78% of the variance. Scree plot (Appendix 7) also clearly indicates a three-factor solution with the line flattening significantly after the third factor, confirming the presence of a three-factor solution from the eigenvalue criterion.

Table 6-7. Factors extracted for Outcome Variables

Total Variance Explained							
	Initial Eigenvalues			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.503	36.129	36.129	6.503	36.129	36.129	5.848
2	2.379	13.218	49.346	2.379	13.218	49.346	3.747
3	1.581	8.781	58.127	1.581	8.781	58.127	4.261

All item loadings in Table 6.8 below were more than 0.40 and loaded exclusively on their respective factor except one item, that is, EIG01, which loaded on networking capability rather than export orientation. This has been noted to be addressed to be assessed in the next stage – confirmatory factor analysis – discussed in the next chapter. As recommended by Hair et al. (2010) communalities for all items (Table 6.8) exceeded the acceptable threshold of 0.4 (Hair et al., 2010). The total variance explained is 58.13%, providing strong evidence that the scale is internally consistent.

Table 6-8. Factor loading for three outcome variables

Pattern Matrix				
	Component			
	1	2	3	Communalities
NC01			0.863	0.692
NC02			0.960	0.791
NC03			0.797	0.653
EIG01	0.385		0.353	0.473
EIG02	0.698			0.607
EIG03	0.580			0.591
EIG04	0.590			0.608
EID01	0.606			0.418
EID02	0.736			0.479
EID03	0.748			0.441
EIR01	0.677			0.352
EIR02	0.703			0.511
EIR03	0.753			0.567
EIR04	0.727			0.506
Export Sales		0.820		0.670
Export Profit		0.877		0.745
Export Sales Growth		0.878		0.771
Market Entry		0.786		0.588

Before proceeding to the confirmatory factor analysis, it is worth considering Type 1 and Type 2 errors and the multicollinearity likely to be associated with them.

6.5 Type 1 and Type 2 Errors

A Type 1 error is the probability of rejecting the null hypothesis when it should be accepted (i.e. concluding that the two means are significantly different when, in fact, they are not). A Type 2 error, however, is the probability of accepting the null hypothesis when it should be rejected (i.e. concluding that the two means are not significantly different when, in fact, they are). Since statistical techniques such as multiple regression analysis is more inclined to produce a Type 2 error, it is important to attempt to eliminate the likelihood of making a Type 2 error by addressing issues of multicollinearity.

6.6 Multicollinearity

Multicollinearity concerns with correlational analysis among three or more independent variables and occurs when any single independent variable is highly correlated (larger than .90) with other independent variables (Hair et al., 2010). Independent variables are said to be

completely independent (lack of collinearity) when the correlation is zero, and exhibit complete collinearity if the correlation is 1. Multicollinearity poses problems for dependence techniques (notably, multiple regression analysis) as it reduces the predictive power of an independent variable by the extent to which it is correlated with other independent variables in the analysis. Moreover, the unique variance explained by each additional independent variable decreases as collinearity increases. Therefore, to maximise the prediction from a set of independent variables, independent variables with low collinearity among themselves should be included as far as possible. Multicollinearity, as discussed above, poses challenges to the structural model tested in the dependence techniques. Therefore, it is recommended that multicollinearity is assessed before proceeding further with confirmatory factor analysis and the hypothesis testing of the proposed model.

Multicollinearity is evaluated using a correlation matrix between and among the independent variables and dependent variables in the study (SPSS 26), presented below. The presence of a high correlation (above 0.80) is considered to raise concerns for multicollinearity (Malhotra, 1995). Table 6.9 below represents Pearson's correlation matrix for independent and dependent variables.

Table 6-9. Pearson correlation matrix for independent and dependent variables

	NC	**ExO**	**ExP**	**LC**	**CQ**	**WI**	**Tr**	**TechA**
Networking capabilities (NC)	1							
Export orientation (ExO)	.495**	1						
Export performance (ExP)	.283**	.317**	1					
Linguistic competence (LC)	.344**	.422**	.211**	1				
Cultural intelligence (CQ)	.377**	.416**	.272**	.421**	1			
Willingness to invest (WI)	.548**	.508**	.277**	.512**	.509**	1		
Training (Tr)	.456**	.591**	.260**	.638**	.419**	.634**	1	
Technological awareness (TechA)	.315**	.312**	.298**	.183*	.220**	.312**	.310**	1

** correlation is significant at 0.01 level (2 tailed); * correlation is significant at 0.05 level (2 tailed)

While a high correlation is an indicator of possible multicollinearity, low correlation does not necessarily ensure a lack of multicollinearity.

To further assess multicollinearity, diagnostic tests of Tolerance and Variance inflation factor (VIF) were utilised. VIF involves a statistic which can be used to estimate the degree to which an independent variable can be predicted by the set of other independent variables. Tolerance is the inverse of VIF and is defined as the amount of variance in an independent variable not explained by another independent variable and is calculated as $1-R^2$ where R^2 is the amount of variance explained by the other independent variable for an independent variable. A tolerance value of less than 0.10 represents that there is multiple correlations with other variable that are high. The tolerance value should be high, indicating that the other independent variables collectively do not have a substantial amount of shared variance. Variance inflation factor, conversely, expresses the degree of multicollinearity and its impact on estimation when conducting multiple regression analysis. A variance inflation factor value of 10 or more indicates the presence of multicollinearity problems to be resolved (Pallant, 2010).

In our study, we have identified five key independent variables which are regressed (multiple regression) one at a time for all other independent variables; $R^2$is used to estimate Tolerance and VIF. The Table 6.10 below represents the multicollinearity diagnostic test results for our independent variables.

Table 6-10. Multicollinearity test

Variable	Tolerance ($1-R^2$)	Variance Inflation Factor (1/Tolerance value)
Cultural intelligence	0.7019	1.4246
Linguistic competence	0.5547	1.8027
Willingness to Invest	0.5097	1.9621
Training	0.4525	2.2101
Technological awareness	0.8759	1.1417

As indicated in Table 6.10, VIF for all independent (exogenous) variables are less than acceptable threshold of 10 (Pallant, 2010), there are no indications of multicollinearity.

6.7 Conclusion

This chapter provided a detailed overview of exploratory factor analysis for antecedents and outcome variables of the model. The measurement instruments and questionnaire design utilised to test the model were discussed, as were preliminary checks, such as data screening, non-response bias, the treatment of missing data and suitability of factor analysis before

moving onto exploratory factor analysis. Thereafter, the analysis for antecedents and outcome variables of the model –were presented in detail using principal component analysis in preliminary exploratory analysis (Anderson & Gerbing, 1988). Overall, the results showed no major concerns with the data. The following chapter will detail the findings of the confirmatory factor analysis, built on the findings of exploratory factor analysis in this chapter.

Chapter 7- Confirmatory Factor Analysis – Analysis of Psychometric Properties

7.1 Introduction

This chapter reports the statistical properties of the scales identified for use in previous chapters which are summarised in two main categories: antecedent variables to LOC, and outcome variables of the model (see Chapter 4 for confirmatory factor analysis of LOC). Details of the structural validity of the scales, confirmatory factor analysis (maximum likelihood) and structural validity of the constructs studied in this research are discussed and presented. The chapter concludes with a summary of the scales that will be utilised in the subsequent analysis.

7.2 Overview of the structure

The overall aim of this chapter is to determine the structural validity of the antecedents and outcome variables in the model proposed in Chapter 5. As in the previous chapter, this chapter discusses antecedents and outcome variables of the model which form the basis of this chapter:

1. The antecedents (key drivers) of LOC.
2. The outcome (endogenous) variables of LOC.

The chapter will discuss and present details of each of these categories using the exploratory findings (Chapter 6) and confirmatory factor analysis.

Data Sample

As discussed previously, this research adopted a web-based survey. Data collection, analysis of missing data and initial screening of the data for appropriateness for factor analysis (225 responses in Wave 2 and 192 in Wave 1) have been conducted in previous chapter (see Chapter 5). We use Wave 2 data (n=225) for confirmatory factor analysis in line with recommendation by Hair et al., (2010, p. 122), that is to validate the initial results from exploratory factor analysis, 'either with a split sample in the original data set or with a separate sample' altogether.

7.3 Structural Validity

For each construct utilised in this study, principal component analysis (exploratory factor analysis) was conducted (Chapter 6) followed by confirmatory factor analysis to validate the results. Further, multivariate regression analysis (more detail in following Chapters) was used to estimate the relationship between the constructs and test the hypotheses discussed in Chapter 5. In doing so, we examine the structure of the interrelationships and study the relationship among constructs (dependent and independent variables).

Thus, we used two multivariate techniques – factor analysis and the multiple regression model (Hair et al., 2010) – to estimate multiple and interrelated interdependence relationships and provide a technique to represent unobserved constructs in these relationships. Confirmatory factor analysis enables us to study latent constructs (unobserved variables) with the help of multi-item observable variables, that is, it is a measurement model which depicts the link between the latent variable and the observed variable while multiple regression to test the relationship between the constructs in this study (For multiple regression analysis, see Chapter 8).

Face Validity

To ensure face validity and identify any errors relating to the measurement of the constructs, to ensure that each item reflected accurately the latent construct, and to ensure that the items were comprehensible and unambiguous to the respondents in order to minimise response error (Hair et al., 2010), three academicians with extensive knowledge of the topic, two language experts were invited to review the draft of the questionnaire as the part of 'Front-end' stage of scale development. It should be noted that all outcome variables and cultural intelligence was adapted from the existing established scales (see Figure 5.1) were generally well received, while LOC, linguistic competence, willingness to invest and training were self-developed. (See Chapter 4 & 5). Multiple iteration of survey questionnaire led to a version of the questionnaire which was then sent to two industry experts (International Trade advisors) from British Chamber of Commerce (see Figure 3.1 for methodological approach). The industry experts were asked to be critical of any potential problems regarding the relevance of the items, difficulty in understanding or interpretation of the items, flow and feel of the questionnaire, complexities of the questionnaire for the target audience (SMEs) or

other problematic issues such as inappropriate or complex wording within the questionnaire. The survey questionnaire review was broadly positive, however some minor changes in regard to languages were accommodated. Table 7.1 below presents some examples of the changes made in the questionnaire.

Table 7-1. Sample of changes made in the questionnaire

Earlier version	Revised (final)
In our organisation, we have people who can sometimes try to understand people…	In our organisation, we have people who can understand people…
We are ready to invest in language competencies/services for translation of relevant documents if it can facilitate export/internationalisation growth.	We are ready to invest in language competencies or translation of relevant documents if it can facilitate export/internationalisation growth.
In our organisation, we encourage people to learn and use our international customer's language such as hello, thank you etc.	In our organisation, we encourage people to learn and use our international customer's language for simple expressions such as hello, thank you etc.
Please indicate names of countries/markets to which you are exporting.	Please indicate names of countries to which you are exporting.

An important step in developing a survey questionnaire is pre-testing the research framework. Prior to administering the final questionnaire, a pilot study of 12 respondents was conducted drawing from sample of the larger data set, that is, independent UK SMEs already exporting so that respondents could give their feedback on the effectiveness of the questionnaire, challenges while completing the questionnaire the survey design (Fink, 2003; Willis, 2005). This was verbally communicated to the researcher. The pilot study provided the researcher an early assessment of content validity (Churchill, 1979; DeVellis, 2003) and helped the researcher understand the effectiveness of the questionnaire with specific feedback from the respondents on time taken, ease of use, presentation, etc. The response from the pilot study was generally positive and the time taken for respondents to complete the questionnaire was approximately 15–20 minutes. A similar response was expected from the wider data collection.

After exploratory factor analysis in the previous chapter, we conduct confirmatory factor analysis for antecedents and outcome variables (see chapter 4 for confirmatory factor analysis of LOC scale).

7.4 Examination of the Psychometric Properties of the Antecedent Constructs to LOC (exogenous factors)

The antecedent constructs to LOC (see Chapter 5) consist of five constructs based on the literature review are: Linguistic Competency, Cultural Intelligence, Willingness to Invest, Training and Technological Awareness. The psychometric properties of these were assessed for inclusion in the study.

As for LOC, the data from Wave 2 (n=225) was explored on each antecedent construct. Since some of the scales were taken from existing scales while developing others, unlike LOC (please see Chapter 6 for sources of scales), initial exploration utilised exploratory factor analysis. The results show that KMO is above the recommended level of 0.5, with a value of 0.896 and Bartlett's test of sphericity revealed a significant result (chi-square (df) = 2611.049 (231); $P \leq 0.001$). The items naturally load on five constructs; however, initial principal component analysis was conducted on a multi-dimensional construct as cultural intelligence consists of cultural knowledge, cultural skill and cultural metacognition. The results indicate that, although cultural intelligence is multi-dimensional, all items load on a single factor within the larger antecedents construct group, with communalities of more than 0.5 indicating high internal consistency and will be addressed as one composite construct for our analysis.

Further, although Willingness to Invest and Training are identified as two separate constructs in the conceptual development, all items (W01–W03 and T01–T03) loaded on a single construct, indicating a concern for discriminant validity. Moreover, in Technological Awareness, three items have loaded in a unique way such that TechA01 and TechA03 form one construct while TechA01 and TechA02 form another, with TechA01 having significant cross-loadings on both factors.

Both models – the four-factor solution identified by exploratory factor analysis and the five-factor (conceptual) solution – was tested using confirmatory factor analysis; that is, the five antecedents and four antecedents' structure. First, assessing psychometric properties of the antecedents for LOC.

7.4.1 Reliability measures – Cronbach's alpha

A reliability measure of Cronbach's alpha (Churchill, 1979) was conducted in SPSS for the five-factor solution of antecedent constructs: Linguistic Competency, Cultural Intelligence,

Training, Technological Awareness and Willingness to Invest. The Cronbach's alpha score of 0.916 is larger than the recommended threshold of 0.70, indicating adequate internal consistency. The table 7.2 below represents the item analysis of all 21 items pertaining to antecedent constructs.

Table 7-2. Item total correlation for five-factor antecedent constructs of LOC (21 items)

Item-Total Statistics						
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Squared Multiple Correlation**	**Cronbach's Alpha if Item Deleted**	**Type**
W01	79.35	154.470	0.584	0.533	0.910	High reliability
W02	79.27	154.547	0.625	0.591	0.909	High reliability
W03	79.16	154.394	0.650	0.623	0.908	High reliability
T01	79.83	151.766	0.592	0.687	0.910	High reliability
T02	79.45	152.034	0.617	0.683	0.909	High reliability
T03	79.35	152.388	0.626	0.675	0.909	High reliability
TECHA01	78.68	163.146	0.382	0.341	0.913	High reliability
TECHA02	78.71	164.349	0.307	0.310	0.915	High reliability
TECHA03	78.92	159.842	0.508	0.364	0.911	High reliability
LC01	79.06	152.751	0.618	0.593	0.909	High reliability
LC02	79.26	150.525	0.653	0.707	0.908	High reliability
LC03	79.40	150.571	0.646	0.667	0.908	High reliability
LC04	80.29	161.260	0.333	0.217	0.915	High reliability
K01	78.92	158.140	0.589	0.478	0.910	High reliability
K02	78.79	158.595	0.599	0.501	0.910	High reliability
S01	78.71	161.244	0.492	0.357	0.912	High reliability
S02	78.95	159.506	0.550	0.458	0.911	High reliability
M01	78.86	159.628	0.537	0.481	0.911	High reliability
S03	78.94	158.978	0.571	0.491	0.910	High reliability
S04	79.02	161.361	0.450	0.359	0.912	High reliability
M03	78.96	159.802	0.583	0.473	0.910	High reliability
M02	78.80	160.297	0.550	0.421	0.911	High reliability

As presented in Table 6.8 above, each item pertaining to the antecedent factors indicates a high-reliability score (greater than 0.7); we also calculate Cronbach's alpha for each of the five antecedent constructs which was all above the acceptable limit. We constructed the factors using the mean of items pertaining to each antecedent construct before calculating the alpha.

7.4.2 Composite Reliability

Further, to assess the internal consistency, we also utilise composite reliability as presented in Table 7.3 below: -

Table 7-3. Composite Reliability (Antecedents)

	Linguistic competency	Willingness to invest	Training	Technological awareness	Cultural intelligence
Composite Reliability	0.824	0.832	0.885	0.647	0.872

The Table 7.3 above presents details of the Composite Reliability measure for five factor solution of the antecedent constructs (21 items). Composite reliability between 0.6 and 0.7 is considered acceptable; however 0.70 is desirable and, with the exception of Tech A, all demonstrate robust composite reliability (Table 7.3). A composite reliability score of 0.647 is cause for some concern as it is below the threshold of 0.70, suggesting doubt over the internal consistency of this construct's items. Close attention will be paid to items in technological awareness in tandem with other model-fit indices and validity tests and item purification will be conducted if required. A high construct reliability of above 0.8 indicates excellent internal consistency for the other four antecedent constructs.

7.4.3 Convergent Validity

To determine convergent validity, we examine the sign and magnitude of each item loading, as we consider each item as a separate approach to measure the dimensions. Each individual item loading is over 0.50 and statistically significant at $p<0.05$. It is generally accepted that standardised loading estimates should be at least 0.5 and ideally 0.7 or higher (Hair et al., 2010). Table 7.4 below presents standardised factor loadings of confirmatory factor analysis in AMOS 25.

Table 7-4. Confirmatory Factor Analysis for five-factor antecedents (with all 21 items)

Antecedents of LOC (n=225)					
	Linguistic Competency	**Willingness to invest**	**Cultural Intelligence**	**Training**	**Technological Awareness**
LC01	0.76				
LC02	0.90				
LC03	0.85				
LC04	0.37				
W01		0.71			
W02		0.81			
W03		0.84			
K01			0.69		
K02			0.71		
S01			0.59		
S02			0.67		
M01			0.70		
S03			0.71		
S04			0.54		
M03			0.68		
M02			0.63		
T01				0.87	
T02				0.83	
T03				0.84	
TechA01					0.65
TechA02					0.56
TechA03					0.64

The Table 7.4 above presents details of the confirmatory factor loadings of each item (21 items) for five -factor solution of the antecedent constructs (Language Competency, Cultural Intelligence, Willingness to Invest, Training and Technological Awareness). All items except one- LC04 has significant factor loadings of more than 0.50, indicating strong evidence for convergent validity. We move on to assess convergent validity using average variance explained (AVE).

Convergent validity using AVE is presented in Table 7.5 below.

Table 7-5. AVE for antecedent constructs

Average variance explained					
	Linguistic competence	**Willingness to Invest**	**Training**	**Technological awareness**	**Cultural intelligence**
AVE	0.559	0.623	0.719	0.381	0.433

The above table presents details of the Average Variance Explained measured of the antecedent construct (Language Competency, Cultural Intelligence, Willingness to Invest, Training and Technological Awareness). Average Variance explained (AVE) value of 0.5 or

greater suggests adequate convergent validity. Table 7.5 indicates Technological awareness items and cultural intelligence are lower than the 0.50 recommended threshold for AVE, suggesting that more error remains in the items than the variance explained by the latent construct structure. To shed further light, a discriminant validity test was conducted. It must be noted here that Technological awareness also showed concerns in internal consistency (composite reliability). Close attention will be paid to this construct during subsequent analysis.

7.4.4 Discriminant validity

Discriminant validity is one of the important criteria for the overall assessment of structural validity in studying the relationships among constructs, especially latent constructs. To interpret the strength of these relationships among latent constructs, it is paramount that a discriminant validity test is conducted and satisfied before we proceed with dependence techniques (see Chapter 8). Researchers have historically used Fornell and Larcker (1981) and cross-loadings to assess discriminant validity. According to Fornell and Larcker (1981), the square root of AVE of a construct must be greater than the correlation between the two constructs studied. This ensures that the items within a construct are specific to that construct and do not relate to any other construct in the analysis. If constructs have more in common and are highly correlated, it may be difficult to assess discriminant validity (Hair et al., 2010). Table 7.6 below presents the details of the discriminant validity measure for the five-factor solution of the antecedent constructs (21 items) using the Fornell- Larcker criterion.

Table 7-6. Discriminant Validity for five-factor antecedent constructs

	Convergent Validity		**Construct**				
	CR	**AVE**	**LC**	**WI**	**Tr**	**TechA**	**CI**
Linguistic competence (LC)	0.824	0.559	**0.748**				
Willingness to Invest (WI)	0.832	0.623	0.507	**0.789**			
Training (Tr)	0.885	0.719	0.581	0.830	**0.848**		
Technological Awareness (TechA)	0.647	0.381	0.373	0.552	0.416	**0.617**	
Cultural Intelligence (CI)	0.872	0.433	0.661	0.566	0.426	0.655	**0.658**

In the above Table 7.6, we clearly see although average variance explained is below the minimum threshold for technological awareness and cultural intelligence, the square root of AVE presented on the diagonal is still more than its correlation with any other construct

illustrating discriminant validity. Furthermore, except for the correlation among Willingness to Invest and Training, the square root of AVE for all constructs is higher than its correlation with related yet distinct antecedents. A similar issue was found in the exploratory analysis in the previous chapter. A closer inspection of the item loadings (standardised) in Willingness to Invest ranged between 0.7 and 0.85, while for Training all item loadings were above 0.8. Table 7.7 below presents the content for all items.

