

ETHICAL LEADERSHIP IN A MALAYSIAN MULTINATIONAL

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Dedication

I would like to dedicate this thesis to my late grandfather, whose wonderful memory I will always carry with me wherever I am. Ah Kong, your love and guidance will carry me through to the end of my days.

ABSTRACT

This thesis examines a trickle-down model of ethical leadership on lower-level line manager voice behaviour and work engagement in a large Malaysian multinational organisation. Seminal ethical leadership theory argued that higher-level management ethical leadership are critical for setting the ethical tone at the top and influence behaviour all the way to the lowest level. As such, proponents of this perspective suggested that higher-level management ethical leader will convey the ethical value in an organisation to inspire lower-level line manager behaviour via middle-level management. However, only Mozumder (2018) and Schaubroeck et al (2012) have tested the trickle-down model that incorporate three levels of management in a public sector organisation. There hence remains opened question about the influence of higher and middle management ethical leadership in private sector organisations. The current study aims to resolve this apparent argument by systematically testing the trickle-down model to explain the role of higher and middle management ethical leadership in promoting lower-level line manager voice behaviour and work engagement. This study draws on social learning theory and role theory and investigate the mediating mechanism of lower-level line manager ethical leader role. The results shown that the line manager ethical leader role is shaped by middle management manager ethical leadership, in turn, affecting their voice behaviour. A new boundary condition of moral identification is then presented to explain this relationship and result shown that lower-level line manager with higher a moral identification and ethical leader role will voice more to improve the organisation's process. In doing so, this thesis provides a new understanding of why lower-level line manager will develop an ethical leader role in a new Malaysian multinational set-up.

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TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION	9
1.1. Aims and Objectives of Research.....	9
1.2. <i>Theoretical and Empirical Contributions</i>	18
1.3. <i>Methodological Strengths</i>	26
1.4. <i>Practical Contributions</i>	28
1.5. <i>The study and organisation environment</i>	31
1.6. <i>Outline of Methodology</i>	33
1.7. <i>Outline of Thesis Structure</i>	33
CHAPTER 2: LITERATURE REVIEW	36
2.0. Introduction.....	36
2.1. Line manager voice behaviour	37
2.2. <i>Line manager work engagement</i>	43
2.3. <i>Higher-level and middle-level manager’s ethical leadership as antecedents of lower-level line manager’s voice and engagement</i>	48
2.4. <i>A trickle-down model of higher-level leader and middle-level manager’s ethical leadership</i>	58
2.5. <i>A role theory perspective towards the line manager’s voice behaviour and work engagement: The mediating influence of line manager’s perception of an ethical leader role</i>	69
2.6. <i>Moral identification as a boundary condition towards line managers’ perception of an ethical leader role</i>	77
2.7. <i>Chapter summary</i>	84
CHAPTER 3: METHODOLOGY	88
3.0. <i>Chapter summary</i>	88
3.1. <i>Research philosophies in social science and management</i>	88
3.2. <i>Research philosophy in ethical leadership research</i>	94
3.3. <i>Research philosophy and approach of this study</i>	97
3.4. <i>Research strategy and design</i>	98
3.5. <i>Data collection</i>	103
3.5.1. The research organisation, design and co-production	103
3.5.2. Access negotiation	104
3.5.3. Participants sample	106
3.5.4. Data collection procedure.....	108

3.5.5. Measures	111
3.5.6. Rating leniency.....	116
3.5.7. Rater source	116
3.6. <i>Data Analysis strategy</i>	118
3.7. <i>Research ethics and governance</i>	121
3.8. <i>Protecting the organisation and the non-disclosure research agreement.</i>	126
3.9. <i>Summary of methodology</i>	127
CHAPTER 4 – RESULTS	129
4.0. <i>Chapter summary</i>	129
4.1. <i>Data sample</i>	130
4.2. <i>Preliminary analysis</i>	135
4.3. <i>Skewness and kurtosis, and its inference on data</i>	137
4.4. <i>Analysis of the multilevel structure</i>	139
4.5. <i>Parcelling strategy</i>	141
4.6. <i>Multilevel Confirmatory factor analysis (MCFA)</i>	145
4.7. <i>Analysis of hypothesis one, two, three, and four: The direct effect of HL and ML ethical leadership</i>	150
<i>Figure 4.1. Analysis of hypothesis one, two, three, and four: The direct effect of HL and ML ethical leadership</i> 152	
4.8. <i>Analysis of hypothesis five: The trickle-down model</i>	153
4.9. <i>Analysis of hypothesis six, seven, eight, and nine: Line manager ethical role as the mediating variable</i>	155
4.10. <i>The moderating influence of line manager moral identification through bootstrapping (H10, H10b)</i>	160
4.11. <i>Chapter discussion, strength and limitations</i>	164
CHAPTER 5 – DISCUSSION AND CONCLUSION	166
5.0. <i>Chapter summary</i>	166
5.1. <i>Summary of study findings</i>	166
5.2. <i>Theoretical implication of higher-level and middle-level ethical leadership</i>	167
5.3. <i>Theoretical implication of line manager ethical leader role</i>	175
5.4. <i>Theoretical implication of moral identification</i>	180
5.5. <i>Empirical implication</i>	186

5.6. Practical implications	188
5.7. Limitations and future direction	197
5.8. Summary of discussion chapter	204
5.9. Thesis conclusion	207
REFERENCES	211
APPENDIX A.....	273
APPENDIX B.....	276
APPENDIX C.....	285
APPENDIX D.....	288

LIST OF TABLES

Table 2.1. A summary of research that has defined ethical leadership, authentic, servant, transformational, and LMX.	50
Table 2.2. Research that has examined the trickle-down model in ethical and integrity leadership	61
Table 4.1. Descriptive Statistics, Correlations, and Reliabilities	134
Table 4.2. Skewness and kurtosis test of the observed variables.....	137
Table 4.3. Example of factor analyses for HL-EL and ML-EL for parcelling strategy	143
Table 4.4. Comparison of measurement models using two-level multilevel confirmatory factor analyses and chi-square test differences	145
Table 4.5.1 Analysis of HL and ML ethical leadership and the trickle-down model on line manager voice behaviour (H1, H2, H5a)	154
Table 4.5.2 Analysis of HL and ML ethical leadership and the trickle-down model on line manager work engagement (H3, H4, H5b).....	154
Table 4.5.3. The direct, partial and full mediation model	155
Table 4.6.1 line-manager perception of ethical leader role on voice behaviour (H6a, H7a, H8a) and comparison between alternative multilevel path structure models.....	157
Table 4.6.2 line-manager perception of ethical leader role on work engagement (H6b, H7b, H8b) and comparison between alternative multilevel path structure models.....	158
Table 4.7. The regression coefficient and conditional indirect effect estimates between ML ethical leadership and line manager voice behaviour, moderated by line-manager moral identification (hypothesis 10a).....	162
Table 4.8. The regression coefficient and conditional indirect effect estimates between ML ethical leadership and line manager work engagement, moderated by line-manager moral identification (Hypothesis 10b)	164
Table 5.1. Summary of this study findings	166

CHAPTER 1: INTRODUCTION

1.1. Aims and Objectives of Research

The essential role played by immediate, lower management or those managers and supervisors that are directly involved in the operation or service end of organisations (Cohen, 2013) and work directly with and in teams of bottom-line (or non-management) employees in organisations are well-established. Accordingly, responsibility for employee and team values, development and performance are entrusted to line managers, with most employers viewing them as *the* key agent and conduit in embedding the necessary skills, goals, processes and norms required for team and organisational success (Mindell, 1995).