Table 7-7. Details of items pertaining to Willingness to Invest and Training

Item code	Details of the item
Training	
Tr01	We provide training…
Tr02	We encourage training…
Tr03	We support training…
Willingness to Invest	
W01	We invest in translation of relevant documents…
W02	We are ready to invest in language competencies…
W03	We are open to spending some of our budget…

It can be argued that Willingness to Invest is a wider construct, which could incorporate the Training construct; however, the theoretical considerations identify Training as a key component for LOC (see model development, Chapter 5) thus requiring individual attention. Nevertheless, we shall further assess the four-factor model (as empirically identified) and the five-factor solution (identified in the conceptual development) with the help of model fit indices. A further method of assessing discriminant validity is assessment of cross loading at an item level and necessarily seeks that each item loading is necessarily higher on its construct and smaller on other constructs. This is the basis of the exploratory factor analysis and it is not a statistical test (Hensler et al., 2014). More recently, Hensler et al. (2015) found that the above methods of assessing discriminant validity may not be accurate and recommended the HTMT ratio approach which utilises the heterotrait-heteromethod and monotrait-heteromethod. The heterotrait-monotrait (HTMT) ratio is the average of the heterotrait-heteromethod, relative to the monotrait-heteromethod.

The details of the discriminant validity measure for a five-factor solution of the antecedent constructs (21 items) using the HTMT ratio method of the correlation matrix is presented in Table 7.8 below.

Table 7-8. Discriminant Validity (HTMT ratio) for antecedents

	LC	WI	Training	TechA	CI
Language competence (LC)	-				
Willingness to invest (WI)	0.551	-			
Training (TR)	0.589	0.835	-		
Technological awareness (TechA)	0.385	0.548	0.419	-	
Cultural intelligence (CI)	0.704	0.574	0.426	0.662	-

The statistical threshold for the HTMT ratio of the correlation varies, with a conservative HTMT threshold being 0.85 (Kline, 2011) and liberal threshold 0.90 (Gold et al., 2001; Teo et al., 2008). HTMT using bootstrapping can also be utilised where the HTMT ratio should be significantly different from 1 for discriminant validity. As we see, all HTMT ratios are below the conservative threshold of 0.85 for all five antecedents; thus, we see no cause for concern regarding discriminant validity for the five-factor solution for antecedent constructs.

The AVE for Technological awareness and cultural intelligence are lower than the minimum threshold of 0.50 (Hair et al., 2010) which is a concern at this point in time. A closer look at the individual items identifies TechA02, with a factor loading of 0.56, and SA03, with a factor loading of 0.72, as potential problematic items. Model fit indices along with error estimates will be analysed to identify potential problematic items and will be further investigated at a later stage.

7.4.5 Diagnostic measures: model fit indices

We administered a survey on the antecedent variables to 225 respondents in Wave 2 who also answered questions on the key construct of LOC and the consequences of LOC. Confirmatory factor analysis was performed with the four factors empirically identified and assessed in the exploratory factor analysis and also the five-factor solution identified in the model development stage. It may be noted that item purification using diagnostic measures was not considered for antecedents, as only one out of 21 items (less than 10%) was considered to have minor specification issues and was retained for conceptual considerations. The Table 6.15 below presents the details of the model fit indices and chi-squared difference of measurement equivalence for five factors (21 items), five factors (20 items) and four factors (21 items).

Table 7-9. Model fit indices (antecedents)

Model	Chi- square (df)	Diff in chi square (df)	NNFI	CFI	RMR	RMSEA
Base Model with 5 antecedents and all 21 items	272.955 (199)		0.962	0.967	0.046	0.041
Model invariance with 4 antecedents and all 21 items	342.561 (203)	69.606(4)	0.930	0.938	0.052	0.055
Model invariance (alternative) with 5 antecedents and 20 items (except LC04)	237.194(179)	35.761(20)	0.963	0.973	0.04	0.038

As indicated in the above Table 7.9, the chi-square(df) is 272.955(199). The relative model fit indices were acceptable with NNFI=0.962, CFI=0.967 and GFI=0.905 while AGFI=0.880 was slightly below the threshold limit of 0.9(Marsh, Bella & McDoanld, 1988). Likewise, RMSEA=0.041 was within the acceptable limit of 0.08 (MacCallum et al., 1996) and RMR was 0.046 were slightly above 0.04 (Hu & Bentler, 1999). All model fit indices, except the chi-squared test, which is sensitive to sample size, are above the minimum required threshold (Hair et al., 2010), indicating acceptable model fit. Further, analysing the relative fit indices of all three models, suggests that the model invariance for the alternative model with five antecedents (20 items) indicates a slight invariance (improvement) over base model (21 items) such that change in CFI is 0.001 which is less than 0.01, and change in NNFI, RMR and RMSEA indicates only minor improvement ranging from 0.003 to 0.006. This suggest the alternative model is equally acceptable. However, model invariance for the four-factor antecedent solution decreases from 0.962 to 0.930 for NNFI and much more than 0.01 in CFI, and, hence, is rejected (Cheung & Rensvold, 2002). Further for good fitting models, smaller RMR and RMSEA is recommended, and both these indices increases slightly, 0.006 to 0.014 respectively making the five- factor (all 21 items) a better fit than four- factor solution. Hence the four -factor solution (as identified by the principal component analysis), is not accepted and five factor antecedent solution (21 items) is identified.

7.5 Examination of the Psychometric Properties of the Outcome Variables (Endogenous)

The psychometric properties of the outcome variable were assessed with the same tools of statistical analysis used in previous sections for LOC and its antecedent constructs. The techniques used are composite reliability, convergent and discriminant validity, and an

assessment of model fit. The outcome variables are: - Export Orientation, Networking capability and Export performance.

7.5.1 Diagnostic measures: model fit indices

Results from the exploratory factor analysis in the previous chapter indicate three distinct outcome variables, which are tested using multiple fit indices (Kline, 2005). The Table 7.10 presents the details of the model fit indices of the confirmatory factor analysis for Outcome Variables.

Table 7-10. Model fit (Outcome Variables)

Model	Chi-square (df)	AGFI	NNFI	CFI	RMR	RMSEA
Base Model with 3 outcome variables and all 18 items	218.925 (132)	0.872	0.944	0.951	0.04	0.054

As seen in Table 7.10 above, a three-factor solution provides a good model fit. Hence, considering the theoretical underpinnings of the factor identification in prior literature and model fit indices, we shall use three outcome variables for the assessment of the predictive validity of the key construct – LOC. In an attempt to shed further light on the consistency of the outcome variables, reliability and validity tests were conducted.

7.5.2 Reliability and validity measures of the scale items

Having established the three outcome variables with a good fit (export orientation – 11 items, networking capability – 3 items, and export performance – 4 items), reliability and validity test are presented below.

Reliability – Cronbach's alpha

The reliability test in form of Cronbach's alpha coefficient of 0.912 suggests high reliability and indicates strong internal consistency for the established outcome variables. The Table 7.11 below displays an item analysis: corrected item- total correlation of 18 items of the outcome variables export orientation, networking capability and export performance.

Table 7-11. Item -Total Analysis of Outcome Variables (18 items)

Item-Total Statistics						
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Squared Multiple Correlation**	**Cronbach's Alpha if Item Deleted**	**Type**
NC01	61.88	114.445	0.593	0.597	0.908	High reliability
NC02	61.99	113.719	0.633	0.622	0.907	High reliability
NC03	62.21	114.416	0.541	0.462	0.910	High reliability
EIG01	62.32	108.690	0.690	0.510	0.905	High reliability
EIG02	61.91	113.969	0.660	0.497	0.906	High reliability
EIG03	62.16	112.456	0.677	0.503	0.906	High reliability
EIG04	62.24	112.431	0.625	0.469	0.907	High reliability
EID01	62.12	115.397	0.547	0.462	0.909	High reliability
EID02	62.19	111.644	0.667	0.521	0.906	High reliability
EID03	62.22	113.885	0.586	0.484	0.908	High reliability
EIR01	61.59	121.797	0.323	0.272	0.914	High reliability
EIR02	62.04	113.061	0.641	0.489	0.907	High reliability
EIR03	61.81	115.385	0.615	0.458	0.908	High reliability
EIR04	61.76	116.145	0.591	0.424	0.908	High reliability
Export Sales	62.47	117.679	0.555	0.522	0.909	High reliability
Export Profit	62.45	116.597	0.549	0.619	0.909	High reliability
Export Sales Growth	62.52	116.796	0.521	0.575	0.910	High reliability
Market entry	62.66	120.028	0.379	0.377	0.913	High reliability

7.5.3 Composite Reliability

The Table 7.12 presents details of the composite reliability measure for three outcome variables: export orientation, networking capability and export performance (18 items)

Table 7-12. Composite Reliability for three outcome variables

	Networking capability	**Export orientation**	**Export performance**
Composite Reliability	0.836	0.890	0.838

Table 7.12 above clearly indicates that composite reliability, which measures the internal consistency of each construct, is higher than the threshold of 0.70, indicating strong reliability for all three outcome variables.

7.5.4 Convergent Validity

The Table 7.13 below presents the details of the convergent validity (average variance explained) measure for three outcome variables (18 items)

Table 7-13. Convergent Validity (Outcome Variables)

	Networking capability	Export orientation	Export performance
AVE	0.631	0.429	0.570

As seen in Table 7.13 above, the AVE values for networking capability and export performance are above the minimum threshold of 0.50; however, export orientation is below this threshold. The low AVE suggests that more error remains in the items than the variance explained by the latent structure imposed on the measure and items within export orientation will be closely assessed for further analysis. However, it should be noted here that export orientation comprises the dimensions of export information generation, export information dissemination and export information responsiveness.

7.5.5 Discriminant validity (sensitivity analysis)

The Table 7.14 presents the details of the Discriminant validity measure for three outcome variables (18 items) using the Fornell–Larcker criterion and HTMT ratio method

Table 7-14. Discriminant Validity (Outcome Variables)

Discriminant Validity (Fornell and Larcker criterion)				
	AVE	**Networking capability**	**Export orientation**	**Export performance**
Networking capability	0.631	**0.795**		
Export orientation	0.429	0.725	**0.655**	
Export performance	0.570	0.409	0.588	**0.755**

Discriminant Validity (HTMT ratio)			
	Networking capability	**Export orientation**	**Export performance**
Networking capability	-		
Export orientation	0.718	-	
Export performance	0.423	0.583	-

Note: The square root of the average variance extracted is on the diagonal and is in bold

Discriminant validity, as displayed in Table 7.14 above poses challenges for export orientation and networking capability using the Fornell–Larcker technique, as the correlation between the two is 0.725 and is higher than the square root of AVE for export orientation (0.655).

Nevertheless, Hensler et al. (2014) identified that the above methods to assess discriminant validity may not be accurate and recommended the HTMT ratio approach which uses the heterotrait-heteromethod and monotrait-heteromethod. The statistical threshold for the HTMT ratio of the correlation varies, with a conservative HTMT threshold being 0.85 (Kline, 2011). Since all HTMT ratios are below the conservative threshold of 0.85, we see no cause for concern regarding discriminant validity for the three outcome variables.

7.6 Conclusion

This chapter explored the psychometric properties, reliability and validity of the antecedents and outcome variables of the conceptual framework for this research, that is, its five-factor solution for antecedents (micro-macro mechanism) that facilitate development of LOC: Language Competence, Cultural Intelligence, Willingness to Invest, Training, and Technological Awareness and its three outcome variables: export orientation, networking capability and export performance.

The confirmatory factor analysis for antecedents and outcome variables was conducted to examine and test for psychometric properties, composite reliability and average variance explained, and were within the acceptable limit (Bagozzi & Yi, 2012). Further, results show item largely loaded on the intended constructs, showing loadings above the recommended 0.40 which confirms convergent validity and HTMT ratio was less than 0.85 which signifies discriminant validity (Hensler et al., 2015; Kline, 2011) Furthermore, multiple model fit indices (Chi-square (df), CFI, AGFI, GFI, NNFI, RMR and RMSEA) for both five factor antecedent solution and three factor outcome variables were within acceptable limit demonstrating overall fit (Kline,2005; Hair et al, 2010) indicating the structural validity of these constructs and that the model was fit to test the theory. The following chapter tests the hypothesis developed in Chapter 5 for the variables in this study.

Chapter 8- Results from Hypothesis Testing

8.1 Introduction

The chapter aims to further explore and assess the validity of the newly developed scale – LOC and how it behaves in a nomological network. Therefore, following the previous chapter where the initial construct was developed and validated using multiple interdependence techniques, this chapter aims to measure the relationships among the various constructs within the model identified in Chapter 5.

The building of a structural model focuses on a well-defined research plan and incorporates the conceptual development of the model, detailing the relationships to be investigated and the empirical validation of the conceptual model (Hair et al. 2010). Previous chapters have addressed the conceptual development of the LOC (Chapter 4) and hypothesis development (Chapter 5) and have used interdependence techniques (correlation and covariance matrices, exploratory factor analysis and confirmatory analysis) to explore the item-item, item-construct and construct-construct relationships among the variables studied in this research, how the observed variables define the latent constructs (Chapter 4, 6 & 7).

Now, we move to the empirical validation of the conceptual model, the literature suggests the use of dependence techniques such as linear (simple) regression, multiple (hierarchical) regression analysis, SEM and path analysis to study relationships among independent and dependent variables (Hair et al., 2010). Dependence techniques act as a quantitative test for a theoretical model and provide statistical evidence for accepting or rejecting a hypothesis, as discussed in Chapter 5.

8.2 Multiple regression analysis

Multiple regression analysis is a dependence technique to analyse the relationship between one or more independent variables and a single dependent variable. Linear (simple) regression analysis predicts the changes in the dependent variable for a unit change in the independent variable. A regression model shows how a single dependent variable is affected by single/multiple independent variables. The ordinary least square (OLS) is used where regression parameters are estimated by minimising the sum of the squared residuals.

Multiple(linear) regressions facilitate one-way causation and are estimated using observed or mean-centred latent variables. On the other hand, SEM approach uses both variance and covariance techniques, enabling the study of both item- and construct-level relationships simultaneously while a path analysis technique is specified, using observed or mean centre constructs as in regression analysis, but allows the inclusion of multiple dependent as well as independent variables at the same time.

Multiple Regression (linear) Model (measured as $Y= b_0 + b_1X_1 +b_2X_2 +…+ e$) is one of the most widely used multivariate dependent techniques and measures regression coefficients ($b_{1,}$ $b_{2.}$) is a numerical value of the predictor-x (independent) variable on the predicted-y (outcome) variable. The purpose of multiple regression analysis is to establish the relationship between a dependent and one or more independent variables. It aims to not only measure the relative importance of the independent variables on the dependent variable but also to assess the magnitude and direction (positive or negative) of each predictor relationship. Furthermore, multiple regression analysis facilitates an understanding of the relationship among independent variables in their prediction of the dependent variable. That is, regression analysis provides a diagnostic analysis of the nature of the relationship between independent and dependent variables and among independent variables as a linear variate. This raises the key issue of multicollinearity between the independent variables and predictor variable, discussed in the following sections. One of the key limitations of multiple regression analysis compared to other dependence techniques is that it is a piecemeal regression, incorporating only one dependent variable at a time. Despite this limitation, multiple regression analysis uses correlation and standardised estimates, which are scale-independent, making interpretation easier. All standardised estimate values range between -1 and +1.

Multiple regression analysis, therefore, is a simple dependence technique that provides both explanations and predictions for researchers. In this research, we use this dependence technique – multiple (linear) regression – to test the hypotheses and cross-validate the results. Furthermore, diagnostic measures are incorporated to ensure that the model is not only valid for the sample data used but also to ensure its predictive validity and generalisation for the population. Pallant (2010) argues that multiple regression can be utilised efficiently in a research model to identify how well a set of variables predicts an outcome variable of interest, while also enabling the researcher to identify which set of independent variables is

the most important driver of an outcome variable. Since our research is primarily establishing the newly developing construct and the relative role of its antecedents in the development of LOC antecedents and its effect on specific outcome variables, and multiple regression enables us to study the relationships within the research model. Hence, this multiple regression analysis is utilised as an estimation method.

Finally, we also assess direct and indirect mediation effects (path coefficients) between the dependent variable – LOC – and independent (antecedent) variables as independent variables for the (endogenous) outcome variables. This is discussed further below.

Regression coefficients: In a multivariate regression analysis, each independent variable is weighted by the regression analysis process and weight estimates the relative contribution of the independent (predictor) variable to the overall prediction of the dependent variable. These weights (b_1, b_2) are called regression coefficients and facilitate an understanding of the impact of each independent variable on the dependent (outcome) variable. The set of regression weights form a regression variate, that is, a linear combination of independent variables that best predicts the dependent variable (Hair et al., 2010). Regression coefficients that estimate the change in the dependent variable for a unit change in the independent variable are known as raw coefficients. However, standardised regression coefficients measure the relative importance of each independent (predictor) variable on the dependent variable.

It is important to note that, for regression coefficients to be meaningful in predicting the dependent variable, it is critical that coefficients are significant statistically, that is, coefficients are significantly different from zero, and a *p*-value (significance level) < .01, .05 indicates significant coefficients at 99% and 95% confidence intervals.

Intercepts: Another important issue to be addressed in assessing the predictive power of the regression variate is the residual (e). Residual refers to the error in predicting the sample data. The assumption for regression analysis is that the error in the population is distributed with a mean of 0 and constant standard deviation.

We further discuss, 2 key main issues while identifying the variables in multivariate regression analysis are: -

Measurement error: Measurement errors refer to the degree to which a variable is an accurate and consistent measure of the concept being studied. Detailed discussion of the variable selection is presented in Chapter 4 and 5, and their reliability and validity have been reported in Chapters 6 and 7. Measurement error, for a dependent variable, can be problematic if substantial as in such cases, even the best independent variable shall be able to achieve predictive validity. The use of summated scales is recommended in regression analysis to mitigate for measurement errors (Hair et al., 2010).

Specification error: Probably, more important issue for independent variable is a specification issue and concerns with omission of relevant independent variables and/or the inclusion of irrelevant variables. The inclusion of irrelevant variables does not bias the relevance of other independent variables but may reduce the parsimony of the model and statistical significance of independent variable less precise reducing its practical significance. Omission of relevant variables, however, may not only create bias in the results but, if unrelated to other independent variables, may reduce the overall predictability of the model.

To address the specification error, it is paramount that the selected variables and their possible relationships should be based on strong theoretical foundations (see Chapter 4 & 5 for detailed discussion of this aspect).

As discussed in earlier chapters, the measurement properties of the variables in the model are critical when using a multivariate technique (see Chapter 7 for a discussion on the key continuous variables). Here, we draw attention to the control variables in the model before proceeding with the hypotheses.

Control variables

All control variables in the model – such as age of firm, exporting experience, number of export destination countries, number of employees – are continuous variables, but sector is a non-metric variable, identified as Manufacturing, Financial Services, Information Technology, Automotive, Retail and Other. We coded all six sectors using a reference-category dummy variables procedure and identified Manufacturing as a reference category. In this technique, the number of dummies created is *n*-1, where *n* is the number of categories and the reference category, Manufacturing in our case, receives a zero. The principal reason for identifying Manufacturing as the reference category is its relevance to exporting in

general, along with practical considerations of the sample data. The regression coefficients of the dummy variables presented below indicate deviations from the comparison group on the dependent variable (Hair et al., 2010).

Combining the data for analysis

A web-based survey was used for data collection, with data categorised into two sections: Wave 1 (n=192) and Wave 2 (n=225), which were used for exploratory factor analysis and confirmatory factor analysis respectively to test and re-test the psychometric properties of the variables.

For the multiple regression, the total sample data, is utilised to test the hypotheses and assess the nomological validity of the models. However, first, an independent *t*-test, or Student's *t*-test is conducted to identify if mean scores systematically different (greater or lower) for any variable in either of the two waves of data collection. It is acknowledged that, even when two samples are taken from the same population, as in our case, it is unlikely that the means of the two samples will be identical; hence, it is necessary to ensure that the responses from the two sets of samples (Wave 1 and Wave2) are not systematically different (ref). The independent *t*-test was conducted using SPSS 26 on the dimensions of the key construct – LOC, its five antecedents (linguistic competence, cultural intelligence, willingness to invest, training, technological awareness) and the outcome variables (export orientation, networking capability and export performance), indicating a *p*-value of >0.05, suggesting that the means of the two samples are not significantly different and are not a cause of concern in our study.

8.3 Sample Characteristics

For any country-level analysis, it is important to try to gather responses from the widest section of the population; hence the survey was distributed across the UK, across sectors, age of firm and exporting years. The only selection criteria were that the company had to be an independent UK company that exported and had fewer than 250 employees (European Commission, 2008). The Table 8.1 presents sample structure by size, age, sector/industry, number of years of experience and region within UK.

Table 8-1. Sample demographics

	Number	Percentage
Firm Size (n=417)		
Less than 10	109	26%
10-20	56	13%
21-50	89	21%
51-100	84	20%
101-250	76	18%
More than 250	3	-
Age (n= 417)		
Less than 5 years	90	22%
5-50 years	300	72%
More than 50 years	27	6%
Exporting experience (n= 417)		
Less than 5 years	143	34%
5-50 years	269	65%
More than 50 years	5	1%
Sector/Industry (n=417)		
Manufacturing	119	28%
Information Technology	57	14%
Automotive	15	4%
Finance	33	8%
Retail	15	25%
Others	89	21%
Region (n=341)		
England	197	58%
London (England)	80	23%
Scotland	36	11%
Wales	20	6%
Northern Ireland	8	2%

As seen in Table 8.1 above, the sample data had firms from manufacturing- 28%, information technology- 14%, finance- 8%, automotive- 4%, retail- 25% and others- 21%. Further, the sample has 109 (26%) businesses with fewer than 10 employees, 56 (13%) with 10–20 employees, 89 (21%) with 21–50 employees, 84 (20%) with 51–100 employees, 76 (18%) with 101–250 employees and three with more than 250 employees; 90 businesses of which started within the last 5 years, while 300 were between 6–50 years old and 27 businesses had existed for more than 50 years. Of our sample, 143 businesses had exporting experience of less than 5 years, 269 had exporting experience between 5–50 years and 5 had more than 50 years' experience. Efforts were made to get wider participation across UK, the sample represents England- 58%, London (England)- 23%, Scotland- 11%, Wales- 6% and Northern Ireland- 2%. Since, the data is widespread across sectors, age, size, exporting experience, region and sector, it is safe to consider the sample as representative of SME population in UK.

8.4 Test for assumptions for Multivariate Regression Analysis

Like any statistical technique, assumptions are made about the relationship between variables in multivariate regression analysis that impact the statistical procedure used (ordinary least squares or least squares). The main purpose is to ensure that assumptions are met while estimating and interpreting regression results. The key assumptions relate to the linearity, homoscedasticity, independence and normality of the error term.

Linearity/linear relationship: A basic assumption of any regression analysis is the linear relationship between dependent and independent variables, that is the degree to which the change in the dependent is related to the independent variable. For multivariate regression analysis, this can be analysed using **partial regression plots**. These plots indicate the relationship of one independent variable with the dependent variable while controlling for the effects of other independent variables, if any, on the dependent variable. The plots slope up or down, depicting the magnitude and direction of relationship.

Independence of error terms: A second assumption concerns the independence of the predicted (outcome) variable in the regression analysis and is measured by **plotting the residuals** against any or all predictors (independent variables). If the residuals are independent, the pattern on the plot appears random and does not identify any consistent pattern in the residuals.

Homoscedasticity: Homoscedasticity is a homogeneity of variance across independent variables. The presence of unequal variance is called heteroscedasticity and lead to concerns in interpreting and extrapolating the results of the sample to the population. In homoscedasticity, the variance of error terms (e) is constant over a range of predictor variables. Hence, heteroscedasticity must be addressed before any further analysis is undertaken. It is possible to test for homoscedasticity using the **Levene test** which assesses the variance of variables across any number of groups. A significance level (*p*-value) greater than 0.05 indicates that variances are not significantly different.

Normality of the error term distribution

The basic assumption for many popular multivariate statistical techniques is normality. Normality refers to the degree to which the distribution of the sample data corresponds to normal distribution. Normal distribution is a theoretical probability distribution for a

continuous variable where the *x*-axis plots all possible values of a continuous variable while the *y*-axis represents the probability of those values occurring. Two measures that facilitate the identification of non-normality are skewness and kurtosis. Normal distribution is evident if values of skewness and kurtosis are zero. Skewness is a measure of symmetry, that is, it describes whether the values are symmetrical across the distribution or concentrated at either end (left or right) of the distribution curve. Positive skewness indicates that the distribution is focused on the left while negative values indicate a rightward shift. Kurtosis, in contrast, is concerned with the height or otherwise of the distribution curve and indicates its 'flatness' or 'peakedness'. An easy and graphic way to test for normality in a set of independent variables in an equation with an adequate sample size is a **histogram of residuals**. If the sample size is not adequate, **normal probability graphs** can be used to check for normality in continuous variables. One of the simplest ways of addressing non-normality or heteroscedasticity (in a particular variable) is the transformation of the variable to achieve normality, such as log-normal or inverse distributions.

It is important to note that that the severity of non-normality for any data reduces with sample size; non-normality for a sample size of less than 50 can have a substantial impact on regression results while, for a sample size of 200 or more, the same degree of non-normality may be statistically negligible (Hair et al., 2010).

Descriptive statistics in SPSS 26 were utilised to test for these assumptions for the combined sample data and the descriptors did not reveal any deviation. It is important to account for this possibility before multiple regression analysis.

8.5 Results: Testing the Hypothesis

This section presents the result of the analyses that explore the relationship between antecedents of LOC and the outcome variables in the view of the research aim that is developing the LOC and establish the extent to which drivers determine the LOC and also, extend to which LOC influence export orientation, networking capability and export performance. Test details the direct effects of antecedent variables (Linguistic competence, cultural intelligence, willingness to invest, training, technological awareness) on LOC. The test was conducted to assess the direct relationship between LOC and outcome variables (export orientation, networking capability and export performance). The hypotheses were also

conducted to test for indirect effects of LOC on these performance variable, which is discussed in detail later but first the results of direct effects is presented below.

8.5.1 Hypothesis 1-5: Antecedents to LOC

H1-H5: Linguistic competence (H1), Cultural Intelligence (H2), Willingness to Invest (H3), Training (H4), Technological Awareness (H5) is positively correlated to LOC

Table 8.2 below shows a summary of the multiple (linear) regression analysis of antecedents (Linguistic competence, cultural intelligence, willingness to invest, training, technological awareness) and their impact on LOC.

Table 8-2. Summary of multiple regression analysis of antecedents (linguistic competence, cultural intelligence, willingness to invest, training, technological awareness) and their impact on LOC.

Hypothesis	Relationship		Std. coefficient	*t*-values	Sig. level	R^2		Hypotheses
	From	To				adjusted R^2	Change in adjusted R^2	
H1	Linguistic competence	LOC	0.209	7.039	0.000	0.454	-	Supported
H2	Cultural intelligence	LOC	0.230	8.067	0.000	0.567	0.114	Supported
H3	Willingness to invest	LOC	0.255	7.780	0.000	0.716	0.149	Supported
H4	Training	LOC	0.369	11.137	0.000	0.783	0.067	Supported
H5	Technological awareness	LOC	0.073*	2.913	0.004	0.787	0.004	Supported

The coefficient of determination (adjusted R^2), the amount of variance explained collective by five antecedents, is 0.787.

Summary of multiple regression model for (above) hypotheses with controls

The Table 7.3 below shows a summary of the multiple regression analysis of antecedents (linguistic competence, cultural intelligence, willingness to invest, training, technological awareness) and their impact on LOC, controlling for age of firm, sector, export experience of the firm, number of export destination countries, number of employees.

Table 8-3. Summary of multiple regression analysis of antecedents (Linguistic competence, cultural intelligence, willingness to invest, training, technological awareness) and their impact on LOC with controls

Hypothesis	Relationship		Std. coefficient	*t*-values	Sig. level	Hypotheses
	From	To				
H1'	Linguistic competence	LOC	0.208	6.853	0.000	Supported
H2'	Cultural intelligence	LOC	0.233	8.002	0.000	Supported
H3'	Willingness to invest	LOC	0.264	7.957	0.000	Supported
H4'	Training	LOC	0.357	10.408	0.000	Supported
H5'	Technological awareness	LOC	0.072*	2.854	0.005	Supported

8.6 Hypothesis Testing relating to the outcome variables of LOC

8.6.1 Hypothesis 6: Export Orientation

H6: LOC is positively correlated to export orientation.

The table below shows a summary of the simple regression analysis of LOC and its impact on export orientation.

Table 8-4. Summary of linear regression analysis of LOC on the outcome variable export orientation

Hypothesis	Relationship		Std. coefficient	*t*-values	Sig. level	Adjusted R^2	Hypotheses
	From	To					
H6	LOC	Export orientation	0.682	18.940	0.000	0.464	Supported

The coefficient of determination (adjusted R^2), which measures the amount of variance explained, is 0.464 for Export Orientation.

8.6.2 Hypothesis 7: Export performance

H7: LOC is positively correlated to Export Performance.

Table 8-5. Summary of linear regression analysis of LOC on the outcome variable export performance

Hypothesis	Relationship		Std. coefficient	*t*-values	Sig. level	Adjusted R^2	Hypotheses
	From	To					
H7	LOC	Export performance	0.392	8.319	0.000	0.151	Supported

The coefficient of determination (adjusted R^2), which measures the amount of variance explained, is 0.151 for Export Performance.

8.6.3 Hypothesis 8: Networking Capability

H8: LOC is positively correlated to networking capability.

The table below shows a summary of the simple regression analysis of LOC and its impact on networking capability.

Table 8-6. Summary of linear regression analysis of LOC on the outcome variable networking capability

Hypothesis	Relationship		Std. coefficient	*t*-values	Sig. level	Adjusted R^2	Hypotheses
	From	To					
H8	LOC	Networking capability	0.588	14.759	0.000	0.344	Supported

The coefficient of determination (adjusted R^2), which measures the amount of variance explained, is 0.344.

Summary of performance variables as an outcome of LOC

The table below shows a summary of the regression analysis of LOC and its impact outcome variables: export orientation, export performance and networking capability (export orientation, export performance, networking capability), controlling for control variables (age of firm, sector, export experience of the firm, number of export destination countries, number of employees).

Table 8-7. Summary of performance variables: export orientation, export performance and networking capability (export orientation, export performance, networking capability) as outcomes of LOC with controls.

Hypothesis	Relationship		Std. coefficient	*t*-values	Sig. level	Hypothesis
	From	To				
H6'	LOC	Export orientation	0.683	17.480	0.000	Supported
H7'	LOC	Export performance	0.346	6.809	0.000	Supported
H8'	LOC	Networking capability	0.575	13.292	0.000	Supported

Squared Multiple Correlations (coefficient of determination)

Given that the focus of this research is on LOC, it is important to assess the predictive validity of the construct. Therefore, R^2 is used to determine the predictive validity of the regression model of LOC (outcome) and assess how much of LOC is explained by its antecedents. R^2 is a

coefficient of determination measuring the explanatory power of the model and provides an estimate of the strength of the relationship between the variables in the model. That is, it estimates the variance in a dependent variable measure explained by its antecedents (Diamantopoulos & Siguaw, 2000; Schumacker & Lomax, 2004). We estimate R^2 for each independent (exogenous) variable and a change in R^2 as antecedents are added in the hierarchical regression model. The higher the R^2 value, the better the predictive validity of the model. As a general rule, R^2 should be higher than 0.5 to reflect the majority of variance in the model (Mackenzie, Podsakoff & Jarvis, 2011).

Please see the Table 8.8 below for comparative R^2 values for all the models identified in regard to LOC as an outcome variable and its antecedents as independent variables.

Table 8-8. Model Summary of antecedent variables on LOC as an outcome variable with and without controls

Model Summary (H1-H5)				
Model	**R^2**	**Adjusted R^2**	**SE**	**Durbin Watson**
Model 1	0.790	0.787	0.36221	
Model 2 (with controls)	0.797	0.790	0.35978	1.831

It is important to note that adjusted R^2, which measures the explanatory power of the multivariate regression analysis of antecedents on the newly developed construct LOC is 0.787 (ranges between 0 to 1) and increases to 0.790 after controlling for age of firm, sector, export experience of firm, number of export destination countries and number of employees, indicating that results are stable. Hence, the R^2 value of the model suggests that antecedents (drivers) provide a very good explanation for LOC. Moreover, Durbin- Watson statistics which measures the autocorrelation among the residuals in the regression analysis is 1.831. Durbin-Watson statistics ranges between 0 to 4. However, as a general rule of thumb, values ranging between 1.5 to 2.5, is considered acceptable (Field, 2009) where value of 2 indicates no autocorrelation while values below two indicate positive autocorrelation between residuals and values above two suggest negative autocorrelation.

Furthermore, we examine the R^2 of LOC on three outcome variables – export orientation, export performance and networking capability.

Please see Table 8.9 below for comparative R^2 for all the models identified in regard to outcome variables and LOC, with and without controls.

Table 8-9. Model Summary of performance variables: export orientation, export performance and networking capability (export orientation, export performance, networking capability) as outcomes of LOC with and without controls

Model Summary (Export orientation)				
Model (H6)	R^2	Adjusted R^2	SE	Durbin Watson
Model 1	0.465	0.464	0.49994	
Model 2 (with controls)	0.474	0.461	0.50093	2.009
Model Summary (Export performance)				
Model (H7)	R^2	Adjusted R^2	SE	Durbin Watson
Model 1	0.153	0.151	0.64709	
Model 2 (with controls)	0.192	0.170	0.63980	1.904
Model Summary (Networking capability)				
Model (H8)	R^2	Adjusted R^2	SE	Durbin Watson
Model 1	0.346	0.344	0.71026	
Model 2 (with controls)	0.356	0.340	0.71246	1.898

As seen in Table 8.9, the R^2 of LOC on export orientation is 0.465, 0.346 for networking capability and 0.153 for export performance. However, adjusted R^2, which accounts for sample size and is considered a better measure of overall model predictive accuracy (Hair et al., 2010), is 0.461, 0.170 and 0.340 for export orientation, export performance and networking capability respectively for models with controls. The adjusted R^2 values suggest that LOC provides a reasonable explanation for export orientation, export performance and networking capability. Further, inclusion of the controls leads to slight changes in the adjusted R^2 indicating the results are stable. In addition, Durbin- Watson statistics values of the respective models are 2.009, 1.904 and 1.898 and falls within the range of 1.5 to 2.5 indicating the autocorrelation between the residual within the model is relatively normal (Field, 2009).

8.7 Moderation Analysis

Moderation analysis assesses the extent to which a relationship between two variables changes in respect to a third variable, that is, a moderator (Baron & Kenny, 1986; Hayes, 2017) In other words, moderation helps us understand how the relationship between X and Y variables changes given incremental change in a moderator. Moderator variables not only affect the strength of the relationship between two variables but can also have an effect on the direction of the relationship (Hayes, 2015); they affect the nature of the relationship between the predictor and outcome variables, commonly known in statistical terms as an 'interaction'.

For the statistical analysis of moderation effects, it is recommended that the predictor, the moderator, and any other covariates are mean centred to reduce multicollinearity, improve interpretation (Aguinis & Gottfredson, 2010; Edwards & Bagozzi, 2000; Aiken et al., 1991) and to avoid overestimating the effect size. Testing for moderation consists of two steps:

Step 1: Identifying both predictor variable and moderator variable as independent variables and regressing them together on a dependent variable.

$Y = b_0 + b_1X_1 + b_2M_1 + e$ (where b_1 and b_2 are coefficients of predictor (X) and moderator (M) respectively)

Step 2: Creating three new variables: 1) mean-centred predictor, 2) mean-centred moderator, 3) an interaction term by multiplying mean-centred moderator and predictor. Next, all three – mean-centred predictor, moderator, and interaction term – are regressed on the dependent variable.

$Y = b_0 + b_1X_1 + b_2M_1 + b_3X_1M_1 + e$ (where b_3 is the coefficient for moderation effects)

We utilise this mean-centred regression analysis approach to assess the moderating effects of networking on export performance and export orientation.

Having assessed the direct link between LOC, antecedent variables, and the outcome variables in the above section, we move to test interaction effects of networking capability and LOC on export orientation and export performance. Networking capability refers to firms ability to start and develop new relationship (Mitrega et al., 2017) within international business context. Our conceptualisation of LOC is grounded in the dynamic capability literature (Teece et al. 1997) and relates to motivation and preparedness to develop and utilisation of language capabilities within SMEs and is oriented towards internationalisation. Thus, we argue that such behaviour is moderated by the networking capability of SMEs in international markets, which in turn affects the firm's ability to collect, disseminate and respond to market intelligence, that is, export orientation (Cadogan and Diamantopoulos, 1995) and can lead to enhanced export performance.

8.7.1 Hypothesis 9: Networking Capability as a moderator on Export orientation

H9: Networking capability positively moderates the relationship between LOC and export orientation.

Table 7.10 below demonstrates significant and positive interactions for Export Orientation.

Table 7-10. Moderation effects of networking capability on LOC and export orientation

	Unstandardised coefficients (SE)	**Standardised coefficients**	***t* -value**	**Sig.**	**Hypothesis**
Step 1					
LOC	0.463 (0.037)	0.533	12.451	0.000	
Networking capability	0.196 (0.033)	0.252	5.881	0.000	
Step 2					
LOC centred	0.467 (.037)	0.537	12.524	0.000	
Networking capability centred	0.211 (.035)	0.271	6.010	0.000	
LOC x Networking capability	0.038 (.028)	0.051	1.343	0.180	Not supported

Model Summary (Export orientation)					
	Adjusted R^2	**F Change**	**df1**	**df2**	**Durbin-Watson**
Step 1	0.504	211.232	2	412	
Step 2 (with interaction effect)	0.505	1.804	1	411	2.015

The coefficient of determination (adjusted R^2) for the interaction effects though is 0.505, the *p*-value > 0.001 signifies that hypothesis 9 is not supported.

8.7.2 Hypothesis 10: Networking capability as a moderator on export performance

H10: Networking capability positively moderates the relationship between LOC and export performance.

Table 7.11 below demonstrates significant and positive interactions for export performance.

Table 7-11. Moderation effects of Networking Capability on LOC and export performance

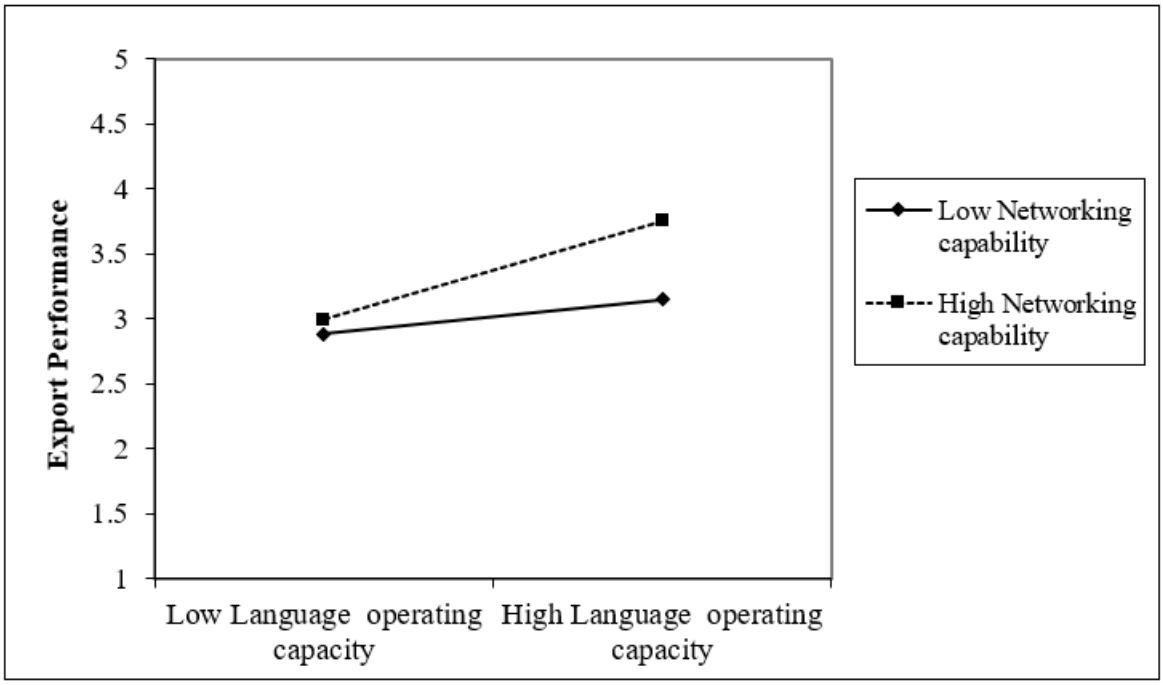
	Unstandardised coefficients (SE)	Standardised coefficients	t -value	Sig.	Hypothesis
Step 1					
LOC	0.245 (.050)	0.274	4.893	0.000	
Networking capability	0.129 (.045)	0.162	2.881	0.004	
Step 2					
LOC centred	0.256 (.050)	0.286	5.151	0.000	
Networking capability centred	0.178 (.047)	0.222	3.799	0.000	
LOC x Networking capability	0.122 (.037)	0.162	3.280	0.001	Supported

Model Summary (Export performance)					
	Adjusted R2	**F Change**	**df1**	**df2**	**Durbin-Watson**
Step 1	0.150	37.394	2	412	
Step 2 (with interaction effect)	0.169	10.756	1	411	1.813

The coefficient of determination (adjusted R^2), which measures the amount of variance explained for the interaction model, is 0.169. The *p*-value = 0.001 signifies that hypothesis 10 is supported. In addition, Durbin- Watson statistic of 1.813 is within the acceptable limit (Field, 2009).