Lower management proximity to operations, and operational employees, also make them an essential source of feedback and information for middle and higher-level leadership (Hutchinson & Purcell, 2003; Tansky & Cohen, 2001). As such, these managers are not only important in communicating and enforcing organisational values, objectives and goals (Gregory & Levy, 2011), but are perhaps one of the key sources of information regarding the opportunities and threats facing organisations, and the potential solutions to these problems (Ulrich, 1998). A key role for lower line manager (hereinafter as line managers) is thus the constructive, extra-role, challenging of norms, processes and objectives to continuously improve operations (Gutierrez, Howard-Grenville, & Scully, 2010). If organisations are to survive and prosper, it is imminent that they need a highly engaged (Hutchinson & Purcell, 2003) cadre of lower-level line managers who are provided with space, opportunity and security to deliver their knowledge, skills and ideas (Schepers & Van der Borgh, 2020).

This study aims to examine the how, why and when lower-level line managers are high performing, engaged, and willing to voice their concerns and ideas to higher-level management and middle-level management. The research setting is a large Malaysian multinational corporation. To meet this aim, the researcher draws on role theory (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964) and the trickle-down model of leader/line manager ethical development and behaviour (Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009). The trickle-down model states that values, norms, goals, attitudes and behaviours will pass-on from the very top of an organisation, cascading throughout all levels until they reach the final operational level (Bass, Waldman, Avolio, & Bebb, 1987). Thus, higher-level management goals, values and attitudes are communicated across different levels of management to influence lower-level management behaviour (Brown, Treviño, & Harrison, 2005; Treviño, Hartman, & Brown, 2000; Wo, Schminke, & Ambrose, 2018).

Within the wide leadership literature, recent attention has focussed on the role of leaders and benefits of positive higher-level management leadership styles, including the notion of ethical leadership (Liu, Liao, Derfler-Rozin, Zheng, Wee, & Qiu, 2020; Matta, Scott, Koopman, & Conlon, 2015; Paterson & Huang, 2019). Ethical leaders are those that demonstrate the “normatively appropriate conduct through personal actions and interpersonal relationships and the promotion of such conduct to followers through two-way communication, reinforcement, and decision making” (Brown, Treviño, & Harrison, 2005, p. 120). Ethical leadership is gaining ever greater salience in an era where organisations are increasingly required to focus on projecting an image of ethicality, transparency, and social/environmental responsibility to customers and employees (Treviño, Hartman, & Brown, 2000; Treviño, Weaver, & Brown, 2008), and in such circumstances, higher-level management leadership has

become an essential driver of the goals, values and attitudes of the wider organisation and have a key role in being the source of organisational goodness (Treviño, Nieuwenboer, & Kish-Gephart, 2014). The trickle-down model thus proposes that lower-level line managers' values, attitudes and behaviours emerge from the cascading of higher-level management ethical values, via middle-level managers' (i.e., the managers of lower-level line managers) ethical values, attitudes and behaviours, where each managerial level learning the importance of certain values and attitudes from the level of management above them (Byun, Karau, Dai & Lee, 2018).

There are approximately a dozen studies that have tested the trickle-down models. Initial conceptual of the trickle-down model in ethical leadership literature suggested that higher-level and in turn, middle-level ethical leadership will cascade values down the organisation. However, only two studies have tested the trickle-down models by incorporating three management levels. First, Mozumder (2018) found that higher-level ethical leaders will embed their behaviour through an increase in trust propensity from the very top and trickle down to influence behaviour at the very bottom of a public service organisation in England. Second, Schaubroeck et al. (2012) shown that higher management ethical leadership values will flow down a military organisation through respective level ethical culture. Large scale formal organisations have multiple hierarchical levels and are pyramid in shape. The nature of leadership responsibilities become less concerned with the day-to-day operations and more concerned with planning the organisational environment (i.e., responding to changes), as the progressed up the hierarchy (Jago & Vroom, 1977). For this reason, higher-level leaders tend to exhibit greater reliance on subordinates and less centralised decision making.

It is thus possible that differences in individual expectation may result in different participation at different hierarchical level. Particularly for ethical leadership behaviour, we would expect that managers are promoted into higher level management due to their willingness to participate in the “normatively appropriate behaviour”, instead of being autocratic (Bennis & Slater, 1968). Leadership behaviour research has also found that certain leadership behaviours can result in stronger organisational commitment, as well as perception of top-management team effectiveness (Bass & Avolio, 1993, Lowe & Gardner, 2000), which in turn, increases lower-level motivation (Fu, Tsui, Liu, & Li, 2010). Therefore, although pieces of research suggest that ethical leadership can be embedded at lowest management of the organisation when appropriate trust and ethical culture exist across the different levels of management (i.e., higher, middle and lower). The direct involvement of higher-level management ethical leadership in a for-profit private sector organisation remains limited. More importantly, in answering the question of why would a frontline manager develop an ethical leader role in an organisation?

Accordingly, Wo, Ambrose and Schminke (2015) stated that leaders at different management levels will role model after they're direct leaders. Besides, the majority of trickle-down research that incorporates two levels of management (see Mayer et al., 2009; Peng & Wei, 2020; Byun et al., 2018) have shown that lower-level managers will take on ethical leadership behaviour from their higher direct report and influence lower-level employees behaviour. Because the issue of ethical leadership development/emergence is connected with a myriad of other attributes when discussing the emergence of moral standards at lower-level management (Kalshoven, Den Hartog, & de Hoogh, 2011b). Scholars have argued that role modelling from higher-level management and in turn middle-level management in a large for-profit

organisation may not always happen so easily (Brown & Treviño, 2014). Therefore, line managers can disturb the moral fabric of management by taking employees and other stakeholders along when embracing an alternative view of moral issues (Desai & Kouchaki, 2017; Solinger, Jansen, & Cornelissen, 2020). As an example, a line manager is likely to realise their ideological stance to influence bottom-line employees and take action to correct the shortfall of the organisational system through articulating an alternative set of arrangement (see Benford & Snow, 2000). However, limited research has explored the antecedent of line manager voice behaviour and engagement at work, as a consequence of their ethical leader role in the organisation.