Graph 7.1 below presents the two-way interaction effects of networking capability on export performance.

Figure 7-1. Moderation effects of Networking Capability on LOC and export performance



The coefficients are unstandardised results, revealing that networking capability has a significant positive effect on export performance. Further, in support of H10, networking capability positively moderates the relationship between LOC and export performance, such the effect of LOC on export performance is stronger for companies high on networking capacity.

An important consideration when utilising regression-based analysis for causality is endogeneity (Jean et al., 2016). Endogeneity refers to a situation in which an independent variable correlates with the standard error term or residual (e) leading to inconsistent estimation. The three important sources of endogeneity within OLS estimation technique are omission of variables, error in variables and simultaneous or reversed causality. Several methods are recommended within the literature to address endogeneity such as instrument variable, lagged independent variable including identifying the factors which have been proven to have effects on dependent variable such as export performance and export orientation in this study (Zaefarian et al., 2017) In general, several factors such size (no. of employees), age (no. of years since inception) and international experience (see Chapter 5 for details on control variables) were utilised following the recommendation of specific controls that should be correlated with dependent variable (Bharadwaj et al., 2011; Mizik & Jacobson, 2008) to examine whether their presence in the model has influences the relationship tested (main effects). All the relationships presented above were re-examined with inclusion of these controls and the results have been presented in above section (Table 8.3 & Table 8.7). The inclusion of the controls do not lead to any substantial change in the main effects (std. regression coefficients) indicating robustness of the results. Further, we also utilise Mediation analysis in the next section, which addresses some of the concerns with simultaneous and reverse causality.

8.8 Mediation Analysis

Mediation is a process in which a third variable, known as a mediator, interacts with exogenous (independent) and endogenous (dependent) variables of interest in such a way that change in the independent construct leads to change in the mediator, resulting in change to the dependent (endogenous) variable (Demming et al., 2017). Mediation Analysis is a

structured research design that aims to identify the process through which the independent (exogenous) variables affect the key outcome (endogenous) variables in path analysis.

In addition to the hypotheses discussed in above sections, we also test for LOC as a mediator between managerially relevant individual as well as firm level drivers of LOC and the outcome variables: export orientation and export performance. To investigate the mediating role of LOC, we use bootstrapping procedures (Zhao et al., 2010; Preacher & Hayes, 2004, 2008) to gain explicit estimates of indirect effects through inferential tests (Muller et al., 2005; Mackenzie et al., 1986).

The PROCESS macro in SPSS software allows us to determine the confidence intervals by bootstrapping and allowing to make statistical inferences about the strength and direction of the hypothesised indirect effects. Bootstrapping makes fewer assumptions about the nature of the data and is intuitive. Furthermore, it facilitates resampling, increasing the predictive power of the model and providing a more accurate estimate of a parameter than the analysis of one (n= 417) sample (Efron & Tibshirani, 1996). We calculated the indirect effects with 5,000 bootstrap resamples to determine whether the bias-corrected and accelerated 95% CIs contained 0 (Hayes, 2017–18, Model 4). For conceptual integrity and consistency, we include other independent variables as covariates.

8.8.1 Hypothesis 11: LOC as a mediator for antecedent construct and Export Orientation

This thesis builds on the acknowledgement that LOC is an appropriate concept to understand firm level language capabilities though language skills inherently exist within an individual (Welch & Welch 2018). In addition, dynamic capability as extension of resource-based view refers to it as an ability to utilise existing resources and skills and integrates organisational strategic goals (Eisenhardt and Martin, 2000; Hung et al, 2010), thus, we argue that LOC as a firm level process is the ability to develop (motivation and preparedness) language related skills and competencies for internationalisation. Further, the exogenous variables of LOC in the model such as linguistic competence, cultural intelligence, willingness to invest, Training and Technological awareness are relevant constructs in practice that act as the key drivers of LOC. In addition, given the competitive pressures and imperfect access to information (Hsu and Ziedonis, 2013) in the international markets for SMEs, it is argued that export (market) orientation may become difficult for SMEs if they do not have the requisite

individual linguistic competencies or cultural intelligence to operate in a particular market. Also, organisational level antecedents are equally important for the development and utilisation of such competencies, knowledge and skills. That is, individual and organisational level antecedents have different but complementary roles for firm-level language capabilities (LOC). The presence of LOC in SMEs is essential to transform these managerially relevant drivers for international performance. A good level of LOC helps to make better use of the drivers such that it leads to higher export orientation, and it has been argued that difference in language capabilities (LOC) within a SME affects its ability to generate, disseminate and respond to market intelligence in the international market (see Hypothesis 6). Thus, we propose that LOC as a process mechanism (Langley et al., 2013; Eisenhardt and Martin, 2000) mediates the relationship between these managerial relevant drivers and export orientation.

> *$H11_{(a\text{-}e)}$: LOC mediates the relationship between its antecedents – (a) linguistic competence, (b) cultural intelligence, (c) willingness to invest, (d) training and (e) awareness of technological and linguistic services – and export orientation.*

We used the PROCESS macro v3.5 to test the hypothesis (Hayes, 2017–18, Model 4) using the following procedure: one antecedent as an independent variable (*x*) and the others as covariates. The regression results are presented in Table 8.12 below and reveal that model fits our data well, explaining 78% variance in LOC {F(5,409) = 306; p< 0.000)} and 49% in Export Orientation {F(6,408) = 66; p< 0.000)}. The variance inflation factor values of the independent variables all score significantly lower than the suggested threshold of 10 (Neter et al., 1996), so multicollinearity is not a concern.

The empirical results indicate that all independent variables (antecedents) have a direct positive effect on LOC; and also show the positive effect of LOC on export orientation (β=0.3379; *p*=0.000).

Table 8-12. Estimated Regression Coefficients, Dependent Variables (n =417)

	LOC	**Export Orientation**	
Variable	Coef. (SE)	Coef. (SE)	Hypotheses
Intercept	-0.0472 (.1427)*	1.0528 (.1921)*	
Independent Variables			
Linguistic competence	0.1475 (.0211)*	-0.0026 (.0301)	
Cultural intelligence	0.2955 (.0370)*	0.1886 (.0536)*	
Willingness to invest	0.2125 (.0273)*	0.0628 (.0393)	
Training	0.2550 (.0231)*	0.0787 (.0355)	
Technological awareness	0.0883 (.0309)**	0.608 (.0421)	
LOC		0.3379 (.0665)*	$H11_{(a-e)}$
R	0.886	0.7044	
R^2	0.7896	0.4961	
MSE	0.1315	0.2382	
F	306.912	66.9524	
df1	5	6	
df2	409	408	
p-value	0.000	0.000	

Notes: The reported effect sizes are unstandardised ß coefficients. SE = standard errors.
** $p < .005$. * $p < .001$.

Please see below for direct effects of the antecedents on Export Orientation.

Table 8-13. Direct Effects on Export Orientation

Variable	**Direct Effect (SE)**	**LL**	**UL**	**Sig**
Linguistic competence	-.0026 (.0301)	-.0618	.0565	.9302
Cultural intelligence	0.1886 (.0536)	.0832	.2939	0.0005
Willingness to invest	0.0628(.0393)	-.0145	.1401	0.1113
Training	0.0787 (.0355)	.0090	.1485	0.0270
Technological awareness	0.0608 (.0421)	-0.0219	.1435	0.1494

Notes: n = 417, 95% confidence interval, 5000 bootstrap resamples. SE = standard error, LL = lower limit, UL = upper limit.

As can be seen in the above Table 8.13, the direct effect of the antecedent (exogenous) variables on the outcome (endogenous) variable: Export Orientation is insignificant at 95% confidence interval, except for training and cultural intelligence. The direct effect of latter is not surprising given the importance of cultural intelligence in extant literature in international marketing and business (Magnusson et al., 2013; Ott & Michailova, 2018; Tung & Stahl,2018). Further, analysis indicates that other three individual variables (linguistic competence, willingness to invest, technological awareness) in the study has no direct effect on the export orientation.

Please see below for the indirect mediation effects of LOC on Export Orientation.

Table 8-14. Indirect Effects on Export Orientation

Mediation effect for	Indirect Effect	SE	LL	UL	Hypothesis
Linguistic competence (H10a)	.0498	.0150	.0245	.0831	Supported
Cultural intelligence (H10b)	.0999	.0262	.0540	.1569	Supported
Willingness to invest (H10c)	.0718	.0200	. 0367	.1147	Supported
Training (H10d)	.0862	.0222	.0471	.1335	Supported
Technological awareness (H10e)	.0298	.0141	.0054	.0600	Supported

Notes: n = 417, bias-corrected and accelerated 95% confidence interval, 5000 bootstrap resamples. SE = standard error, LL = lower limit, UL = upper limit.

As shown in the Table 8.14 above at the 95% confidence interval, linguistic competence (.0245 .0831) excludes 0 (.0498; p< .05); that for cultural intelligence (.0540 .1569) also excludes 0 (.0540 .1569), as does willingness to invest (.0367 .1147), Training (.0471 .1335) and Technological Awareness (.0054 .0600) indicating significant and positive indirect effects of all the five antecedents on export orientation. We note that H11a, H11b, H11c, H11d, H11e are all accepted.

Thus, the analysis clearly indicates that all but two (cultural intelligence and training) of the antecedents have an insignificant direct effect on export orientation, while all the five antecedents have significant indirect effects on export orientation. This means that LOC fully mediates the relationship between export orientation and the three antecedent variables: linguistic competence, willingness to invest, and awareness of technological services, while it partially mediates the effect of training and cultural intelligence .

8.8.2 Hypothesis 12: LOC as a mediator for antecedents and export performance

Recent advocates of studying and understanding language capabilities through a process lens (Karhunen et al., 2017). In their view, the change from individual and functional role of languages to a process is appropriate and directed at specific goals such as export performance. Further, extant research studying the relationship between linguistic competence and export performance in SMEs have incongruence and the results are mixed (see William and Chaston, 2004). In addition, Foreman-Peck and Zhou (2015) suggest that

investment in language related resources/assets (organisational level antecedents) leads to the development and utilisation of language capabilities within SME facilitating better export performance. LOC as an organisational ability enables SMEs to develop and use these managerially relevant skills and competence such as linguistic competence and cultural intelligence when necessary for opportunity recognition, and expansion in international markets by firms, for international business performance. Thus, in accordance with the process mechanism (Langley et al. 2013; Eisenhardt and Martin, 2000), we postulate that LOC mediates the relationship between its (individual and organisational) antecedents such that presence of capacity to develop and utilise these skills and competencies is indispensable in order to make antecedents effective for export performance.

> *$H12_{(a\text{-}e)}$: LOC mediates the relationship between its antecedents – (a) language competence, (b) cultural intelligence, (c) willingness to invest, (d) training and (e) awareness of technological and linguistic services – and export performance.*

We followed a similar process method to Hypothesis 11 (see above) except that we included mean-centred LOC and a quadratic term of LOC for analysis. There is evidence of some degree of a quadratic positive relationship between LOC and the actual export performance measure in our study. We tested for linearity for the direct relationship, using SPPS 26, and found that all direct relationships were linear except one, that is, a positive relationship between LOC and export performance. There is some evidence for a quadratic relationship as the coefficient is significant for change in adjusted R^2 of 0.020 (see Appendix 8). Table 8.15 below presents the mediation results on export performance.

Table 8-15. Estimated Regression Coefficients, Dependent Variables (n =417)

	LOC	**Export Performance**	
Variable	Coef. (SE)	Coef. (SE)	Hypotheses
Intercept	-0.0472 (.1427)*	1.4849 (.4063)**	
Independent Variables			
Linguistic competence	0.1475 (.0211)*	0.0033 (.0392)	
Cultural intelligence	0.2955 (.0370)*	0.1265 (.0701)	
Willingness to invest	0.2125 (0273)*	0.0828 (.0513)	
Training	0.2550 (.0231)*	0.1137 (.0465)	
Technological awareness	0.0883 (.0309)**	0.1200 (.0547)	
LOC_C		0.0809 (.0911)	$H12_{(a-e)}$
LOC_C squared		0.1108 (0.0385)**	$H12'_{(a-e)}$
R	0.8886	0.4452	
R^2	0.7896	0.1982	
MSE	0.1315	0.4030	
F	306.9120	14.3725	
df1	5	7	
df2	409	407	
p-value	0.000	0.000	

Notes: LOC is mean centered. The reported effect sizes are unstandardised ß coefficients. SE = standard errors. ** $p < .005$. * $p < .001$

The empirical results indicate that all independent variables (antecedents) have a direct positive effect on LOC, and while LOC shows a positive quadratic effect on export performance. However, hypothesis 12 which stipulates LOC mediates the relationship between its antecedents and export performance is not supported.

Please see below for direct effects of the antecedents on Export Performance.

Table 7-16. Direct Effects on Export performance

Variable	**Direct Effect (SE)**	**LL**	**UL**	**Sig**
Linguistic competence	0.0033 (.0392)	-0.0738	0.0805	0.9327
Cultural intelligence	0.1265(.0701)	0.0114	0.2643	0.072
Willingness to invest	0.0828(.0513)	-0.0181	0.1836	0.1075
Training	0.1137(.0465)	0.0223	0.205	0.0149
Technological awareness	0.1200(.0547)	0.0125	0.2276	0.0288

Notes: n = 417, 95% confidence interval, 5000 bootstrap resamples. SE = standard error, LL = lower limit, UL = upper limit.

As can be seen in the above Table 8.16, the direct effect of the antecedent (exogenous) variables on the outcome (endogenous) variable: Export performance is insignificant at 95% confidence interval, for antecedent variables linguistic competence and willingness to invest and significant for cultural intelligence, training, and technological awareness.

Please see below for the indirect mediation effects of LOC on Export Performance.

Table 8-17 Indirect Effects on Export Performance

Mediation effect for	Indirect Effect	SE	LL	UL	Hypothesis
Linguistic competence (H12a)	.0119	.0152	-.0165	.0435	Not supported
Cultural intelligence (H12b)	.0239	.0287	-.0353	.0779	Not supported
Willingness to invest (H12c)	.0172	.0212	-.0217	.0611	Not supported
Training (H12d)	.0206	.0256	-.0297	.0712	Not supported
Technological awareness	.0071	.0102	-.0088	.0318	Not supported

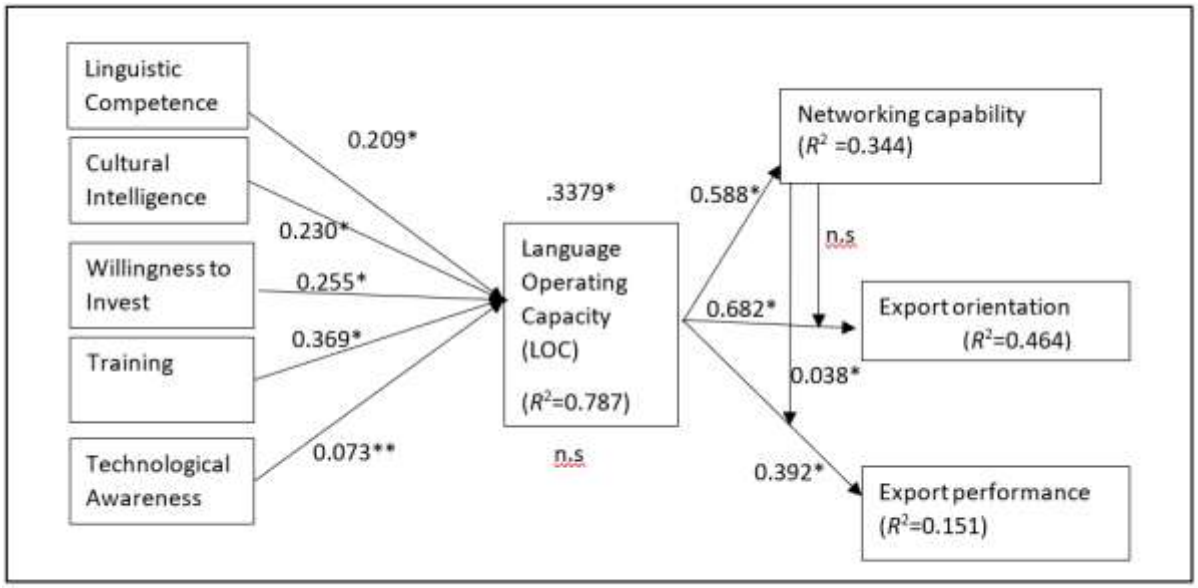
Notes: n = 417, bias-corrected and accelerated 95% confidence interval, 5000 bootstrap resamples. SE = standard error, LL = lower limit, UL = upper limit.

As seen in Table 8.17 above, the indirect effect of LOC on export performance is insignificant and hypothesis 12 which stipulates LOC mediates the relationship between its antecedents and export performance is not supported for our dataset. This is an unexpected outcome and is it perhaps because export orientation mediates the relationship between LOC and export performance. Nevertheless, there is an empirical support for quadratic term of LOC mediating the relationship between antecedents and export performance (see H12' β=0.1108; p<0.005 in Table 8.14).

Although there exists some literature on the quadratic effect of mediators on outcomes such that, if the relationship between independent (*X*) and mediator (*M*), or mediator (*M*) and dependent (*Y*), or both, are non-linear (Hayes & Preacher, 2010), and Loeys et al. (2012) recommend flexible mediating analysis for non-linear relationships. However, we could not find any literature in international business studies, other related business and psychology fields or elsewhere, that explores and explains the interpretation of quadratic direct effects of mediators, nor quadratic indirect effects. Therefore, we suggest this is an avenue for future research in the field of quantitative methods, to provide appropriate explanations for such findings and discuss the challenges in accepting the validity of such findings.

Finally, we present the summary of all the above hypotheses in Figure 8.2 below:

Figure 8-2. Visual Summary of empirical results



** $p < .005$. * $p < .001$.

In addition to testing for hypotheses (H1-H12), we also tested relationship for antecedents, two-dimensions and outcome variables results of which are broadly in line with the findings presented in the thesis. More specifically, the results of mediating effect of the two dimensions of motivation and utilisation of LOC individually on the two outcome variables export performance and export orientation indicate that the motivation dimension of LOC exerts a positive and significant mediating effect on market orientation, while the utilisation dimension has a positive mediating effect on export performance (see Appendix 9). Thus, these results further suggest stability of the research findings for the newly developed two-dimensional LOC construct and its nomological network of antecedents and consequences.

8.9 Conclusion

This chapter assessed and tested the relationship of the newly developed LOC construct with five antecedents (independent) variables and three outcome (dependent) variables.

The results for antecedent hypotheses (H1 to H5) for LOC derived from micro- and macro-mechanisms of organisational capability development were supported at p<0.001, except technological awareness (H5) which was supported at p<0.005, within a hierarchical multivariate regression analysis.

The newly developed LOC was also tested for direct effects on the outcome variables: export orientation, networking capability and export performance. These measures came from existing literature in international marketing and entrepreneurship and were identified as dependent variables. LOC was treated as an independent variable for the next set of hypotheses (H6–H8), which were supported, suggesting a direct and positive relationship between LOC and the outcome variables.

The study further assessed the indirect effects of moderation and mediation, in relation to H9–H12. There is support for a mediating effect of the newly developed construct on export orientation (H11), that is, LOC fully mediates the relationship between four of its antecedents – language competence, cultural intelligence, willingness to invest, training, and supportive use of technology – and export orientation, while it partially mediates the effect of cultural intelligence. However, a mediating effect (linear) of LOC on export performance (H12) is not supported for our data. Finally, the results indicate LOC exerts stronger effect on export performance for companies with higher networking capacity, that is, networking capability positively moderates the relationship between LOC and export performance (H10). Thus, these results provide empirical evidence for LOC as a new developed construct, which behaves well within the nomological network of the conceptually derived antecedent variables (micro-macro mechanisms) and outcome variables.

Chapter 9- Integration of Findings, Discussion and Conclusion

9.1 Introduction

This chapter offers an overall discussion of the findings from this thesis. First, we present a brief summary of the main objectives. Then we move to contributions to knowledge in the form of the key findings, theoretical and conceptual contributions to the language capabilities literature in international business and marketing. Finally, we also address practical contributions for firms and policy-makers that can be utilised by SMEs in their international marketing and business performance in international markets.

9.2 Research objectives – overview

One important objective of this research study was to investigate and develop LOC from a dynamic capabilities' perspective within SMEs. Since languages have been explicitly acknowledged as an essential aspect of the internationalisation process (Johanson & Valhne, 1997, p. 24), subsequent research (cf. Tenzer et al., 2017) primarily focused on individual language skills (linguistic competence) as a proxy for language capabilities in understanding the role of languages within a firm. For example, the part languages play in knowledge transfer (Peltropi & Vaara, 2014), power relationships (Tenzer & Puldelko, 2017), trust (Tenzer et al., 2014), and reduced cognitive performance (Volk et al., 2014) within multinational corporations. Recently, research (Welch & Welch 2018) presented a first conceptualisation of LOC for multinational corporations. However, the concept has not been developed to an empirically valid measurement instrument. Moreover, little is known about the role of language capabilities in SMEs. This thesis identifies three important research objectives:

1. To develop and operationalise LOC
2. To identify the antecedents (key drivers) of LOC
3. To determine the impact of LOC on relevant outcome variables

9.3 Overview of key findings

The conceptualisation of LOC in this research project is grounded in the dynamic capabilities literature (Teece et al., 1997), and relates to behaviour, that is, the utilisation and

development of language capability within a firm for the purpose of internationalisation. The key contribution made by our research is to develop and empirically valid a measure for LOC for SMEs and by examining its antecedents and outcomes. In the following section, we discuss and summarise three main findings associated with the three research questions for this thesis.