Line managers can also challenge organisation processes, taking a central role in organisational management by providing an informal voice (Townsend & Loudoun, 2015). The importance of line managers in managing bottom-line employees' relation through decentralising management activities is inconspicuous. As such, voicing is a crucial part of the ethical leadership theory, whereby these leaders are perceived as a "fair and principled decision-makers who cared about the people and the broader society" (Brown & Treviño, 2006, p. 597). Besides, the increasing breadth of the responsibility of the line manager, a greater psychological availability is also demanded to perform work role, particularly, when multiple tasks are required to simultaneously perform (May, Gilson, & Harter, 2004). This made both the topics of motivation and engagement as important means of understanding the willingness of line manager to voice (Walumbwa & Schaubroeck, 2009), as well as the consequences of own ethical work role (Kahn, 1990).

Line managers will engage directly with bottom-line employees and possess some form of authority. As an example, line managers are the lynchpin of an organisation and the mouthpiece of human resources (HRs) that will translate policies

and procedures into practice (Wright & Kehoe, 2008), affecting the perception of their leadership (Russell, Steffensen, Ellen, Zhang, Bishoff, & Ferris, 2018). Therefore, line managers can control and decide certain aspects of the organisational processes, like deploying resources to facilitate and monitor performance, having the authority over team budget and staffing decision, as well as accountability for business performance (Hales, 2005). Furthermore, an ethical line manager that demonstrate (or provide) voice will accentuate employees' ethical role (see Paterson & Huang, 2019). However, not much is known about the antecedents that support line managers' voice behaviour and their engagement based on their preoccupied role in an organisation. Since organisational science literature argues that implementation of strategy tends to be fuelled by middle-level managership (Mantere, 2008), whereby they are tasked with strategic decision making (Cohen, 2013). The problem of middle-level ethical leader's participation along the moral standard process has also plagued the understanding of the role they occupy (Mantere & Vaara, 2008), often only facilitated through a trickle-down process without an adequate explanation (Wang, Xu, & Liu, 2018).

As research has mainly paid attention to higher-level leadership through an upper-echelon approach (Heyden, Fourné, Koene, Werkman, & Ansari, 2017). Scholars have called for future research to examine the line manager's role as a consequence of perceived value in the social system to determine how it can affect others' behaviour (see Vandenberghe, Bentein, & Panaccio, 2017). In doing so, this study examines both higher-level and middle-level management ethical leadership influences towards line manager voice behaviour and engagement through a role theory perspective to understand why these managers will increase moral responsibility. Role theory is relevant as organisations have a system of roles, which represent a central component that explains how an individual should behave, interact

and coordinate action (Katz & Kahn, 1978). In applying these perspectives, the antecedents of line managers' ethical leader role may help explain why interrelated actions will occur in an organisation of particular attribute.

Line managers' behaviour is also affected by the perception of moral standards through a specific boundary condition (Mayer et al., 2009; Schaubroeck et al., 2012), while development in this area has largely focused on boundary conditions that enhance ethical leadership (see Bedi, Alpaslan, & Green, 2016; Tu & Lu, 2016). Apart from the above mentioned, this study is also interested in understanding if line managers' moral identification, defined by one's "belongingness associated with an organisation that exhibits ethical traits" (May, Chang, & Shao, 2015, p. 681), would enhance their ethical leader role on voice behaviour and engagement at work. For this reason, addressing the influence of an organisation's attributes where line manager is more likely to enforce and promote moral standards becomes critical (Day, Fleenor, Atwater, Sturm & McKee, 2014; Dinh, Lord, Gardner, Meuser, Liden, & Hu, 2014). Accordingly, literature has suggested that line managers would value the opportunity to participate in decision making when they strongly identify with the organisation's values (see van Knippenberg, Martin & Tyler, 2006). Hence, this study aims to illuminate the grey area about line manager interaction with ethical regulation (Weaver, Reynolds, & Brown, 2014), to provide a better explanation about the whys of line manager ethical role-taking as a result of higher-level ethical leadership.

Furthermore, there has been an asymmetrical attention to scholarship on ethical leadership development in comparison to its consequences and impact (Avolio, Reichard, Hannah, Walumbwa & Chan, 2009; Day et al., 2014). Although ethical leadership is collectively held by management that shared the same values (see Mayer et al., 2009; Mayer, Nurmohamed, Treviño, Shapiro, & Schminke, 2013), not

much research has paid attention to line managers ethical perspective. As such, accurate representation through direct perception is warranted to narrate the important moral impact of higher-level ethical leadership on lower-level line manager's behaviour, given that their decision-making process occurs in connection with every other aspect of organisational life (Clawson, 2009; Eisenbeiss, van Knippenberg, & Fahrbach, 2015). However, gaining access to the top management team is often very difficult in a large multinational organisation. Therefore, past research has often relied on public records to score higher-level leadership behaviour (see Ormiston & Wong, 2013). However, this scoring procedure might not present an accurate report of higher-level leadership. It is thus important to provide a reliable body of knowledge and evidence-based practice that management can use when formulating future decisions and strategy (Hambrick, 2007; Sumanth & Cable, 2011).

Finally, although a growing body of research has underlined the implications of value-driven leadership behaviour through providing the theoretical models and descriptions of moral behaviour in an organisation (De Cremer & Moore, 2020; Jones, 1991; Treviño, 1986; Treviño et al., 2014), most have agreed that the concept of moral and ethics are not always universally held (Resick, Martin, Keating, Dickson, Kwan, & Peng, 2011). In light of this argument, this study aims to narrate the antecedents of line managers' voice behaviour and engagement at work in a large Malaysian multinational company (MNC). Knowledge from emerging economies' multinationals is necessary as many are becoming important actors in global business due to their substantial foreign direct investments and joint ventures to establish a presence in developed economies (Kim, Kandemir, & Cavusgil, 2004; Marano, Tashman, & Kostova, 2017). These organisations' involvement in developed economies have also invited increasing scrutiny about their ethical best practices to adhere to moral

standards, which are often seen as lacking in their respective countries of origin (Tashman, Marano, & Kostova, 2019).

Apart from the scrutinisation of public and governance, large multinationals are also increasingly branding itself as moral agencies in managing industrial ethical challenges. Strategic leadership at the top of organisation has hence come together conspicuously to complement MNC sustainability activity such as establishing a formal business ethics programme (Strand, 2014). It is indeed important for Malaysian MNC to develop a system of practice because these organisations view about ethics is increasingly becoming a pillar of their success in their daily operation (Othman & Rahman, 2010). Hence, this makes the very sustainable economic survival of an MNC an increasing function of its business ethics as stakeholders believe that such investment pays (Paine, 2000).

In summary, as organisations are becoming larger and integrated into the fabric of modern society, the management of moral behaviour is increasingly prevalent to ensure such governance is well embedded in the structure of the organisation (Kish-Gephart, Harrison, & Treviño, 2010). Based on the above presentation, this study proposes three research question. First, what is the antecedent of the line manager's behaviour? Second, how does the line manager develop an ethical leader role in an organisation? Third, why does the line manager maintain their ethical leader role in an organisation? In addressing the aforementioned research questions, the following research objectives are proposed:

1. To test the trickle-down framework by examining the role of higher-level and in turn, middle-level management ethical leadership in promoting lower-level line manager voice behaviour and their work engagement.