9.3.1 Language operating capacity – the development of a new construct to investigate language capabilities at a firm-level

This thesis has developed a new measure for LOC in the context of SMEs which has been defined as follows:

LOC involves the motivation and preparedness towards developing language-related capabilities (ability to develop) as well as the utilisation of these capabilities (ability to exploit) within the SME. That is, it is the ability to develop and exploit language capabilities to enable the SME's internationalisation as and when necessary.

This study findings reveal that LOC consists of two dimensions: (a) motivation and preparedness (ability to develop) and (b) actual utilisation. These dimensions are consistent with the dimensions of potential capacity and realised capacity explored in the literature (Zahra & George, 2002).

The development of LOC was based on a comprehensive scale-development process (Churchill, 1979; DeVellis, 2003), whereby an extensive literature review was utilised to first develop the construct and its dimensions, followed by item-generation for the latent construct which was facilitated by semi-structured interviews and the existing literature. Next, a multiple validation study was conducted to explore the structure and properties of the newly developed scale – LOC. The LOC construct and its dimensions were assessed for construct validity and reliability. The finding of this thesis show that the scale exhibited strong internal consistency (Hair et al., 2010). Further, confirmatory factor analysis was conducted to assess the psychometric properties of the two-dimensional construct, specifically composite reliability, convergent validity and discriminant validity (Fornell–Larcker and HTMT analysis). The two-dimensional construct exhibited high composite reliability and standardised loadings for all items were sufficiently high and significantly positive indicating convergent validity. In addition, average variance explained (AVE) range is acceptable and the

two dimensions were statistically different (discriminant) from one another (Kline, 2011). However, it is acknowledged that the two dimensions are correlated, as expected for a two-dimensional construct. Furthermore, the results of multiple fit indices recommended by Kline (2005) and Bagozzi and Yi (1998) indicate strong empirical evidence for a two-dimensional model of LOC.

The study further provides empirical evidence for LOC as a unique construct, which is well-positioned within a nomological network that further consists of cultural intelligence (Thomas et al., 2015) and individual competence (CEFR). The findings indicate that LOC is statistically different from these two related yet distinct constructs, hence demonstrating strong nomological validity and support for the construct. In other words, while related to cultural intelligence and individual competence, LOC proves to be a clearly distinguishable concept that delivers a unique contribution to understanding the challenges posed by language barriers in the internationalisation of SMEs.

9.3.2 Individual and firm-level antecedents of LOC

The present study further contributes to the LOC construct by identifying its key antecedents. In this endeavour, the research draws on the dynamic capabilities literature. Specifically, we distinguished two types of antecedent constructs: individual-level (micro) and firm-level (macro) mechanisms. These micro-macro mechanisms – linguistic competence and cultural intelligence (individual-level) and willingness to invest, Training and Awareness of Technological and Linguistic Services (firm-level antecedents) – are assessed with multiple regression analysis. All five antecedents turn out the significant drivers of LOC.

H1 states that individual-level linguistic competence positively impacts LOC. The results of the regression analysis support H1. **H2** posits that individual-level cultural intelligence positively impacts LOC. The results support H2.

These two antecedent findings empirically substantiate the role of micro- mechanism such as linguistic competence and cultural intelligence in language capabilities development within the SME, that is, knowledge of (foreign) language and cultural skills, metacognition and knowledge (Thomas et al., 2015) make an individual aware of the challenges language poses and enable firms not only to acknowledge these differences but also to adapt their style and behaviour to suit a specific business environment.

H3 states that the willingness to invest in language-related services is positively associated with LOC. The results of the regression analysis support H3. **H4** asserts that training is positively associated with LOC, which is also supported. **H5** suggests that awareness of the technological services available positively impacts LOC and is supported.

Each of the three firm-level antecedent constructs (Zahra & George, 2002) turn out to be important drivers of LOC. Further, the organisational antecedents of Training and Willingness to Invest are the two most significant drivers and determine how effectively individuals acquire and utilise language capabilities within a firm for internationalisation (Lane et al., 2006). Technological awareness was the least statistically significant antecedent. As discussed earlier, this may be attributed to the fact that, although technological awareness could facilitate the initiation of a conversation, the firm must take a long-term orientation and conscious decisions through Training and Willingness to Invest to develop LOC. Table 8.1 (below) presents the overall results of the multiple regression analysis of antecedent variables on LOC.

Table 9-1. Summary of hypothesis testing relating to LOC and its antecedent variables

Hypothesis	Result	Outcome
H1: Linguistic competence is positively related to LOC	Significant and positive	Supported*
H2: Cultural intelligence is positively related to LOC	Significant and positive	Supported*
H3: Willingness to invest is positively related to LOC	Significant and positive	Supported*
H4: Training for languages is positively related to LOC	Significant and positive	Supported*
H5: Awareness of technology and linguistic services is positively related to LOC	Significant and positive	Supported**

** $p < .005$. * $p < .001$.

Together, the five antecedent (two individual-level and three firm-level) constructs summarise the ability of the firm to develop and utilise language capabilities within a firm. Micro-macro clusters for antecedents are important, as the empirical findings of the regression analysis indicate that, together, these five antecedents explain almost 79% of the variance in LOC. Further, the results convincingly confirm hypotheses H1 to H5. Our findings also clearly indicate that organisational antecedents have a greater impact than the individual antecedents on the development of LOC.

9.3.3 Language operating capacity and firm performance in international markets

Exports are argued to be the most appropriate mode of internationalisation for SMEs (Dhanraj and Beamish, 2003; Love & Roper, 2015) as they incur limited commitment in international markets, preferable for SMEs. Therefore, we aimed to understand how LOC relates to the following outcome variables: SMEs' export performance, export orientation and networking capability.

The table 9.2 below shows a summary of the direct and indirect effects of LOC on these outcome variables

H6 states that LOC is positively associated with export orientation, which is supported. As expected, the findings show that LOC facilitates the generation and dissemination of international market intelligence and the responsiveness of the firm in developing new products and services for international markets. **H7** posits that LOC is positively associated with export performance and is supported. **H8** states that LOC is positively associated with networking capability and is also supported.

Thus, the findings suggest that LOC is directly related to all three outcome variables: export orientation, networking capability and export performance.

H9 postulates that networking capability moderates the relationship between LOC and export orientation; however, the results do not support this hypothesis. **H10** states that networking capability positively moderates the relationship between LOC and export performance, which is supported. Finally, **H11** states that LOC mediates the relationship between its antecedents (linguistic competence, cultural intelligence, willingness to invest, training and awareness of technological and linguistic services) and export orientation. The results support H11 and show that LOC acts as mediator between the antecedents and export orientation such that LOC partially mediates the cultural intelligence while fully mediating the other four antecedents: linguistic competence, willingness to invest, training and technological awareness. In addition, **H12** states that LOC mediates the relationship between the five antecedents and export performance. However, the results do not support this.

Table 9-2. Summary of hypothesis testing relating to LOC and its outcome variables

Hypothesis	Result	Outcome
H6: Language Operating Capacity is positively related to Export orientation.	Significant positive	Supported*
H7: Language Operating capacity is positively related to Export performance.	Significant positive	Supported*
H8: Language operating capacity is positively related to Networking capability.	Significant positive	Supported*
H9: Networking capability (positively) moderates the relationship between Language Operating Capacity and export performance.	Insignificant	Not Supported
H10: Networking capability (positively) moderates the relationship between Language Operating Capacity and export orientation.	Significant positive	Supported**
H11(a-e): Language Operating Capacity mediates the relationship between its antecedents – (a) linguistic competence, (b) cultural intelligence, (c) willingness to invest, (d) training and (e) awareness of technological and linguistic services – and export orientation.	Significant positive	Supported*
H12(a-e) Language Operating Capacity mediates the relationship between its antecedents (a) linguistic competence, (b) cultural intelligence, (c) willingness to invest, (d) training and (e) awareness of technological and linguistic services – and export performance.	Insignificant	Not Supported

** $p < .005$. * $p < .001$.

Hence, the findings in the Table 8.2 above illustrate that LOC, that is, language capabilities within SMEs can lead to an increase in its ability to generate and process market intelligence in international markets. Moreover, it also enhances the firm's networking capability and exerts influence on not only networking capability and export orientation but also on export performance.

Thus, we estimate a model with the conceptually relevant variables, the results of which are significant. All but two of the twelve hypotheses (main and indirect effects) in the study (see Figure 7.2) are positive and significant. We also performed each of the analysis with control variables (sector, age, number of employees and export experience) and the results remain stable, which indicates the robustness of the model.

9.4 Theoretical Implications

In this section, we discuss the theoretical contribution of this thesis.

Dynamic capabilities literature

The study contributes as a cross-disciplinary study to the dynamic capability theory and international marketing and business literature by introducing LOC as a specific international capability, a capability specific to the international marketing context, not a marketing capability extended in the international context, in line with recommendations by Morgan et al., (2018).

LOC constitutes an element of organisational internal capabilities that relate to the international context and settings specifically. One of the important contributions of this thesis is that we expand Welch & Welch's (2018) work on LOC by operationalising the construct within the context of SMEs. More specifically, the study distinguishes two separate dimensions of LOC: motivation and preparedness, and utilisation. Further, this research acknowledges the importance of understanding the role of languages in international business from a firm's perspective (Welch & Welch, 2018). In this sense, the dynamic capability literature provides an appropriate approach through which to understand and measure language capabilities at a firm level. Further, the study contributes to the language research stream in international business by providing a measure to assess the level of language capability within a firm, that is, researchers can utilise the measurement tool developed within this research to assess the collective language capabilities of an organisation, unlike the research so far in the field (Piekkari et al., 2015; Barner-Rasmussen & Bjorkman, 2005; Barner-Rasmussen et al., 2014) which typically utilises individual-level linguistic competency (cf. Tenzer et al., 2017).

In addition, LOC is a unique organisational construct as it can quantitatively assess a firm's language capability at an organisational level and differs from other language studies which are either qualitative or study linguistic abilities as a component of composite cultural or similar studies. LOC is a better measure of language ability within a firm than the linguistic competence which has been utilised as a proxy so far in the research (cf. Tenzer et al., 2017). Furthermore, we identify linguistic competence as one of the drivers of LOC, thus adopting an organisational process perspective on languages within a firm which is consistent with a social practice view rather than a functional or static view on languages (Karhunen et al., 2017).

In addition, our research clearly takes a micro-macro foundation perspective that yields greater insights into the multi-level context in which dynamic capabilities reside. So far, there was a strong emphasis on micro-foundations (individual drivers) in the conceptual discussion of dynamic capabilities literature, empirical research focuses primarily on firm-level (macro) antecedents (Eriksson, 2014). This study expands extant research by providing micro-macro foundation of mechanisms, that is, the collective role of individual drivers (micro) and firm-level drivers (macro) in developing and utilising language capabilities within SMEs. Thus, this research explicitly focuses both on individual-level antecedents (linguistic competence and cultural intelligence) and firm-level mechanisms (willingness to invest and training) to understand the development of LOC. In other words, both micro and macro mechanisms are essential for the effective development and utilisation of capabilities and should be used in conjunction with future empirical endeavours in the dynamic capability literature. Interestingly, the research findings indicate that contextual (macro) factors bear even more relevance, with training and willingness to invest having the strongest effect on LOC. These macro (firm-level driver) mechanisms findings are in line with the capability literature, where continuous learning and resource allocation have been identified as key drivers for capability development (Teece, 2014).

SMEs Internationalisation Literature

Furthermore, the organisational capability literature underpins firms' ability to respond to changes in the external environment for competitive advantage and focuses mainly on large enterprises, with some interest expressed in SMEs. This research focuses on language capability building for internationalisation specifically within SMEs. Building on the dynamic capability literature, we develop and empirically validate a model that identifies LOC, its antecedents as well as the effect of LOC on SME outcomes. This research identifies motivation and preparedness as important dimensions for SMEs' language capability development, which may or may not include multi-lingual skills. This is in contrast to multinational corporations which, by design, are multi-lingual and in which the majority of language research has been conducted so far. In this sense, this research contributes to a small group of studies that identifies capability-building as an important driver for performance within SMEs (Hernandez-Linares et al., 2021; Inan & Bititchi, 2015) as well as larger ones. Hence, the findings of this study provide evidence that SMEs need to develop capabilities to thrive in

international markets, and LOC is one such capability. However, more research is needed to develop such capabilities which could impact SME business performance.

Within international business research, research on environmental and contextual factors is primarily focused on institutional and cultural challenges and barriers. In the context of a global environment, venturing into a new market is both a business opportunity and also a challenge, and market intelligence and networking become issues of strategic value to overcome such challenges. This research shows that LOC is an organisational mechanism that can facilitate international performance. Specifically, LOC can be an important tool for adapting market intelligence to design and implement competitive product-market strategies which are multi-lingual by nature. Furthermore, it facilitates networking, not only with customers in foreign markets but also with other important stakeholder groups such as government agencies, competitors and business partners. The study is particularly valuable as LOC exerts an influence not only on soft measures of performance – such as networking capability and export orientation – but also on hard performance measures such as export performance within SMEs. In doing so, it provides empirical evidence for both a direct and positive link between performance and dynamic capabilities which is still a debated topic in the research (Barreto, 2010; Eriksson, 2014).

Furthermore, our results reveal that LOC provides the 'missing link' between the linguistic competences of individuals within SMEs and the performance of such firms. Several studies assessing the relationship between the linguistic ability of export managers/key decision-makers within SMEs and foreign market information and export behaviour (Stion & Rialp-Criado, 2010; Williams, 2003; Ursic & Czinkota, 1989; Turnbull & Welham, 1985). However, they lack consensus on the influence of language competency on exporting behaviour and performance within SMEs (Knowles et al., 2006). The present research reveals no direct link between linguistic competence and firm performance. Instead, LOC fully mediates the relationship between linguistic competence and firm performance. That is, LOC explains the mechanism that underlies the relationship between the existence of individual linguistic competence within an SME and the SME's performance. Thus, this thesis identifies LOC as an organisational mechanism and missing link within the nomological network of individual linguistic competence and cultural intelligence and is identified as critical for international marketing and business performance within SMEs.

In addition, this research also bridges the international marketing literature and the economics literature, in that the former literature stream shows mixed results for the relationship between the linguistic ability of an individual and the exports of a firm, while the latter literature stream clearly finds languages to be an important factor in international trade: economics studies illustrate the significant influence of languages on macro-variables such as foreign direct investment (Ly et al., 2018) and GDP (Foreman-Peck & Wang, 2014) at a national level.

The study, overall, provides a novel perspective for SMEs using capabilities perspective grounded in dynamic capability literature (Teece et al., 1997) as a theoretical foundation on how to handle international marketing and internationalisation by developing a firm-specific capability – LOC.

9.5 Implications for practice and policy-makers

The implications for SMEs exploring internationalisation are clear and presented below.

Overall, the research findings clearly lend weight to the role of language capabilities as key in international marketing and business performance among SMEs. Following a 3-year study, this research has identified the key components for international business success using (foreign) language capabilities.

First, the newly developed LOC has the potential to enhance the effectiveness of strategies deployed by export managers to increase their export performance by increasing their ability to harness export market intelligence and enhance the networking capability of the firm. This implies LOC can be utilised as an important self-assessment tool enabling SMEs to take stock of their language capabilities for adapting market intelligence to design and implement competitive product-market strategies which are multi-lingual by nature. Further, it facilitates networking, not only with customers in foreign markets but also with other important stakeholder groups such as government agencies, competitors, and business partners. Language capability, therefore, suggests a new type of ability for creating export market intelligence and networking capability to enhance export performance within SMEs.

Furthermore, this research does not only identify language capabilities relevance for export performance but also identifies, two cluster of managerially relevant drivers of language

capability. This implies that SMEs should hire personnel with linguistic competence and cultural intelligence. For instance, hiring proactively multi-lingual and culturally aware personnel in the workforce can enable firms to be prepared to use their resource base for export performance. Similarly, if firms have a multi-lingual and culturally conscious workforce, it makes them aware of the challenges that language diversity poses and can motivate firms to use multi-lingual promotional material and technical manuals to cater to their export market, rather than using only English.

In addition, we find that firm-level drivers, such as willingness to invest and training, are more important in enhancing LOC, which ultimately has a positive impact on export performance. These results suggest that awareness of readily available language technologies, such as GoogleTranslate, WeChat or similar services, can facilitate the language capabilities needed for the initiation of a conversation or initial exchange of information. Moreover, a longer-term approach towards the development of language capabilities can be achieved through training and/or investing in language translation and interpreting services. In this sense, firms in international markets should follow proactive, rather than reactive, approaches to developing language capabilities (Welch & Welch, 2017) which involve developing and hiring individuals with language and cultural competence, offering training and being willing to invest in external translation and interpreting services. This is especially important for SMEs, who often face resource constraints possibly with low levels of foreign language capability.

Furthermore, LOC as a diagnostic tool, provides SMEs with a measure of self-assessment and, thus, allowing it not only to assess SME´s preparedness (ability to develop) but also its utilisation of languages for international business. It is grounded within the capability literature (Teece et al., 1997). Based on the study findings, a web-based diagnostic tool has been developed for SMEs to identify their export-readiness, with language capability as a central feature. This diagnostic tool – the TalkGlobal app – is available on the Aston University website for SMEs (http://talkglobaladvisor.co.uk/), thanks to funding from the Higher Education Innovation Fund in 2019.

Since the findings indicate that language capabilities within a firm not only impacts soft performance measures such as export orientation and networking capability, but also significantly influences export performance itself, it is argued that policy-makers, and especially export promotion policies, could use these research findings to highlight the

importance of languages in internationalisation. Hence, there is a scope for export promotion policy-makers to recognise language capability as a factor impacting growth.

Although export promotion policies across the world, and specifically in the UK, have focused on product or service innovation (Turner et al., 2020), our research demonstrates the potential for improved international performance by addressing export capability generally within SMEs, in that the development of language capability can enhance international performance, specifically export performance directly, but also by influencing market orientation and the networking capability of SMEs.

This research also suggests the potential employability of individuals with language skills which has implications for the education sector. For SMEs in the UK, language capability has a significant impact on internationalisation strategies and is a way of gaining a competitive advantage. Hence, national-level policy-making bodies should prioritise language skills, based on this research, as a USP for Global Britain and should ensure that language skills are woven into the education policy agenda.

In an effort to impact policy decisions, the management report from this research (https://www.aston.ac.uk/research/bss/abs/loc30-report) was launched online on 11 May 2021 (Appendix 12 for list of registration), and the findings disseminated to industry partners, with more than forty attendees from academia, business, and business support services as British Chamber of Commerce. The report has also been submitted to the All-Party Parliamentary Group for Modern Languages (APPG-ML) and the author was invited to present at APPG-ML on 20 May 2021 (see Appendix 10 for list of MPs who attended). The research findings were received positively by members of the APPG-ML group, the academics present and The British Academy. Baroness Coussins, chairing the meeting, noted an opportunity in the forthcoming Skills and Post-16 Education Bill,2021 to bring much of this research to the fore and make the case for language training at a national level. This initiative was supported by a grant from Economic and Social Research Council in 2020. Further, the research findings have also been presented through a webinar with TheBusinessDesk.com to SMEs and language practitioners (see Appendix 11 for list of registration/attendees).

This study has, therefore, contributed towards influencing practice and policy-makers through illustrating how language capabilities can be measured within a firm and also

identifying managerially relevant drivers as key to the development of language capabilities (LOC) within firms. Furthermore, the research illustrates how language capabilities can impact business performance in international markets. International business is a business development opportunity, and firms exploring internationalisation, or already present in international markets, can enhance their performance by developing relevant language capabilities and should be supported in their endeavour to achieve successful internationalisation, irrespective of market or country.

9.6 Directions for future research and limitations

While this study makes a number of contributions to the existing literature on language capability development and its role in international marketing and business literature, it is acknowledged that the study is not without limitations. This section addresses these limitations and also suggests a number of avenues that exist for future researchers.

The focus of the study is on only SMEs, it excluded large firms. Hence, it would be interesting to consider the extent to which the findings of this research are applicable to larger organisations such as larger firms and multinational corporations. Future research could also benefit from exploring whether the findings of this thesis are applicable to other modes of internationalisation, for instance, entry mode type or number of subsidiaries, subsidiary performance, or joint venture success. It would be of interest to assess the applicability of LOC to larger firms with specific data collection and different modes of internationalisation. The respective influences on outcome performance may differ but this will help to further understanding of the role of languages in international business.

Second, the study was conducted in a particular geographical context – the UK. English is considered a lingua franca in international business literature and, therefore, findings in the UK can be considered applicable to most countries and economies. The research setting as UK adds strength to the arguments made in this research specifically because of the perception of English as a business language (Jenkins, 2018; Crick 1999). This research highlights even for primarily English-speaking economies, language capabilities have significant and positive relationship with export performance indicators. However, it would be interesting to consider the extent to which the findings of this research apply within different countries speaking different languages and, more specifically, English- speaking

countries such as Australia, New Zealand or the USA. Further, this is a new scale, it is recommended that the items within the scale (questionnaire) is tested, re- tested using multiple data sets in different context to facilitate further refinement of the scale. Furthermore, since UK is known for its low foreign language skills, it would be interesting to see how the scale behaves within different countries such as China or India with large non-English-speaking population.

Third, an important limitation of this study is its single source of data and since no identifying data was collected, it is not possible to obtain second informant data from the same firm/SMEs to validate the results. The survey, which was critical in studying relationships among variables of interest in this study, showed an absence of objective performance data. An effort was made to collect objective performance data, such as average sales, exports and profits in pounds sterling. These questions were invariably skipped by the respondents and the few data points collected were mostly unsound. This is not unexpected, given that respondent SMEs do not need or want to divulge sensitive financial information despite assurances of anonymity. Since no identifying information was sought, due to GDPR regulations, there was no way of triangulating the self-reported questionnaire with publicly available (in some cases) financial data. However, future researchers could use a research design such as to facilitate inter-rater reliability and cross validation by collecting data from multiple respondents within a firm.

Furthermore, despite these limitations, the study has enhanced the understanding of language capabilities' development and its role in international marketing and business performance specifically for SMEs. The main aim of this thesis was to empirically investigate the role of language capabilities for internationalisation; hence, the focus was on antecedents and outcome variables of LOC as a composite variable. We recognise, however, that there is a need for examining how antecedents affect the two dimensions of LOC and how these dimensions impact performance variables. In addition, since we utilise multiple regression analysis and LOC as a composite variable, it is advisable that future researchers model LOC as second-order formative index (reflective-formative construct) and compare with the results from second order reflective model (reflective- reflective measurement construct) presented in thesis.

Nevertheless, this research provided an initial understanding of the five key drivers of language operating: linguistic competence, cultural intelligence, firm willingness to invest, training and awareness of technological and linguistic services. These collectively explain almost 79% of variance in LOC and provide evidence for the positive and significant effects of LOC on the performance variables: export orientation, networking capability and export performance. Capabilities literature identifies external environmental characteristics (competitive intensity, technological and market environment) competition within the international market can have a major impact on new capabilities development as well as export performance (Morgan et al., 2004; 2012; O'Cass & Julian, 2003; Rose & Shoham, 2002) which has not been included within this research. There is a need to assess the impact of LOC on export performance across variety of export environments. For e.g., it would be interesting to conduct the research within specific sector or consider market (country) specific factors to include impact of market condition on SMEs export performance. Furthermore, strategic intent such as Entrepreneurial orientation (Miller, 1983; Covin & Wales, 2012) and market orientation could possibly have influential impact on the development of LOC and act as important antecedent which can be an avenue for future researchers. It is important note here that export (market) orientation (Cadogan et al., 1999) utilised in this research is not an attitudinal construct (as most other orientation constructs in marketing and strategy) but a behavioural construct.

In addition, while this research has gone one step further by assessing the mediating role of LOC on export orientation, future research could provide an in-depth understanding of the effects of both factors of language capabilities. These could be achieved through experimental/longitudinal design where a controlled environment could provide further insight into causal relationships.

Furthermore, the present study is cross-sectional in nature and therefore does not evidence of the causality in the estimated relationships However, since capability building and performance may have some lagged effects, it would be ideal if future research collect data over a period to establish causal effects.

Finally, we also study the moderating effects of networking capability. Future research should also investigate the moderating effects for other variables of interest in internationalisation, for instance, the distance constructs utilised in international business (Tung & Stahl, 2018). It

would also be interesting to study the relationship between language capabilities and degree of internationalisation, such as intensity and/or propensity to internationalise or speed of internationalisation (Ovaitt & McDoughall, 2005).

In conclusion, a number of avenues exist for future researchers. First, there is a need to consider multiple country samples; a large multi -country sample can be developed so as to refine the newly developed scale: LOC and establish multi-country equivalence but also facilitate significant and comparative analysis on role of languages in internationalisation. Second, the model within the research can be refined by identifying (antecedent and moderating) variables that direct and indirectly have impact on development of LOC to enhance the theoretical sophistication. Third, methodologically, a research design to collect multiple data from the same firm, possibly over a period of time to facilitate inter-rater reliability, cross validation and establish causality can be envisioned. Further, M-Plus could enable comparison of LOC as second-order formative index and second order reflective measurement model presented in thesis, and thus potential exist for more sophisticated analysis and could be a powerful tool for international marketing research.

9.7 Conclusion

In summary, this research makes a contribution as a cross-disciplinary research measuring language capabilities within SMEs for international business performance. Building on the theoretical foundations of dynamic capability, this unique approach to address language capabilities within a firm, that is, the LOC and its conceptual model (Figure 5.1), attempts to offer a coherent framework that integrates the concepts of linguistic competencies and cultural intelligence at the micro-level, and organisational mechanism (macro-level) to elucidate micro-macro mechanism for development and utilisation of LOC. Further, drawing on Welch & Welch's (2018), this study conceptualises LOC for SMEs by developing and empirically validating a more integrated framework. Moreover, consistent with the dynamic capability perspective (Teece et al., 1997), our results confirm that a firm's LOC has a positive impact not only on soft performance measures such as export orientation (Cadogan et al., 1999; Cadogan & Diamantopoulos, 1995) and networking capability (Mitrega et al., 2012) but also on the firm's overall export performance (Sousa & Novello, 2014; Morgan et al., 2012b).

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Appendix

Appendix 1: Informed Consent Form

INFORMED CONSENT FORM - INTERVIEW

Full title of the research: Role of Languages in International Marketing and Business Performance

Researcher's detail: Ankita Tibrewal (PhD) Researcher. Marketing and Strategy Group. Aston Business School. Aston University. Birmingham B4 7ET. E-mail: tibrewaa@aston.ac.uk

Please put your initials in the box if you agree with the statement:

I confirm that I have read and understood the research participant briefing for this research and have had the opportunity to ask questions.	
I understand that my participation is voluntary and that I am free to withdraw at any time without giving reason.	
I agree to take part in this research.	
I agree to have my data (after it has been anonymized) stored in a specialist data centre and potentially used for future research.	

Please tick box

Yes No

I allow the researcher to take notes during the interview. ☐ ☐

I agree to the interview being audio recorded. ☐ ☐

I give authorization for the use of any quotes I have said provided that they do not reveal my identity and are strictly used within the framework of this doctoral research. ☐ ☐

_____	_____	_____
Your name	Date	Your signature
_____	_____	_____
Researcher's name	Date	Researcher's signature

Appendix 2: Participant briefing leaflet

Full title of the research: Role of Languages in Internationalisation/Exporting

You are invited to take part in this research to understand role of language competencies in exporting/internationalisation among SME's. Within this context, the researcher seeks to understand what are the influential factors that will facilitate development of language competencies at a firm level and how and in what ways these language competencies facilitate internationalisation and exports for e.g. collecting market information from foreign markets, communication to the target market, negotiations, complying with regulations i.e. right from enquiry to delivery in export market. I shall be interviewing both SME's already exporters and non- exporters to understand the how language competencies impact business and business decisions in international context.

I am carrying out this research within the framework of my doctoral degree (PhD.) at Aston University, Birmingham, United Kingdom.

I am contacting you because you are a member of British Chamber of Commerce and/or have agreed to in principle to share your time and knowledge for this purpose. Before you decide whether to participate, it is important to understand why the research is being done and what it will involve. Please take time to read the following information. Please ask if there is anything that is not clear or if you would like more information.

What is the purpose of the research?

The main aim of the research is to understand and quantify the role of languages in internationalisation from an organisation perspective. To achieve this, we intend to develop a scale/ measurement tool which will help us first assess the ability of an organisation to develop language skills and then quantify the impact of such competencies on business performance.

To this end, I would like to learn, by interviewing you, about the specific factors that you think are important for exporting/ doing international business in relation to the language

competencies. Also, how and in what ways such competencies have facilitated business in making international strategies.

Do I have to take part?

Only if you want to. Taking part in this research is completely voluntary. If you decide to take part, you are free to withdraw at any time of the research. You may skip any questions that you do not want to answer in the interview, however, it would be great if you could answer all question as it will help the research objective immensely. You are also free to interrupt, terminate the session or withdraw your participation entirely at any time during or after the interview.

If I decide to participate, what do I have to do?

If you decide to participate, you will be interviewed by me (Ankita Tibrewal). I am a full-time research candidate at Aston Business School, Birmingham, United Kingdom. The interview will last between 45-60 minutes. The interview is a conversation between you and I will be asking you open- ended questions.

There are **no right or wrong answers** for any of the questions in the interview. I am just keen to understand your viewpoint. I will interview you once. In case I have any follow-up questions, I would contact you again by phone or by e-mail. At that time, you may again freely decide whether or not you wish to answer my questions.

Are there any risks?

I do not anticipate any risks to you from participating in this research other than those encountered in day-to-day life.

Are there any benefits?

Here are the most important benefits for you as a participant:

1. Opportunity to inform academic research about the issues faced by SME wanting to export in relation to language capabilities.
2. Opportunity to help assess/ understand key factors for language competencies within the organisation

3. Opportunity to highlight language capability as important for international trade in United Kingdom and to influence government policy debates on the under-funding for development of language capabilities within UK.

What will happen to my data?

This study is anonymous and strictly confidential. All the records of this research, and the transcription of the interview will be kept private on secure drives and no one other than myself and my supervisors (details along with contact information are at the end of this document) will have access to them. In case, transcriptions of the recorded interview will be undertaken by an external service provider, a confidentiality agreement will be established with the service provider.

Your and organisation's name will not appear on the transcript of your interview. Instead, a pseudonym (code) will be used. This is to ensure that your identity is protected. In addition, your participation in this study will not be shared with anybody like your colleagues, competitors, association or anybody.

All data generated by my research will be retained in accordance with Aston University's policy on Academic Integrity and will be kept securely in paper and electronic forms for a period of ten years after the completion of the research in accordance with that policy.

When I present the findings at conferences and publish papers to obtain my doctoral research, data will appear only fully anonymized, i.e. no one will be able to connect you to the research.

At the end of this research, I will send you an executive summary with the main findings, if you show your wish to receive it. This summary will NOT include any information that will make it possible to identify you.

If you allow me, I would like to record the interview so that I can transcribe it and analyse it afterward.

If you decide to withdraw from this research, you can allow me to use the data I have already collected or ask me to delete all your data.

What if I have questions in the future?

If you have questions, problems, concerns or comments at any point of this research, please contact me **at tibrewaa@aston.ac.uk**

You can also contact my supervisors, Professor Ad de Jong at adj.marktg@cbs.dk, Dr. Geoff Parkes at g.s.parkes@aston.ac.uk, Dr. Iftakar Haji at i.haji@aston.ac.uk, Dr. Susan Schwartz at s.schwarz@aston.ac.uk, Prof. Christof Backhaus at c.backhaus@aston.ac.uk

If you have any concerns regarding any ethical issues related with this research, you may contact the Committee Officer of the Aston Business School Research Ethics Committee (Dr. Carola Wolf at c.wolf@aston.ac.uk).

You will be given a copy of this form to keep for your records.

Appendix 3: Personal Background Information Sheet

Personal Background Information Sheet

This will be used to provide general information about the research participants and organisation

---

1. Please Tick Male_____ Female_____
2. How old are you? _____
3. What is the highest level of education that you have?
    a. None
    b. GCSE (O Levels)
    c. 6th form (A levels)
    d. Tertiary degree/Diploma
    e. Post graduate degree
    f. Other qualifications (please specify): _____
4. Have you lived or worked in any country different than United Kingdom? Please Tick Yes/No
5. Do you speak or understand other language than English?
    a. French
    b. German
    c. Welsh
    d. Scottish
    e. Polish
    f. Other languages (Please specify):_____
6. How do you describe the sector that you operate in/work for? _____
7. How long have you worked in this or similar industry/sector? _____
8. How long have you been working with this organisation? _____
9. What is you role/job title in the present organisation? (e.g. CEO/ Marketing Manager) _____
10. What is the total number of employees at present? _____
11. Are you exporting goods and services? Please tick Yes_____ No_____

Appendix 4: Semi- Structured Interview Guide (Phase 1)

Semi- Structured Interview Guide (Exporters)

Section A

1. How long have you been exporting? What are the markets that you are exporting?
2. When was the last export venture initiated? Can you take me through your decision-making process of exporting? What are the factors considered for exports in a market?
    - PROMPT: - 'Please walk me through the sales process from enquiry to delivery'
3. Modes of communication with your customers, agents and partners, third parties in general.
    - How much of it is important in your business to know the language of your customer. Please briefly elaborate your response.
    - Has not knowing (knowing) the local language led to issues (facilitated) interaction with business partners, agents, distributors? For example, i) new market entry ii) revenue growth in new/existing markets and iii) before/after investment in language competency.
    - Do you think not knowing (knowing) the language of your customer or business partners led to miscommunication (help you understand and serve them better) and do more businesses? So how did language facilitate sales process?
    - Has the (lack of) knowledge of local languages hindered (helped) you make contacts while exporting and help your business grow?
4. Can you share how and what have you done to facilitate the language skill required to do exports? Please provide brief explanation like for which market and what were your reasons to adopt those strategies.
    - PROMPT: - What do you do or have done to address the language needs identified for exports?
5. Have you ever faced a situation while starting to export or servicing the export market where you felt if you had the necessary language skill of the foreign market, you would be able serve the market better and do more business? Please briefly elaborate your response.
6. Has there been any exporting venture other than this one where you were faced with similar or different challenges in exporting?

7. Are you considering any new export venture in near future? Which markets are you exploring at the moment? What are the reasons for choosing them? How far do you think you are in the process? Do you think there are some issues involved in exporting to the new market?

Section B

About the company

1. Name and address of the company
2. Date of the establishment
3. No. of Employees
4. Industry

About the Participant (respondent)

1. Role in the organisation
2. How long have you been with this organisation?
3. What is your total experience and related experience of doing international business?

Appendix 5: Survey Instrument

Survey Instrument

The aim of this research is to examine the role of languages in internationalisation/exporting for Small and Medium-sized enterprises in the United Kingdom. Findings of this research will be useful for exporters and policy makers alike. The aim is to identify what and how language competencies within an organisation can facilitate internationalisation/exporting for small and medium business performance in the United Kingdom.

Your participation in the survey is extremely important for the completion of the research project. We do not need or ask any specific financial information of your organisation; we simply need your viewpoints regarding the role of languages for internationalization/exporting. The survey will take approximately 15 minutes of your time.

This research is conducted within the framework of my doctoral degree (PhD.) at Aston University, Birmingham, United Kingdom. Confidentiality and anonymity will be assured in accordance with Aston university Ethics committee procedures. Neither your name nor that of your company will be recorded. This is to ensure that your identity is protected.

Your participation in this research is voluntary. If you choose to participate, please click on the link below. There are **no right or wrong answers** for any of the questions in the interview. I am just keen to understand your viewpoint on the role of languages in exporting. By participating you get the opportunity to enter into a lucky draw for Amazon voucher worth £100 x 3. Each completed questionnaire will be included in the lucky draw and the winner will be informed as soon as data collection is over. Furthermore, in appreciation of your participation, a summary report of this study can be made available to you. If you would like to receive a copy, please let us know by responding to the mail.

If you have any specific questions regarding this research, please contact me at tibrewaa@aston.ac.uk or my local supervisor, Dr. Geoff Parkes at g.s.parkes@aston.ac.uk.The research has been approved by the University Research Ethics Committee, Aston University, and you can reach out to the Secretary of the Aston Business School Research Ethics Committee on r.hancock@aston.ac.uk if you have any concerns about the way in which the study has been conducted.

Thank you

Thank you for taking the time to read the information sheet. I am well aware that your participation in the research puts pressure on your busy schedule and I want to reiterate my sincere thanks for your contribution to this research project.

Ankita Tibrewal
Doctoral Researcher at Aston Business School
ASTON BUSINESS SCHOOL, BIRMINGHAM, UNITED KINGDOM

Part I: General Information

1. Sector that you work for/ how to classify your sector: (Code CT05)
   A. Manufacturing
   B. Information Technology
   C. Financial Services
   D. Automotive
   E. Retail
   F. Others (Please Specify) _____

2. Please choose the regions to which your organisation is exporting. Please tick all that apply. (D01)

(Exporting includes exporting directly by your firm, selling to foreign and local representatives or offices, and through your sales agent/office/branch in foreign markets).

A. Western Europe (including Scandinavian) B. Russia and Baltic countries C. Asia D. Eastern Europe

E. North America F. Africa and Middle East G. South/Central America H. Southern Europe

3. Please specify no. of countries/markets your organisation export to? _____ (CT06)

4. Please indicate names of the main countries/markets to which you export your products/services. (D02)

_____ _____

_____ _____

_____ _____

5. How long has your firm been in business? _____ years (Code: CT03)

6. How long has your firm been exporting? _____ years (Code: CT02)

7. Please specify no. of employees (globally) in your organisation. (Code: CT01)

A. Less than 10 B. 10-20 C. 20-50 D. 50-100 E. 100-250 F. More than 250

8. What percentage of your sales is exports/international business? (Code: OEP03)

A. 0-5% B. 5-10% C. 10-20% D. 20-50% E. Above 50 %

Part II: Factors relating to internationalisation and language related constructs

In this section, I would like to know your opinion on aspects of exporting and the role of languages in exporting/internationalisation. Please indicate your level of agreement by checking the boxes representing different levels of agreement, which you believe most appropriately reflects your judgment of your organisation.

1. Please select a response on the given scale ranging from 1 (strongly disagree) to 5 (strongly agree) that indicates the level of agreement or disagreement regarding linguistic competencies within your organisation (including yourself).

Statements	Strongly disagree 1	Disagree 2	Neither disagree nor agree 3	Agree 4	Strongly agree 5	Item code	Sources
In our organisation, we have people who can use everyday expressions and very basic phrases of foreign customer (market) language for e.g. Hello, Thank you, etc.						LC01	Self- developed (CEFR* A1 level)
In our organisation, we have people with a good understanding of frequently used expressions who can communicate using simple vocabulary of foreign customer (market) language.						LC02	Self- developed (CEFR* A2 level)
In our organisation, we have people who can understand, read and produce simple text on familiar/business topics in the foreign customer (market) language.						LC03	Self- developed (CEFR* B1 Level)
Approximately number of languages known (collectively) within the organisation.	1	2	3	4	5	LC04	Self- developed (Interviews)

In general, my perception is that our foreign customers speak good enough English.						LC05	Self- developed (Jenkins, 2017 and Interviews)

*CEFR=Common European framework for Languages

2. Please select a response on the given scale ranging from 1 (strongly disagree) to 5 (strongly agree) that indicates the level of your agreement or disagreement with the following statements with cultural knowledge, skills and competence within your organisation (including yourself)

Statements	Strongly disagree 1	Disagree 2	Neither disagree nor agree 3	Agree 4	Strongly agree 5	Item Code	Sources
In our organisation, we have people who know the ways in which cultures around the world are different.						K01	Thomas et al., (2015)
In our organisation, we have people who can share examples of cultural differences from personal experience, travel, education, work experience, reading, etc.						K02	Thomas et al., (2015)
In our organisation, we have people who enjoy talking with our international customers from different cultures.						S01	Thomas et al., (2015)
In our organisation, we have people who can try to understand our international customers from another culture by imagining how something looks from their perspective.						S02	Thomas et al., (2015)
In our organisation, we have people who can change their behaviour to suit our international customers and different cultural situations.						S03	Thomas et al., (2015)
In our organisation, we have people who can accept delays without becoming upset when in different cultural situations and with culturally different international customers.						S04	Thomas et al., (2015)
In our organisation, we have people who are aware of the cultural knowledge we use when interacting with international customers from another culture.						M01	Thomas et al., (2015)

In our organisation, we have people who are aware about the influence that culture has on their behavior and that of our international customers who are culturally different.						M02	Thomas et al., (2015)
In our organisation, we have people who are aware that we need to plan our course of action when in different cultural situations and with culturally different international customers.						M03	Thomas et al., (2015)

3. Please select a response on the given scale ranging from 1 (strongly disagree) to 5 (strongly agree) that indicates the level of agreement or disagreement with the following statements about willingness to invest in language competencies within the organisation.

Statements	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree	Item Code	Sources
We invest in translation of relevant documents (e.g. legal documents, marketing strategy / operations manual / website / packaging) or for any other purposes for our international clients/customers.						W01	Self -developed (conceptualised from Barner-Rasmussen et,2014., and Interviews)
We are ready to invest in language competencies or translation of relevant documents if it can facilitate export/internationalisation growth.						W02	Self -developed (conceptualised from Barner-Rasmussen et,2014., and Interviews)
We are open to spending some of our marketing/operations/strategy budget in language competencies when there is a need for growth and expansion in international markets.						W03	Self -developed (conceptualised from Barner-Rasmussen et,2014., and Interviews)

4. Please select a response on given scale ranging from 1 (strongly disagree) to 5 (strongly agree) that indicates the level of agreement or disagreement about training within the organisation.