2. To understand why middle-level managers' ethical leadership will promote lower-level line management voice behaviour and work engagement through a role theory perspective.
3. To examine the role of lower-level line managers' moral identification as a new boundary condition on the positive effects of middle-level managers' ethical leadership on lower-level line managers' voice behaviour and work engagement.
4. To test the generalisability of the role theory and the trickle-down model in a new context (*i.e.*, the Malaysian multinational set-up).

The study aims to examine the proposed research objectives through a large-scale survey in a large Malaysian multinational organisation. In doing so, this study pays attention to the levels of management of interest, such that data will be collected from middle-level and lower-level management to examine the (in)direct effects of higher-level management and middle-level management behaviour on lower-level management perception. Given the prior discussion and the aims and objectives outlined above the following contributions to knowledge are proposed.

1.2. Theoretical and Empirical Contributions

This study replicates the trickle-down model and draw on a role theory perspective to examine the role of higher-level leaders and middle-level managers in promoting greater lower-level line managers' voice behaviour and work engagement. First, this study argues and show that moral standards in an organisation is associated with the perception of line managers ethical leadership (Peng & Kim, 2020). The current study replicated past research about ethical leadership and voice behaviour

and extended this finding between middle-level management and lower-level line manager. It shows that the presence of ethical leaders will increase voice behaviour, as well as engagement in an organisation (see Lam, Loi, Chan, & Liu, 2016). Because enforcing standards like rules and norms can be very inconspicuous in a large multinational organisation, which highlights the issue of power dynamics versus ethical practice of the management (see Gordon, Clegg & Kornberger, 2009). This study argues and showed line managers that response to middle-level manager ethical leadership is much more willing to demonstrate voice and engagement at work.

Second, this study contributes to the trickle-down model research. The trickle-down model borrows from the economic literature to depict the role of higher-level ethical leadership. It is suggested that higher-level ethical leader's value will trickle-down organisation and affect up to three-levels of management behaviour (Mayer et al., 2009; Wo et al., 2018; Wang et al., 2018). However, recent research has argued that higher-level ethical leader's value can only be trickle-down and affect lower-level leaders' ethical behaviour when they're approximated (Brown & Treviño, 2014) and when certain conditions are met, such as respective level ethical culture (Schaubroeck et al., 2012) or trust propensity (Mozumder, 2018). Granting that literature has often proliferated the model through seeing line manager as the transmitter (or the mediator), rather than examining how value is appropriated from the very top to inform their ethical leader role. This study thus draws on social learning theory (Bandura, 1977) and shows that an individual will role model after their direct report leader's ethical behaviour to cascade the value downwards.

Most trickle-down research generally agrees that ethical value will flow down the organisation through such a role modelling perspective (Byun et al., 2018; Mozumder, 2018; Schaubroeck et al., 2012; Wang et al., 2018). However, this study

tested and found that both middle-level managers and line manager do not role model ethical leadership behaviour after the higher-level ethical leader. It is hence clear that ethical role model must be present in proximation (or in situ) for ethical role modelling to happen (Weaver, Treviño, & Agle, 2005). In line with Schaubroeck et al. (2012) argument, the insignificant association between higher-level and middle-level management ethical leadership could suggest that role modelling can only exist in an environment when both mentor and mentee can cooperate alongside one another. For this reason, it is possible that higher-level ethical leader behaviour would only affect the organisational level outcome (Shin, Sung, Choi, & Kim, 2015), rather than transcending ethical value down the organisation.

Third, this study draws on role theory as a new theoretical lens for understanding the line manager's ethical leader behaviour. The trickle-down model findings reveal the complex nature of the learning from ethical leader up in the organisational hierarchy. Indeed, social learning alone will not account for every social influence (Paterson & Huang, 2019). This study thus proposes and found support that line manager will develop an ethical role which then increases their willingness to demonstrate (or provide) voice. A role theory perspective also supplement the limitation of social learning theory by arguing that role is a set of activities that owes to the interdependence of the individuals within an organisation. As an example, line managers role is closely linked to those who endorse the role, shaping the behavioural expectations (Katz & Kahn, 1978; Sluss & Ashforth, 2007). As such, taking role through the expectations of the organisation will include a mix of observations and responses that are espoused by being in the occupied role. This process typically requires more cognitive effort and motivation categorised through an increase in engagement (Matta et al., 2015; Vandenberghe et al., 2017), and greater identification

with facets that are relational to the organisation (Sluss, van Dick, & Thompson, 2011). Thus, line managers that aim to fit into the organisational system will develop an ethical leader role because they know what is expected of them.

The current study found support that line manager's awareness of middle-level ethical leadership will inform the ethical role expectation of the organisation (Eisenberger et al., 2010). These findings extend Yang, Zang and Tsui's (2010) argument by providing an explanation about the role of middle-level manager leadership and its potential influence on lower-level line manager's ethical behaviour. According to Solomon (1992), individual at work that prescribes to an ethical role will help legitimise one's position at work. While most research has taken stock on the assumption that ethical leader will provide moral content in management, in turn allowing those that answer to them to develop ethical leader behaviour. This study finding suggests that ethical role-taking in concert with the issue of fairness within an organisation is important (Matta et al., 2015). It allows the role occupant to understand their role responsibility, embedding the organisation's expectations concerning their behaviour and conduct (Katz & Kahn, 1978; Sluss et al., 2011). For this reason, line managers' ethical role-taking matters because we cannot completely divorce the role responsibility these managers hold at work with other personal attributes and behaviours (Mantere & Vaara, 2008).

Furthermore, this study contributes to knowledge by introducing a new boundary condition to explain line managers' ethical leadership role on their voice behaviour and work engagement. The theoretical perspective of role theory suggests that identification mechanism can support individual role expected behaviour, strengthening the behaviour that is associated with the role expectation (Sluss et al., 2011). Identification mechanism can thus facilitate the association between perceiving

own role and acting per the behaviour that is connected to a particular role (Sluss & Ashforth, 2007). Moral identification is examined here as a boundary condition to strengthen the role theory perspective. This study conceptualised line managers' moral identification as the tendency to seek identification with organisations on the basis of moral alignment. This construct is used to explain why line-manager with higher (vs lower) moral identification are much more willing to voice and uphold moral standards (May et al., 2015). Moral identification thus explains how moral driven individuals will behave in association with the value promoted by the organisation (Hannah, Sumanth, Lester, & Cavarretta, 2014b).

Moral identification also serves as the theoretical explanatory mechanism between line managers' moral identity and their behaviour with the organisation that demonstrates a similar characteristic (May et al., 2015). Just as a moral identity will predict and accentuate ethical leadership behaviour (Mayer, Aquino, Greenbaum, & Kuenzi, 2012; Moore et al., 2019), moral identification signals their commitment towards the organisational value and the willingness to uphold moral standards to the extent of challenging the process to improve and protect the organisation from harm (May et al., 2015). Although ethical compliance is often connected with the moral standards, such as perceiving ethical leadership up in the organisational hierarchy (Hansen, Alge, Brown, Jackson, & Dunford, 2013; Schaubroeck et al., 2012; Treviño et al., 2000), this study extends knowledge, arguing that line managers which resonate with the same value promoted and presented by the organisation will display stronger ethical leader role (see Lord, Day, Zaccaro, Avolio, & Eagly, 2017).