Statements	Strongly disagree 1	Disagree 2	Neither disagree nor agree 3	Agree 4	Strongly agree 5	Item code	Source
We provide training/workshops leading to development of basic knowledge of an export market's (customer's) language.						T01	Self- developed (Conceptualized from Peltolorpi,2017)
We encourage training/staff development of basic knowledge of an export market's (customer's) language through courses or online resources.						T02	Self- developed (Conceptualized from Peltolorpi,2017)
We support training/staff development to undertake courses/ online resources or any such endeavours for enhancing their knowledge of export market's (customer's) language						T03	Self- developed (Conceptualized from Peltolorpi,2017)

5. Please select a response on given scale ranging from 1 (strongly disagree) to 5 (strongly agree) that indicates the level of agreement or disagreement with the following statements regarding awareness of technologies in relation to languages.

Statements	Strongly disagree 1	Disagree 2	Neither disagree nor agree 3	Agree 4	Strongly agree 5	Item code	Sources
We are aware of computer-assisted language technologies like machine translation software.						TECHA01	Self -developed (interview)
We make use of readily available digital technologies like Google Translate, WeChat and others for customer interaction.						TECHA02	Self -developed (interview)
We are aware of translation companies and the services provided by them.						TECHA03	Self -developed (interview)

6. Please select a response on given scale ranging from 1 (strongly disagree) to 5 (strongly agree) that indicates the level of agreement or disagreement with the following statements regarding perception/role of language capabilities for exporting within organisation.

Statements	Strongly disagree 1	Disagree 2	Neither disagree nor agree 3	Agree 4	Strongly agree	Item Code	Sources
In our organisation, we are aware of complexities around languages when conducting international trade and business activities.						LOC01	Self-developed Adapted from Kyos and Decotis, Scheinder et al., (1998); Patterson et al., (2005); Nair, (2006); Zohar, (2000); Kirati et al., (2016)
In our organisation, we frequently make use of foreign languages for various activities for e.g. communication, promotion of our products etc.						LOC02	Self- developed (Interview)
In our organisation, we have translated our product/service manuals, packaging materials, or website in foreign languages for the use of our international customers.						LOC03	Self -developed (interview)
In our organisation, we actively invest in resources with language awareness/ capabilities for our international market.						LOC04	Self-developed Adapted from Scheinder et al., (1998); Patterson et al., (2005); Nair, (2006); Zohar, (2000); Kirati et al., (2016)
In our organisation, we are aware of language challenges when exporting.						LOC05	Self-developed Adapted from Scheinder et al., (1998); Patterson et al., (2005); Zohar, (2000); Kirati et al., (2016)
In our organisation, we encourage people to learn and use our international customer's language for simple expressions such as hello, thank you etc.						LOC06	Self-developed (Interviews)
In our organisation, we hire people with multi-lingual exposure/experience to focus on exporting/ international trade.						LOC07	Self-developed Adapted from Scheinder et al., (1998); Patterson et al.,

							(2005); Nair, (2006); Zohar, (2000); Kirati et al., (2016)
In our organisation, we have deputed, hired an employee with foreign language skills relevant to the customer to promote and manage the international market.						LOC08	Self-developed (Interviews)
In our organisation, we promote endeavors/attitude towards learning and understanding an international customer's language.						LOC09	Self-developed Adapted from Scheinder et al., (1998); Patterson et al., (2005); Nair, (2006); Zohar, (2000); Kirati et al., (2016)
In our organisation, we seek to support/ invest in services from experts/translation companies to overcome language barriers.						LOC10	Self-developed Adapted from Scheinder et al., (1998); Patterson et al., (2005); Nair, (2006); Zohar, (2000); Kirati et al., (2016)
In our organisation, we are encouraged to share our experiences whether personal or professional about exposure to different languages.						LOC11	Self-developed Adapted from Scheinder et al., (1998); Patterson et al., (2005); Nair, (2006); Zohar, (2000); Kirati et al., (2016)
Our organisation publicly recognises those who are knowledgeable and contribute towards language competencies.						LOC12	Self-developed Adapted from Scheinder et al., (1998); Patterson et al., (2005); Nair, (2006); Zohar, (2000); Kirati et al., (2016))
In our organisation, we understand the complexities that language differences can create in international markets.						LOC013	Self-developed Adapted from Scheinder et al., (1998); Patterson et al., (2005); Nair, (2006); Zohar, (2000); Kirati et al., (2016)

In our organisation, we are open to people with different language capabilities and encourage and utilize their diversity to achieve our organisation objectives in international markets.						LOC14	Self-developed Adapted from Scheinder et al., (1998); Patterson et al., (2005); Nair, (2006); Zohar, (2000); Kirati et al., (2016)
In our organisation, we envision hindrance/disruption to our exporting/international trade when we/our representative are not able to manage local language complexities.						LOC15	Self-developed Adapted from Scheinder et al., (1998); Patterson et al., (2005); Nair, (2006); Zohar, (2000); Kirati et al., (2016)
In our organisation, we are committed to enriching language competence awareness to facilitate international trade/exporting.						LOC16	Self-developed Adapted from Scheinder et al., (1998); Patterson et al., (2005); Nair, (2006); Zohar, (2000); Kirati et al., (2016)
In our organisation, we openly share our thoughts/help each other with language/linguistic challenges.						LOC17	Self-developed Adapted from Kirati et al., (2016)

7. The questions presented below may/may not apply to you as entrepreneur. If you are not the entrepreneur then, please indicate your perception of the entrepreneur of the organisation. Select your response on given scale ranging from 1 (strongly disagree) to 5 (strongly agree) that indicates your level of agreement or disagreement with the following statements.

Statements	Strongly disagree 1	Disagree 2	Neither disagree nor agree 3	Agree 4	Strongly agree 5	Item code	Source
The owner(s) of this company places strong emphasis on research, development and innovation of products/services.						INN01	Adapted from Covin and Slevin (1989), Miller (1983), and Miller and Friesen (1982)
In this company, changes in products/services have been mostly of minor/major.						INN02	Adapted from Covin and Slevin (1989), Miller (1983), and Miller and Friesen (1982)
How many new products in terms of design/quality/new product line did your company launch during the last 5 years?	1	2	3	4	5	INN03	Adapted from Covin and Slevin (1989), Miller (1983), and Miller and Friesen (1982)

In dealing with competitors, the owners(s) of this firm typically initiates actions rather than responds to the actions of its major competitors.						PRO01	Adapted from Covin and Slevin (1989), Miller (1983), and Miller and Friesen (1982)
In dealing with competitors, the owner(s) is very often the first who introduces new products/services, administrative techniques and operating technologies, etc.						PRO02	Adapted from Covin and Slevin (1989), Miller (1983), and Miller and Friesen (1982)
The founder(s) of this firm typically seeks to avoid competitive clashes and has a preference of a "live-and-let live" approach.						PRO03	Adapted from Covin and Slevin (1989), Miller (1983), and Miller and Friesen (1982)
In international markets, the owner(s) of this firm has a proclivity for high risk projects (with chances of very high rate returns).						RIS01	Adapted from Covin and Slevin (1989), Miller (1983), and Miller and Friesen (1982)
When confronted with international decision-making situations involving uncertainty, the owner(s) typically adopts a cautious, "wait-and-see" approach in order to minimize the chance of making costly mistakes.						RIS02	Adapted from Covin and Slevin (1989), Miller (1983), and Miller and Friesen (1982)
The owner(s) believes that, owing to the nature of the international business environment, it is best to explore it gradually via conservative, incremental steps.						RIS03	Adapted from Covin and Slevin (1989), Miller (1983), and Miller and Friesen (1982)

8. Please select a response on given scale ranging from 1 (strongly disagree) to 5 (strongly agree) that indicates the level of agreement or disagreement with the following statements regarding exporting activities within the organisation.

Statements	Strongly disagree 1	Disagree 2	Neither disagree nor agree 3	Agree 4	Strongly agree 5	Item code	Sources
Our top managers/owners regularly visit our current and prospective export customers.						EIG01	Adopted from Cadogan et al., (1999,2002,2009) Miller et al, (2011)

We constantly monitor our level of commitment and orientation to serving export customer needs.						EIG02	Adopted from Cadogan et al., (1999,2002,2009) Miller et al, (2011)
We generate a lot of information in order to understand the forces which influence our international customers' needs and preferences.						EIG03	Adopted from Cadogan et al., (1999,2002,2009) Miller et al, (2011)
In this company, we generate a lot of information concerning trends (e.g., regulations, technological developments, politics, economy) in our export markets.						EIG04	Adopted from Cadogan et al., (1999,2002,2009) Miller et al, (2011)
We freely communicate information about our successful and unsuccessful export customer experiences across all business functions.						EID01	Adopted from Cadogan et al., (1999,2002,2009) Miller et al, (2011)
Important information concerning our major export customers is disseminated right down to the shop floor.						EID02	Adopted from Cadogan et al., (1999,2002,2009) Miller et al, (2011)
All information concerning our export competition is shared within this company.						EID03	Adopted from Cadogan et al., (1999,2002,2009) Miller et al, (2011)
When we find out that export customers are unhappy with the quality of our service, we take corrective action immediately.						EIR01	Adopted from Cadogan et al., (1999,2002,2009) Miller et al, (2011)

If a major competitor were to launch an intensive campaign targeted at our foreign customers, we would implement a response immediately.						EIR02	Adopted from Cadogan et al., (1999,2002,2009) Miller et al, (2011)
We are quick to respond to important changes in our export business environment (e.g., regulatory, technological, economic).						EIR03	Adopted from Cadogan et al., (1999,2002,2009) Miller et al, (2011)
We give close attention to after sales service in our export markets.						EIR04	Adopted from Cadogan et al., (1999,2002,2009) Miller et al, (2011)

9. Please select a response on given scale ranging from 1 (strongly disagree) to 5 (strongly agree) that indicates the level of agreement or disagreement with the following statements about networking capabilities within the organisation.

Statements	Strongly disagree 1	Disagree 2	Neither disagree not agree 3	Agree 4	Strongly agree 5	Item Code	Sources
Managers at our company have utilised personal/professional connections and networks with managers at export buyer/customer (e.g., export market retailer, wholesaler) firms.						NC01	Peng and Luo (2000) a; Park and Luo (2001) Luo, Hsu, and Liu (2008)

Managers at our company have utilised personal/professional connections and networks with managers of foreign supplier firms.						NC02	Peng and Luo (2000) a; Park and Luo (2001) Luo, Hsu, and Liu (2008)
Managers at our company have utilised personal/professional connections and networks with managers of export competitor firms.						NC03	Peng and Luo (2000) a; Park and Luo (2001) Luo, Hsu, and Liu (2008)

10. Please select a response on given scale ranging from 1 (strongly disagree) to 5 (strongly agree) that indicates the level of agreement or disagreement with the following statements about Value-based Selling and Co-Creation (VBSCC) within the organisation.

Statements	**Strongly disagree 1**	**Disagree 2**	**Neither agree nor disagree 3**	**Agree 4**	**Strongly agree 5**		
We work with our international customers to find what out what is needed to enhance their performance.						VBS01	Adapted from Mullins et al., 2019
To better understand our international/export customers' needs, we also try to understand our customers' customers.						VBS02	Adapted from Mullins et al., 2019 Kienzler at al,2019
We proactively focus on identifying opportunities to improve our international/export customers' business performance.						VBS03	Adapted from Mullins et al., 2019
We actively demonstrate to our international customers, the financial impact of working with us.						VBS04	Adapted from Mullins et al., 2019
An important part of our selling process is to demonstrate the business value of our offerings to the customers.						VBS05	Adapted from Mullins et al., 2019; Kienzler at al,2019

We routinely follow up the performance of our products and services.						VBS06	Adapted from Mullins et al., 2019
We spend time with the customer to create a shared understanding of the solutions required.						VCC01	Adapted from Ranjan and Reads, 2014, Ad de Jong et al, 2019
Our company treats our international customers as partners.						VCC02	Adapted from Ranjan and Reads, 2014, Ad de Jong et al, 2019

11. Compared with your industry average, how would you grade your company's export performance over the past three years on the following indicators?

Items	Much lower than expected 1	Lower than expected 2	Expected 3	Higher than expected 4	Much higher expected 5	Item Code	Sources
Average Export Sales						EP01	Cadogan, Kuivalainen, and Sundqvist (2009); Morgan, Katsikeas, and Vorhies (2012)b
Export Profit						EP02	Cadogan, Kuivalainen, and Sundqvist (2009); Morgan, Katsikeas, and Vorhies (2012)b
Average Export Sales Growth						EP03	Cadogan, Kuivalainen, and Sundqvist (2009); Morgan, Katsikeas, and Vorhies (2012)b
Market Entry (new market)						EP04	Cadogan, Kuivalainen, and Sundqvist (2009); Morgan, Katsikeas, and Vorhies (2012)b

On average, what has been the average export sales turnover of your company over the past three years? £_____ Code OEP01/Source: Cavusgil and Zou (1994); Matthyssens and Pauwels (1996)

Over the past three years, **approximately** what has been the average export profit (before tax) of your company? £_____ Code OEP 02/Source: Cavusgil and Zou (1994); Matthyssens and Pauwels (1996)

Part III: Participant profile information.

(Please provide following information for aggregate statistical purposes.)

1. Gender

A. Female_____ B. Male _____

2. Age

A. Less than 30 B. 30- 40 C. 41-50 D. Above 50

3. Professional Experience

A. Less than 2 years B. 2- 5Years C. 5-14 Years D. Over 14 years

International Experience (personal/professional)

A. Less than 2 years B. 2- 5Years C. 5-14 Years D. Over 14 years

4. Your role/job title in the present organisation:

A. Managing Director

B. Chief Executive Officer

C. General Manager

D. Director

E. Exporting Manager

F. Commercial Officer/Financial Director

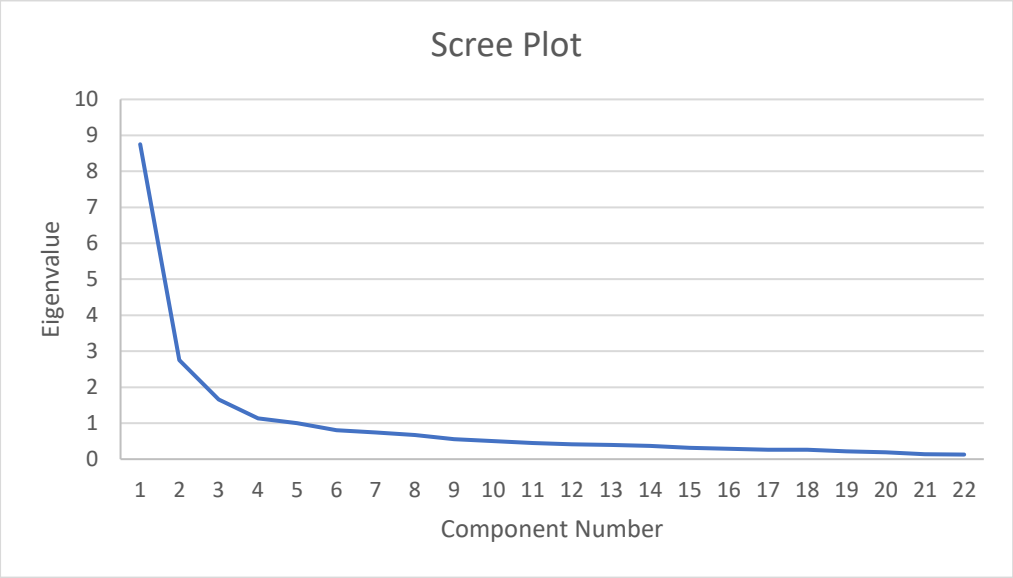
G. Others (please specify) _____

Appendix 6: Descriptive Statistics for the key constructs in the Study

Descriptive Statistics							
	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Networking capability	417	3.7668	.87606	-.862	.120	.920	.238
Export performance	417	3.2458	.70123	-.117	.120	.329	.238
Export orientation	417	3.7774	.68092	-.545	.120	.104	.238
LOC	417	3.6478	.78481	-.646	.120	.223	.238
Linguistic competence	417	3.6171	1.11286	-.796	.120	-.193	.238
Cultural intelligence	417	4.0600	.61144	-.738	.120	1.301	.238
Willingness to Invest	417	3.6387	.95632	-.732	.120	.223	.238
Training	417	3.2206	1.13125	-.357	.120	-.795	.238
TechA	417	4.1543	.63752	-1.106	.120	2.509	.238
Valid N (listwise)	417						

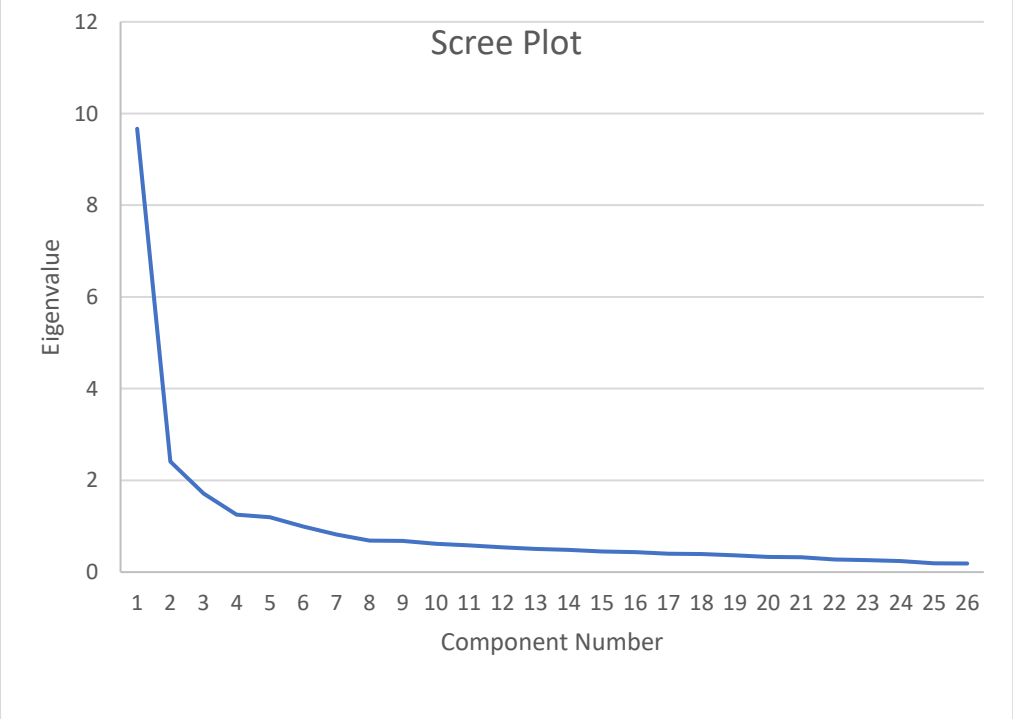
Appendix 7: Scree Plot for Antecedents and outcome variables

7a: Scree Plot for antecedent variable



Scree Plot for Outcome variables

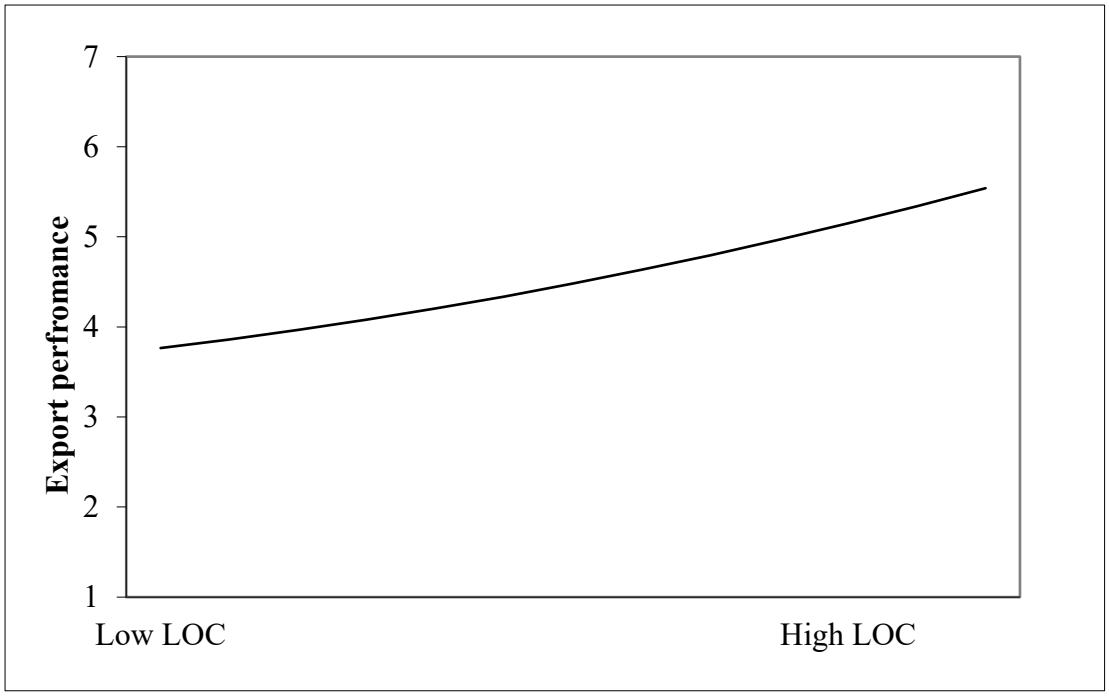
7b: Scree Plot for outcome variables



Appendix 8: A model and graphic representation of quadratic relationship between LOC and export performance