Nonetheless, examining moral identification also contributes to knowledge about moral driven organisational behaviour (Treviño, Weaver, & Brown, 2008). As prior research about moral alignment in an organisation has underlined how one's

morality can increase negative sentiment and hinders the perception of ethical leadership (Qin, Huang, Hu, Schminke & Ju, 2018). Although organisational identification will increase ethical leadership influence on employees' citizenship behaviour (Mostafa, 2018), other research has shown that when the condition of job autonomy is low, organisational identification can evoke unethical pro-organisational behaviour despite being under an ethical leader (Kalshoven, van Dijk, & Boon, 2016). Given that individuals are capable of applying their moral ideology into their behaviour at work (Antonakis, Bendahan, Jacquart & Lalive, 2010). Examining moral identification thus allowed this study to answer the call on understanding business ethics in the context of organisational behaviour (De Cremer & Moore, 2020) and ethical leadership (May et al., 2015).

In addition to the above highlighted theoretical contributions, this study also offers two empirical contributions. First, this study accentuates the blurring distinction between higher-level leadership and middle level managership, which is often proliferated in the trickle-down scholarship (Byun et al., 2018; Mayer et al., 2009). In adopting different levels of leadership, the current study contributes to the debate on the importance of higher-level and middle-level ethical leadership in facilitating the line managers' extra-role work behaviour (Brown & Treviño, 2014; Shin, 2012). This is based on the conventional approach which argued that higher-level ethical leadership will initiate and transfer value down the organisation and affect up to three levels of management (Mayer et al., 2009). However, only two research to date have tested the proposition, using data from the US military organisation (Schaubroeck et al., 2012), and using single-source public service organisational in the UK (Mozumder, 2018). The latter also highlighted issues about the actual representation since the observation of higher-level leadership and middle level managership is obtained from bottom-line

employees. For this reason, this study replicates the trickle-down model in a for-profit organisation to strengthen the evidence base around the theoretical proposition.

Brown & Treviño (2014) argues that ethical values will not simply “trickle-down” the organisational hierarchy and affect bottom-line perspective. As an example, strategic management literature argues that higher-level leadership is strictly confined to administrative function such as providing strategic direction (DeChurch, Hiller, Murase, Doty, & Salas, 2010), rather than informally influencing moral standards. This made their perception somewhat simplified to the understanding of the lower level management (Katz & Kahn, 1966), which underlined the importance of obtaining an accurate representation to depict the actual phenomenon. This further stresses the importance of ethical obligation (Graen & Uhl-Bien, 1995), informing line manager’s ethical leader role perception through higher-level ethical leadership as a behavioural antecedent rather than a cognitive characteristic that is susceptible to change (Mayer et al., 2012; Walumbwa & Schaubroeck, 2009). This study also advances knowledge by observing two levels (i.e., middle-level and higher-level) of management to understand the role these leaders play when informing line managers ethical leader role. This study thus advance knowledge by taking a broader perspective towards understanding the antecedent of line manager’s ethical role behaviour (Peng & Kim, 2020).

This study also replicates the trickle-down model in a Malaysian multinational using data from two geographically distributed office (the United Kingdom and Malaysia). As large multinationals are becoming increasingly diverse and globalised, which make gauging their processes relatively difficult (Dreher, Gaston, & Martens, 2008). Cultural attitude of the diverse workforce could inform trend(s) on leadership perception and development (Javidan, Dorfman, de Luque, & House, 2006). However,

cultural values such as power distance can affect an individual's response to an ethical role (Schwartz, 1992; Schepers & Van de Borgh, 2020). Granting that the trickle-down model is prone to biases when it incorporates multilevel leadership (Marquard, Brown & Casper, 2018; Pucic, 2015). The culture value held by line managers can affect their attitude and behaviour (Gentry, Cullen, Sosik, Chun, Leupold & Tonidandel, 2013; Letwin, Wo, Folger, Rice, Taylor, Richard & Taylor, 2016; Schepers & Van der Borgh, 2020). Because the presence of an ethical leader is likely to improve the work engagement of lower power distances member (Loi, Lam, & Chan, 2012), line managers are less likely to take on ethical leader role in an organisation when their perceptions about the power distribution are unequal (Clugston, Howell, & Dorfman, 2000). Indeed, this study shows that power distances score of line managers is correlated with their perceptions of middle-level managers' ethical leadership. Besides, accounting for power distance aims to mitigate leniency and the possibility of forming favourable impression towards the leader, as a result of own cultural attitudes (Ng, Koh, Ang, Kennedy, & Chan, 2011). Therefore, the differences of power distance withheld by line managers at both the offices (Malaysia vs United Kingdom; see Hofstede, 2001) is measured and controlled. This helped to mitigate any bias in data observation to strengthen to theoretical model.

Second, this study gathered data to inform a new boundary conditions that will have consequences towards line manager behaviour. The perception of about an organisation's values and image in the mind of an employee may form very early on during the recruitment and onboarding process. Especially for large multinationals, this process can emerge through formal and informal sources before an employee joins the organisation (Walker, Field, Giles, Bernerth, & Short, 2011). For this reason, line managers that identify with the values of an organisation through perceived similarity

attribute are more likely to develop role expected behaviour (see Hogg, 2006). By observing moral identification, which is the concern of membership with an ethical organisation (May et al., 2015). This study provide explanation for a new boundary condition to explain why line managers are more willing to speak up to improve work processes as well as protect the core interests of an organisation (Schepers & Van der Borgh, 2020). Besides, the findings also showed that line manager that morally identified with the organisation is more likely to demonstrate vigour, absorption and dedication (Maslach, Schaufelo, & Leiter, 2001).

In sum, the current study contributes and strengthens the evidence around social learning and role theory. Katz and Kahn (1978) stated that an organisation's system will rely on myriads of attitudes and facets to provide strategic direction to secure future viability, as well as shaping the role expectation of the line manager (Schepers & Van der Borgh, 2020; Vandenberghe et al., 2017). Therefore, an organisation that is concerned with embedding moral standards through its leadership, will develop an environment that will allow line managers to voice their concern, improving the organisational process with fear of retaliation. Taken altogether, this study provides knowledge about institutionalising line manager voice behaviour and engagement at work under ethical leadership. Furthermore, this study implies the importance of middle-manager ethical leadership when shaping frontline manager ethical leader role behaviour.

1.3. Methodological Strengths

This research also offers important methodological contributions. The existing trickle-down research that accounted for three levels of management using dyadic data has only insofar examined the model using piecewise analysis, where the

regression function may be discontinuous (see Schaubroeck et al., 2012). This study examines the model using multilevel path analysis to prevent any conflation across the different levels of analysis (Preacher, Zyphur & Zhang, 2010; Preacher, Zhang, & Zyphur, 2016). Specifically, this study tested the hypotheses using the multilevel path analysis to estimate the cross-level and indirect effects. In testing the moderation effect, this study uses the bootstrapping technique (Stride, Gardner, Catley, & Thomas, 2015), which estimates from 10,000 bootstrap samples of the indirect effect of middle-level managers ethical leader towards line managers' voice behaviour and engagement via their ethical leader role perception. This method thus allowed this study to estimate bias-corrected confidence intervals at 95% for the boundary conditions using parameters and standard errors from the analysis (Koopman, Scott, Matta, Conlon, & Dennerlein, 2019; Moore et al., 2019).