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.370[a]	0.137	0.134	0.65394
2	.397[b]	0.158	0.154	0.64669
a. Predictors: (Constant), LOC				
b. Predictors: (Constant), LOC, LOCsq				

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	2.039	0.153		13.349	0
	LOC	0.331	0.041	0.37	8.083	0
2	(Constant)	3.381	0.444		7.609	0
	LOC	-0.51	0.265	-0.57	-1.925	0.055
	LOCsq	0.124	0.039	0.951	3.212	0.001
a. Dependent Variable: Export performance						



Appendix 9: Analysis for dimensions of LOC

Outcome variable: Export orientation (Mediation)						
Model Summary						
R	R-sq	MSE	F	df1	df2	p
.7082	5015	.2363	58.4880	7.0000	407.0000	.0000
Model						
	coeff	se	t	p	LLCI	ULCI
constant	.9921	.1935	5.1262	.0000	.6117	1.3726
LC	.0123	.0308	.4004	.6891	-.0482	.0729
LOCm	.2664	.0600	4.4364	.0000	.1483	.3844
LOCu	.0806	.0587	1.3737	.1703	-.0347	.1959
CI	.1615	.0549	2.9418	.0034	.0536	.2695
WI	.0800	.0400	1.9994	.0462	.0013	.1587
Tr	.0859	.0355	2.4210	.0159	.0162	.1557
TechA	.0489	.0423	1.1577	.2477	-.0342	.1320
********** DIRECT AND INDIRECT EFFECTS OF X ON Y **********						
Direct effect of X on Y						
Effect	se	t	p	LLCI	ULCI	
.0123	.0308	.4004	.6891	-.0482	.0729	
Indirect effect(s) of X on Y:						
Effect	BootSE	BootLLCI	BootULCI			
TOTAL	.0349	.0177	.0023	.0724		
LOCm	.0170	.0086	.0029	.0363		
LOCu	.0179	.0160	-.0114	.0524		
*LC= linguistic competence, CI= cultural intelligence, WI= willingness to Invest, Tr=Training and TechA= Technological awareness. LOCm= motivation dimension and LOCu= utilisation dimension of LOC						

Outcome variable: Export performance (Mediation)
Model Summary

R	R-sq	MSE	F	df1	df2	p
.4684	.2194	.3923	16.3433	7.0000	407.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.5991	.2494	6.4118	.0000	1.1088	2.0894
LC	-.0291	.0397	-.7335	.4637	-.1072	.0489
LOCm	-.2930	.0774	-3.7874	.0002	-.4451	-.1409
LOCu	.2672	.0756	3.5355	.0005	.1186	.4158
CI	.2225	.0708	3.1444	.0018	.0834	.3616
WI	.0241	.0516	.4671	.6407	-.0773	.1255
Tr	.1104	.0457	2.4131	.0163	.0205	.2003
TechA	.1507	.0545	2.7657	.0059	.0436	.2577

********** DIRECT AND INDIRECT EFFECTS OF X ON Y **********

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-.0291	.0397	-.7335	.4637	-.1072	.0489

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.0406	.0186	.0054	.0803
LOCm	-.0187	.0096	-.0400	-.0028
LOCu	.0593	.0201	.0237	.1028

LC= linguistic competence, CI= cultural intelligence, WI= willingness to Invest, Tr=Training and TechA= Technological awareness. LOCm= motivation dimension and LOCu= utilisation dimension of LOC

Appendix 10: List of Attendees (All Party Parliamentary Group members)

Parliamentary attendance:

- Nia Griffith MP
- Tonia Antoniazzi MP
- Baroness Coussins
- Lord Dykes
- Baroness Garden of Frognal
- Lord Hannay
- Baroness Hooper
- Lord Sherbourne of Didsbury

Appendix 11: List of Attendees (TheBusinessDesk.com Webinar)

First Name	Last Name	Organization	Job Title
Gemma	Dilkes	Aston University	Student
Sally	Jenkins	Freeths LLP	
Daniel	Dsouza	Currencies DIrect	Partnership Manager
Yelena	McCafferty	Talk Russian Ltd	Director
Chi	Zhang	AECOM	Senior Consultant
Bryan	Manley-Green	Alchemy Translations/Currency UK	Proprietor/Midlands Representative
Stefanie	Bowes		
Sam	Cook		
Rob	Mannion	B2b.store	CEO
Matthew	Cadden-Hyde	Black Country and Marches Institute of Technology	External Project Lead
ROBIN	HUMPHREY		freelance Fr>En translator
Ben	McNamara	Language is Everything	Communications Manager
James	Blomfield	Mulberry Bay	Director
Jogen	Roy		
Lynton	Buxton	The TALL Group of Companies Limited	Group Marketing Manager
John	Hall	Frank eXchange Limited	Founder/Director
Paul	Hebron		
Jane	Matty	Department for International Trade	International Trade Adviser
David	Orrego-Carmona	Aston University	Lecturer in translation studies

Appendix 12: List of Registration/ Attendees (LO-C 30 Report Launch, May 11, 2021)

First Name	Last Name	Company/Organisation	Title/Role
Gabriela	Lemoine	Accentus Language Services	Director
Lisa	Williams	ALM Translations	Director
Mary	Gilbey	Anglia Translations Ltd	Managing Director
JC	Penet	APTIS	President
Raisa	McNab	Association of Translation Companies	CEO
David	Orrego-Carmona	Aston University	Lecturer in translation studies
Emmanuelle	Labeau	Aston University	Reader in French Language and Linguists
Alifya	Thingna	BITS	Associate Director
Melanie	Williams	Brasshouse Translation & Interpreting Services	Head of BTIS
Benjamin	Kulka	British Academy	Policy Adviser
Michelle	Ward	Brook Language Services	
Carl	Gibbard	BSIA Export Council	Chair
Mike	Reddington	BSIA Ltd	CEO
Cari	Bottois	Cardiff University	PhD Researcher
Claire	Hudson	Cardiff University	Careers Adviser
Joseph	Lambert	Cardiff University	Lecturer in Translation Studies
Lucy	Jenkins	Cardiff University	Project Manager - Team Lead - Quality Representative
Joseph	Lambert	Cardiff University	Lecturer in Translation Studies
John	Devery	CCS	Commercial Agreement Manager
John	Worne	Chartered Institute of Linguists	Chartered Institute of Linguists
Robert	Beswick	Chartered Institute of Linguists	HOM
Rupert	Foster	Codex Global Limited	MD
Erik	Ortolani	Codex Global Ltd	Project Manager - Team Lead - Quality Representative
Chantelle	Harrison	Commerical and Contract Management	Commercial Lead
Darren	Paine	Coventry University	Linguae Mundi Programme Manager
Hari	Rai	Coventry University	Senior International Business Adviser
Pan	Hu	Coventry University	World Languages Academic Manager
Ajay	Desai	Coventry& Warwickshire Chamber Of Commerce	Trade Director
Liz	Roberts	Department for International Trade	International Trade Adviser
Conal	Doherty	Department of International Trade	International Trade Adviser

Alison	Avery	DIT (Department for International Trade)	International Trade Adviser
Ralph	Savage	DRS Business Solutions LTD	
bernadette	byrne	Eloquent Agency	Non Exec Director
Ruth	Partington	Empower Translate (Global) Limited	CEO/ATC Chair
Elizabeth	Laidler	Encore Communications	Director
David	Evans	Epic Global Group Limited	Managing Director
Cecilia	Poratti	Essence Translations	Managing Director
Marina	Ibrahim	Globility Coaching	Consultant
Ross	McNally	Hampshire Chamber of Commerce	CEO/Exec Chair
Alina	Cincan	Inbox Translation Ltd	Managing Director
P	Appleyard	Institute of Translation & Interpreting	Chair
Karine	Chevalier-Watts	Karine's Languages & Administrative Services	Director & Owner
Lindsay	Hong	Locaria Ltd	COO
Manuela	Junghans	Manuela Junghans	Translator
Phil	Tennent	Marsolutions	Director
John	Nistor	MAXIMOVE TRANSLATIONS LTD	Director
Caroline	Nokes	Member of Parliament for Romsey and Southampton North	
Glesni	Owen	MFL Mentoring/ Cardiff University	Wales Co-ordinator
Abele	Longo	Middlesex University	Senior Lecturer in Translation
Carina	Balbo	My Language Hub Ltd	Managing Director
Josef	Kubovsky	Nimdzi Insights	CEO
Helen	Provart	Peak Translations Ltd	MD
Antonios	Koutsounouris	Planet Languages Ltd	Operations Director
Rob	Mannion	RNF	CEO
Adam	Brown	RNF Digital Ltd	CRO
Susie	Hoare	Sandberg Translation Partners Ltd	
Yaiza	Bethencourt	Say It Global Translations Ltd.	Director
Yaiza	Rodríguez	Say It Global Translations Ltd.	
Sarah	Thomas	See Media	Director
Esther	Bond	Slator	Research Director
Mirella	Nalder	Smart Planning Translations Limited	Founder and MD
Susan	Heaton-Wright	Superstar Communicator	Owner
Harriet	Barnes	The British Academy	Head of Policy
Sam	Bennett	The Translation People	Operations Director
Levent	Yildizgoren	TTC wetranslate Ltd	Managing Director
Mark	Whiteman	TW Languages	Director of Business Development
Claire	Gorrara	UCML	Chair
Steven	Wonnacott	University of Bath	Senior Lecturer
Wendy	Ayres-Bennett	University of Cambridge	Professor

Begoña	Rodríguez de Céspedes	University of Portsmouth	Dr
Elsa	Huertas Barros	University of Westminster	Senior Lecturer in Translation Studies
Paul	Stewart	Wessex Translations Limited	Director
Roy	Allkin	Wolfestone	Founder
Preethi	Thankappan Nair	ARU	Student
James	Brown	Comtec Translations Ltd	Head of Operations
Isabella	Moore	Comtec Translations Ltd	Director
Kate	Angel	Aston Business School	Head of Operations
Christine	Weightman	ETLS International	Director
Mike	Orlov	NRPSI	Executive Director and Registrar
Dammi	Afolabi	ForwardPMX	Marketing and Comms Manager
Sarah	Mason	ITI	ITI Research Network Coordinator
Celine	Benoit	Aston University	ADPE
Gerti	Willis	Department for International Trade DIT West Midlands	Culture & Communication Adviser
Paul	Hebron	Aston University	Head of Marketing
Heike	Leinhäuser	EUATC	President
Sophie	Howe	Comtec Translations	Director
Teresa	Tinsley	Alcantara Communications	Director
John	O'Shea	Jurtrans Translations Limited	
David	Marshall	RWS	
Vicenta	Soriano	RWS Group	Sales Director
Celine	Benoit	Aston University	ADPE
Jacqui	Flint	Institute of Translation and Interpreting	Membership Manager
Paul	Wilson	Institute of Translation & Interpreting	Chief Executive
Geoffrey	Bowden	European Union of Associations of Translation Companies	General Secretary
Marina	Ibrahim	Globility Coaching	Consultant
Chantelle	Harrison	Commercial and Contract Management	
Suan	Heaton-Wright	Superstar Communicator	Owner
Dan	Andrews	Aston University	Research Fellow
Mike	Reddington	BSIA Ltd	CEO
Clare	Suttie	Atlas Translations	

Appendix 13: GBCC new item

The British Academy

Menu

News > British Academy welcomes new research showing value of language skill...

British Academy welcomes new research showing value of language skills to SMEs

11 MAY 2021

The British Academy today welcomes the findings of a new report by Aston Business School and the Association of Translation Companies that shows language skills play a key role in the success of small and medium-sized enterprises (SMEs) in the UK.

Aston Business School researcher Ankita Tibrewal analysed 415 UK SMEs across different sectors and found that SMEs making use of language capabilities are 30% more successful in exporting than those who do not. As SMEs contribute around half of all turnover in the UK's private sector and employ 61% of the UK workforce, the evidence behind the 'LO-C 30 Report: Role of Languages in International Performance for UK SMEs' suggests that investment in foreign language education could yield significant benefits for employers and the nation's economy.

The report follows the publication in 2020 of the British Academy and partners' national strategy to reverse the long-term decline in foreign language learning in the UK.

Despite the government's aim for 90% of pupils in England to take a language (modern or ancient) at GCSE by 2025, fewer than half of them do. Across the UK, the number of undergraduates in modern languages fell by 54% between 2008-9 and 2017-18. With fewer students applying, at least 10 modern languages departments have closed in the last decade, and a further nine significantly downsized. The economic cost of the UK's linguistic underperformance, in terms of lost trade and investment, has previously been estimated at 3.5% of GDP.

Professor Neil Kenny FBA, Languages Lead at the British Academy, said:

"This timely new research provides compelling evidence of how much value language skills bring to businesses and hence to the UK economy. The ability to communicate in languages other than English and to operate comfortably in unfamiliar cultural contexts helps companies to find new markets for their products, and to connect with customers and workers across the world. To enable this, it is vital that we harness the linguistic

Aston Business School researcher Ankita Tibrewal's quantitative research on 415 UK SMEs across different sectors examines their organisational-level language capacity and its drivers through statistical analysis and modelling.

The research analyses the impact of language capacity (LO-C) on companies' export performance and identifies key drivers that facilitate LO-C within an SME.

LO-C, a key concept within the research, indicates the company's motivation, preparedness and attitudes towards developing language-related capabilities, as well as the actual use of available language capabilities.

SMEs play a critical role in the UK economy, and their contribution increases year on year. SME companies represent 99.9 per cent of the business population with six million businesses and around half of all turnover in the UK's private sector.

SMEs employ 16.8 million people, 61 per cent of the total workforce.

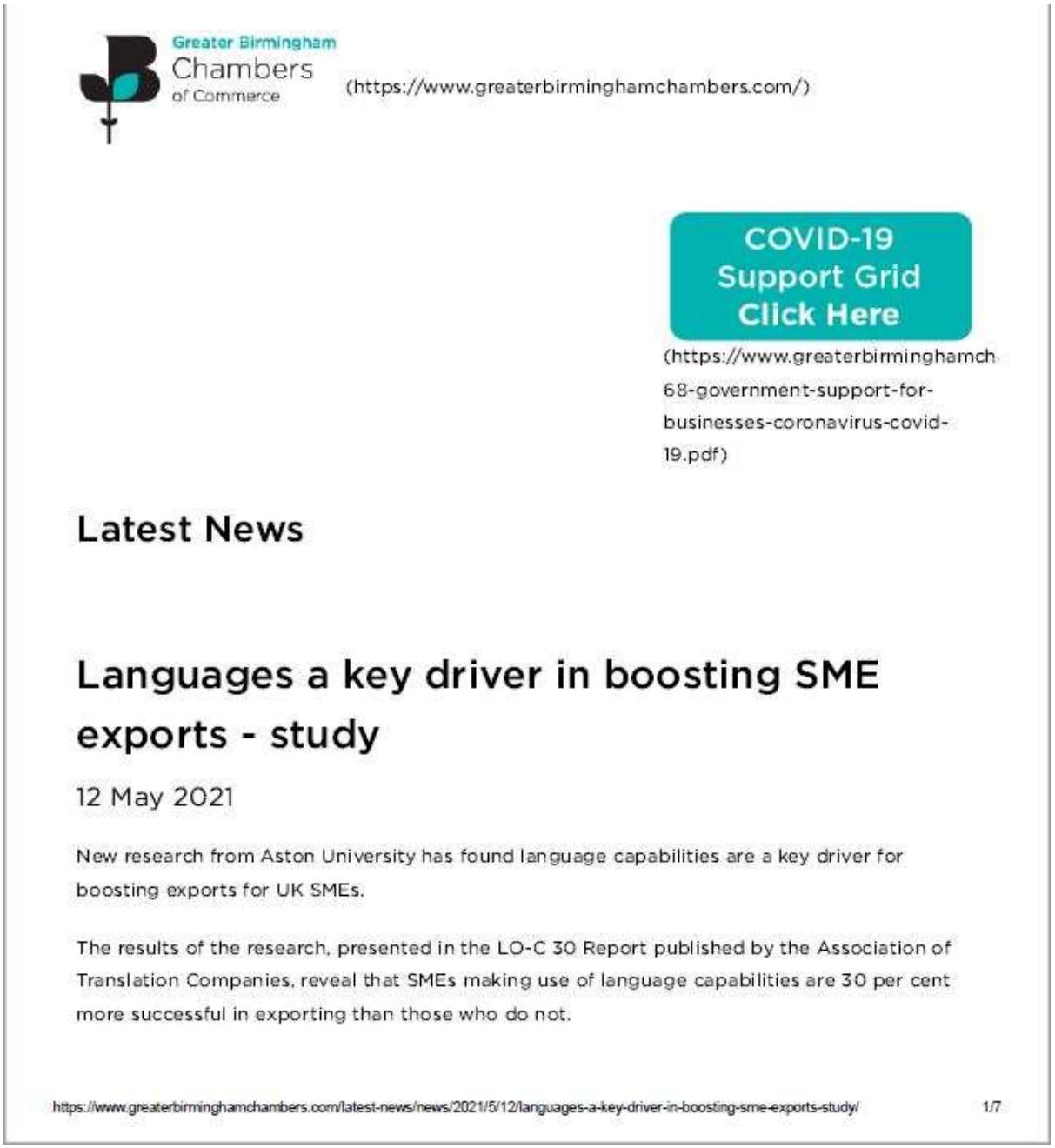
The LO-C 30 Report is the first comprehensive, country-wide quantitative research study investigating how language capabilities at an organisational level can facilitate the internationalisation of UK SMEs.

Dr Geoff Parkes, senior lecturer at Aston Business School (https://www.aston.ac.uk/bss/aston-business-school), said: "Previous academic research on UK companies has shown a strong link between exporting and growth and, for SMEs, a key way to generate growth is through exporting products and services to international markets.

"The results of the research strongly indicate that SMEs can significantly increase their export sales, growth and profits by hiring people with language skills and high cultural intelligence, providing language training to existing staff and investing in professional translation services using sophisticated language technology."

Raisa McNab, CEO at the Association of Translation Companies, said: "SMEs have had a really hard time adapting to the challenges brought on by Brexit and the Covid pandemic, and we haven't had any good news for a while. Language services are a very easy, accessible way to drive international growth, and the LO-C 30 Report shows that the returns can be significant."

Appendix 14: The British Academy news item



Greater Birmingham Chambers of Commerce (https://www.greaterbirminghamchambers.com/)

COVID-19 Support Grid Click Here (https://www.greaterbirminghamch 68-government-support-for-businesses-coronavirus-covid-19.pdf)

Latest News

Languages a key driver in boosting SME exports - study

12 May 2021

New research from Aston University has found language capabilities are a key driver for boosting exports for UK SMEs.

The results of the research, presented in the LO-C 30 Report published by the Association of Translation Companies, reveal that SMEs making use of language capabilities are 30 per cent more successful in exporting than those who do not.

https://www.greaterbirminghamchambers.com/latest-news/news/2021/5/12/languages-a-key-driver-in-boosting-sme-exports-study/ 1/7

capacity of the UK and address the longstanding decline in take up for languages within our education system.

"The British Academy is continuing to work with partners to support the implementation of the recommendations in Towards a National Languages Strategy, actions which we must take urgently to help rebuild the UK economy and strengthen relationships around the world."

Contact the press office

For further information contact the Press Office on press@thebritishacademy.ac.uk / 020 7969 5273 / 07500 010 432.

Appendix 15: Aston website coverage

Aston University (/)

Courses (/courses) Student life (https://www2.aston.ac.uk/student-life)

Research (/research) For Businesses (/business) Find a course

Home (/) / Latest News (https://www.aston.ac.uk/latest-news) / New research links languages with exporting success for UK SMEs (https://www.aston.ac.uk/latest-news/new-research-links-languages-exporting-success-uk-smes)

New research links languages with exporting success for UK SMEs

Published on 10/06/2021

- **Aston Business School researcher Ankita Tibrewal found SMEs making use of languages have 30% better success in exporting**
- **The results form part of the LO-C 30 Report which looks at how language capabilities can aid the internationalisation of UK SMEs**
- **It is the first comprehensive, country-wide quantitative research study of its kind.**

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Appendix 16: LO-C 30 report: Role of language report here

LO-C 30 Report

Role of Languages in International Performance for UK SMEs

(Management findings of PhD. research)

23 FEBRUARY 2021

Aston Business School

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