Furthermore, it is not uncommon for management research to use statistical control as a "placeholder" too generalised reviews across relationship (Carlson & Wu, 2011, p. 418). Although the measure can provide scholarly knowledge, for example, the willingness to accept social stratification and the unequal distribution of power on one's behaviour (Hofstede, 2001). The current study controlled for power distance of line managers as individuals with higher power distance can rationalise unethical leadership, finding it a taboo to challenge the authority (Lian, Ferris, & Brown, 2012). They are also more likely to whistle-blow outside of the organisation (Daniels & Greguras, 2014). Power distance was indeed found to correlate with the line manager's ratings of middle-level manager ethical leadership (see *Table 4.1.*). Thus, this study will control for its influence to examine the antecedent that affects line manager voice behaviour and work engagement in a large Malaysian multinational.

The increased association with a leading figure can affect individual status in an organisation. To mitigate such concern, this study controls for line manager perceive status (see Farh, Hackett, & Liang, 2007). Status is important across work processes and can improve prediction for an asymmetrical model (Dwertmann & Boehm, 2015), the measure can affect multisource feedback (MSF) rating which this study relied heavily on to understand the trickle-down model. Status in an organisation can also influence the way individuals perceive their role attitude as well as influence from others (Sluss et al., 2011). In this case, the current study found line managers' job status to correlate with every aspect of the observing variables (such as the rating of middle-level manager ethical leadership, perception of own role as an ethical leader, line manager voice behaviour, line manager work engagement, and line manager moral identification). As such, contingency is required to ensure the observing phenomenon is accurate of the theoretical underpinning to prevent rating bias due to potential repercussions towards line managers' perception of their status. Thus, this study presents a methodological strength.

1.4. Practical Contributions

This study highlights the importance of developing an ethical outlook to attract applicants scoring high on moral values that would help enforce moral standards in the organisation (Chun, Shin, Choi, & Kim, 2013). In addition to the above-mentioned contributions, this study also presents several practical contributions. First, higher-level and middle-level managers should increase awareness about the consequences of their ethical leadership behaviour and how it may influence important lower-level line manager behaviour. This can potentially inform the recruitment and promotion of higher-level and middle-level managers that espouse ethical leadership. It further

highlights the potential importance of training and development of future leaders emphasising ethical leadership, since such leader behaviour would play a significant role in an organisation.

Second, organisations are much aware of the importance of middle-level managers' ethical leadership and its effect on lower-level line managers' voice behaviour and work engagement. When middle-level managers exhibit ethical leadership, line managers are more likely to develop ethical role clarification, promoting lower-level line managers' voice behaviour and work engagement, leading towards improving organisational processes. Therefore, such information potentially further informs the importance of developing training intervention for middle-level managers to better understand why they may have a positive effect on their direct reports.

Third, organisations are better aware of how and when higher-level leaders and middle-level managers may impact upon lower-level line managers' voice behaviour and work engagement. In particular, the moderating effect of line manager moral identification. This study informs the importance of bringing in ethical/moral line manager into an organisation, in particular, those that associate with the moral commitment and moral value of the organisation. The context these line managers enter is important, granting that middle-level managers' ethical leadership will influence their ethical leader role. Thus, organisations are presented with new insights about the importance of lower-level line managers having high moral identification, which potentially informs their recruitment and promotion practices at this level.

Fourth, organisations are provided with new information about the importance of organisational ethical context in attracting, motivating, and retaining ethical/moral employees. In this case, the research suggests that organisation that value moral

standards, demonstrating an increase in dedication towards ethics can potentially attract employees that share similar values (i.e., individual with strong moral identity). This then translates to an increase in ethical leader role behaviour, increasing their willingness to speak up in the organisation. The line managers will engage directly with bottom-line employees and an organisation that is successful in developing a moral culture will enhance line managers' moral attitude. In doing so, it signals its' value in the organisation, encouraging the behaviour it intends to promote. Moreover, it provides organisations with important information about the benefits of investing in policy and practices that can increase line managers' perception of the organisation's moral attributes. More importantly, it allows individuals with moral standards to be retained in the organisation, retaining key investment, especially in people's development.

Lastly, middle-level managers can influence line managers' ethical leader role, their voice behaviour and work engagement directly, as well as line manager voice behaviour indirectly through their ethical leader role. While efforts are often aimed to booster bottom-line employees' behaviour. This study allowed the research organisation to understand the importance of leadership across different hierarchical levels, showing that efforts to continue the cycle of ethical leadership to inform organisation-wide behaviour are not simply the role of leadership or HR alone, but rather that an organisation's moral commitment to promote ethical leadership must take into consideration the organisational environment and the social relationship embedded in policy and practices that will accentuate line managers' ethical leader role, increasing voice behaviour and work engagement.

1.5. The study and organisation environment

Malaysia is a commonwealth nation and has modelled its social and political system closely after the British since gaining independence in 1957. The language of business and organisation in Malaysia is English. Organisational practices, for example, HR practices, tend to embody both westernised and local Malaysian practices (Gould-Williams & Mohamed, 2010). An emphasis on employees' development activities is also starting to gain momentum in Malaysian firms, underlining the importance of values such as honesty and discipline (Chew, 2005, p. 89). Therefore, many organisational practices in Malaysia are closely reflected those found in the United Kingdom (UK) and this convergence is becoming more prominent in progressive multinationals – Malaysian-UK organisations due to the countries' historical links. This provides a unique context to study the role expectation, and influence, top and middle managers' ethical leadership or lower-level line managers' work attitudes and behaviours.

The current study was funded by DeltaCo, because the organisation leadership aims to communicate the importance of ethical leadership in the Malaysian business setting. In doing so, the researcher was given access to DeltaCo's to study the transfer of their ethical leader's value across different levels of management. DeltaCo is a large family-owned multinational conglomerate with its headquarters in downtown Kuala Lumpur, Malaysia. The organisation is an integrated infrastructure developer with extensive operations in countries including Malaysia, the United Kingdom, Singapore, Indonesia, Australia, Japan, Jordan and China. The core business of the group comprises of utilities, construction, cement manufacturing, property development and investment, hotel development and management, e-commerce, and education solutions and services. DeltaCo has grown from a single listing on the Malaysian stock

exchange entity in the mid-eighties to a group of companies with market capitalisation and total assets of 18.3 billion United States Dollar (USD). DeltaCo prides itself on honesty, hard research, moral responsibility, and vitality through family values¹. At the time of this study, the company derived seventy per cent of its operating revenue from outside Malaysia and was preparing to invest around 240 million USD into the European markets through major infrastructure development.

The leadership of DeltaCo believes that core values are the essence that defines them and their actions. As such, DeltaCo has consistently demonstrated commitment by placing considerable emphasis on moral values and leadership. As an example, the company's foundation has been funding social and education project for over sixty years and is an active patron of many community development projects in Malaysia and the United Kingdom. The organisation has also consistently invested in ethical leadership training program and collaborated with third-sector organisations. Furthermore, DeltaCo has held annual leadership conferences for their management around the globe to promote and communicate the organisation's strategy. Extolling much of its moral management rhetoric, two of the company's listings were inducted as constituents of the Malaysia financial stock exchange goodness index (FTSE4Good) in 2017. The index is designed to identify Malaysian companies that demonstrate transparency, good governance, corporate social responsibility, and draws strength from the global environmental, social, and governance (ESG) framework (Bursa Malaysia, 2014).

Given the above discussion, the current study on the trickle-down model of top and middle manager ethical leadership on lower-level line managers' behaviour was co-produced with DeltaCo operations in the United Kingdom and Malaysia. For this

¹ Organisation website will be withheld to protect anonymity.

reason, this study aims to provide an understanding about the process of these relationships within a large hierarchical multinational with a history of demonstrating moral commitment to the community and environment. In sum, this study aims to communicate the impact of ethical leadership in the Malaysian business organisations.

1.6. Outline of Methodology

This study adopts a pluralist approach to methodology through a multilevel and multisource data obtained from two management levels at two different geographical distributed office of a large Malaysian multinational. Multilevel and multisource perspective is the most appropriate research strategy because it presents a complete picture of the nested system of ethical value on ethical leadership development in DeltaCo. The survey questionnaire is instilled into the performance survey of the organisation to obtain a better understanding of the environment and behaviour of management. This allowed the researcher to examine a multilevel process and their utility in a large Malaysian multinational as well as exploring the boundary conditions that would strengthen line managers' ability to promote ethical leader attitude and extra-role behaviour.

1.7. Outline of Thesis Structure

This thesis is divided into five chapters. Following this introductory chapter, chapter two provides the reader with a critical review of the existing literature, providing an outline of this research's theoretical framework.

The second chapter starts by arguing the importance of line managers' voice behaviour and engagement at work, as well as why they both dependent variables are the focal outcome of this study. The chapter then introduces the importance of higher-

level leader and middle-level manager ethical leadership to underline its importance when underscoring ethics and moral in an organisation. In doing so, ethical leadership theory is compared with other existing positive and emerging leadership theories. The multilevel trickle-down model is then introduced. To further knowledge, role theory is then drawn upon to underline its implication and extend the core understanding about line manager ethical leader role perception, underlining the knowledge gap about informing line manager's ethical leader role in a large organisation. Finally, the chapter will present the boundary condition – moral identification – to extend knowledge on the antecedents of line manager voice behaviour and work engagement.

The third chapter underlines the philosophical approach undertaken by the researcher when conducting this study. As such, the philosophical approach of positivism is discussed to underpin the chosen quantitative methodology. Because such methodology tends to examine theory by appropriating the right sample from a population through deductive reasoning. Critical realism is further borrowed as a parallel argument to appropriate the methodological application when observing the social phenomenon. In borrowing this perspective, the researcher also recognises that influence can be of a greater influx in the outside world as compared to the observing population. Going forward, the chapter layouts the discussion on the multilevel and multisource research design, access negotiation, and ethical consideration and implementation when researching DeltaCo. The chapter then concludes with information about the measure and the data analysis strategy.

The fourth chapter describes the methodological process used to examine the data. The sample, data collection technique, measures, and analytical methods (parcelling, confirmatory factor analysis, multilevel path analysis, and bootstrapping)

used to analyse the data are discussed to provide a systematic process on hypotheses testing. Besides, the findings and methodological limitations are summarised.

The final chapter provides a detailed discussion about the findings reported in this thesis. The objectives of the research are discussed to highlight its theoretical and methodological contributions. The chapter will also present practical implication that was developed as part of an executive summary presented to DeltaCo. Last, the research limitations are highlighted to provide avenues for future research before concluding the chapter.

CHAPTER 2: LITERATURE REVIEW

2.0. Introduction

This chapter aims to provide an understanding of the conceptual links around the research objectives, which are the trickle-down model that espouses of higher-level leadership and middle-level manager and role theory. *Figure 1* demonstrates the proposed model which will be investigated in this study. The following sections will break down this model to propose a series of hypotheses.

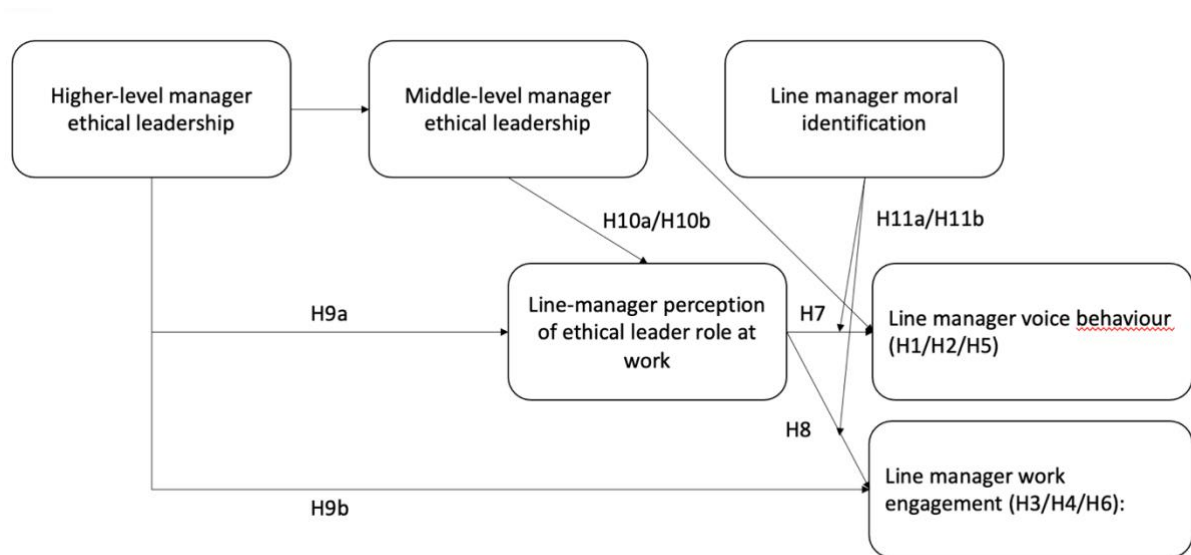


Figure 2.1. The overall research model to examine the trickle-down framework of ethical leadership development through a role theory perspective, and the condition that accentuates line manager voice behaviour and their work engagement.

The literature review first defines and explains the importance of line managers voice behaviour and work engagement, which are the focal dependent variables of this study. Thereafter, the researcher will draw on the trickle-down model to introduce a higher-level leader and middle-level manager's ethical leadership as the key antecedents of lower-level line manager's voice behaviour and work engagement.

Drawing on the role theory, the importance of lower-level line manager's perception of their ethical leader role is introduced as a key mediator to support the explanation of the relationship between middle-level ethical leadership and their voice behaviour and work engagement. This chapter then concludes by examining lower-level line manager's moral identification as the boundary condition of the relationship between lower-level line manager perceptions of their ethical leader role and voice behaviour and work engagement, as well as a consequence of middle-level manager's ethical leadership.

2.1. Line manager voice behaviour

Voice behaviour has recently received increased research attention due to its challenge-oriented nature (see Duan, Li, Xu, & Wu, 2017; King, Ryan, & Van Dyne, 2019), and is positively linked to desirable work behaviour and organisational effectiveness (Frazie & Bowler, 2015; Ng & Feldman, 2012). In the context of line-management, voice behaviour is an important positive leadership tool that will help to legitimise the line manager's influence by choosing to speak up for the benefits of their employee (De Cremer & van Knippenberg, 2003). Voice behaviour is defined as a "discretionary communication of ideas, suggestions, concerns, or opinions about work-related issues with the intent to improve organisational or unit functioning" (Morrison, 2011, p. 375). According to Mayer et al. (2013), voice behaviour as a form of proactive or extra-role behaviour that emerges in the work environment which is supported by this behaviour. Line manager voice behaviour hence aims to improve the functioning process of the work group. In this regard, line manager that voices will foster better cooperation amongst non-managerial employees and improve

organisational processes (Podsakoff, Podsakoff, Mackenzie, Maynes, & Spoelma, 2013).

Voice behaviour will benefit the organisation because it challenges the status quo to promote positive changes and protect the organisation from harm (Podsakoff et al., 2013). Well intended voice towards organisational factors can come across as being counter-normative (*i.e.*, retrenching individual to improve financial performance or to preserve resources for the team) that may resulted in counter-normative outcome. Especially, if it circles around issue that will causes controversy and neglect the individual who are in a position to address the concerns (Brinsfield, Edwards, & Greenberg, 2009). Accordingly, Van Dyne and LePine (1998) have stated that “voice is making an innovative suggestion for change and recommending a modification to standard procedures even when others disagree” (p. 109). However, this study argues that voice is a form of challenge-oriented citizenship behaviour that aims to challenge the status quo. Moreover, voice represents higher commitment and lack of voice is often associated to increase behaviour, such as accounting irregularities that is condoned by management (Thomas, Schermerhorn, & Dienhart, 2004). As such, under leadership that set clear ethical rules and take responsibility to manages the moral standards, voice will benefits subordinates and fall within the normative framework of the organisation (Avey, Wernsing, & Palanski, 2012).

There are two forms of voice, promotive and preventive, where the latter focuses on addressing problems that could potentially lead to harmful outcomes. Emerging research has argued about their distinctive nature (see Chamberlin, Newton, & LePine, 2017), and both types of voice are motivated by the same desire for intended change and are driven by the same mechanics that would inhibit (or promote) the opportunity to speak up (Morrison, 2014). In providing the

aforementioned definition, this study solely focuses on voice behaviour as a whole and taking the positive perspective that voice should embed - both promotive and preventive focus as a deterrent on negative behaviour (Lam et al., 2016; Liang, Farh, & Farh, 2012).

Existing research has outlined the positive benefits of voice behaviour and shows that voice must happen both ways to encourage dialogue (Avey et al., 2012; Walumbwa & Schaubroeck, 2009; Walumbwa, Morrison, & Christensen, 2012), promoting positive changes (Weiss, Kolbe, Grote, Saphn & Grande, 2017), and decrease turnover intention (Lam et al., 2016). However, the willingness to challenge the status quo through demonstrating voice will invite risk (Van Dyne & LePine, 1998). Therefore, a decrease in voice behaviour is often associated with a fear of harm (Detert & Edmondson, 2011) and lowered psychological safety (Nembhard & Edmondson, 2006). More importantly, choosing not to voice is associated with having a sanction from those with a higher status (Morrison & Milliken, 2000; Morrison & Rothman, 2009). Voice behaviour is thus important for an organisation to improve and provide employees with the opportunity to make decisions for the benefits of future performance (Konradt, Schippers, Garbers & Steenfatt, 2015).

Voice behaviour is also associated with willingness to report misconduct, where it is likened to whistleblowing, as organisation tends to rely on employees to report non-normative /or counter-intuitive behaviour (Mayer et al., 2013). As an example, the Enron corporation that famously started the ethical debacle was known to suppress voice, making reporting misconduct difficult (Edwards, Hawkins, & Schedlitzki, 2018). This issue has continued to persist in many recent corporate ethical lapses (i.e., Kobe Steel, Volkswagen, Wells Fargo) despite strict regulations are being enforced by the government. For this reason, serious concerns have prompted researchers to explore

behaviour that could prevent such ethical lapses in the future. As voice behaviour is can provide constructive challenge to improve rather than criticise the organisational processes. Prior research has shown that voice is associated with an increase in satisfaction and the motivation to share ideas that may improve and impact long-term organisational effectiveness, by increasing a sense of obligation towards the organisation (Van Dyne & LePine, 1998).

Voice behaviour helps identify the response needed when addressing problems by providing employees with the opportunity to speak up (LePine & Van Dyne, 1998). However, voice is best exerted by the line manager because it signals the management commitment, for example, line managers voice can decrease unethical employees' behaviour in an organisation (Paterson & Huang, 2019). Therefore, this study conceptualises line managers voice behaviour as a mean to engage and communicate on work-related issues with the intent to improve the processes (Morrison, 2011). It is suggested that line managers who are willing to voice are a symbol of two-way communication that intends to steer a dialogue with non-managerial employees (Brown, Treviño & Harrison, 2005; Walumbwa et al., 2012). Voice, when expressed by the line managers in the organisation will exert influence up the management level (Liu, Tangirala & Ramanujam, 2013). This behaviour also represents its commitment to promoting greater changes across the wider organisation (Paterson & Huang, 2019). Thus, line managers voice behaviour is a powerful tool for them to enhance personal influence in the organisation (van Dyne & LePine, 1998), particularly when demonstrating their role as future leaders.

Line managers that voice can help to direct the wider organisational processes (Organ, 1988). It is much beneficial when voice affects a group of individuals (Morrison, Wheeler-Smith, & Kamdar, 2011), and is fundamental for the effectiveness

of a team or group (Ohana & Stinglhamber, 2019; Weiss et al., 2017). Accordingly, line managers that voice tends to have a lower perception of the hierarchical barriers and is vital for enhancing key organisational performance (see Weiss et al., 2017). It is clear that line managers that promote and demonstrate this behaviour will amplify the expectation that is directed by management up the organisation. This provides higher level management with constructive criticisms to correct (or improve) the shortfall of the organisational process (MacKenzie, Podsakoff, & Podsakoff, 2011).

Line manager voice also differs from employees and middle manager. Unlike employee's voice that aims to improve the work group performance, past research suggested that an effective line manager must be skilled in getting higher up to take notice of the respective action (Dutton & Ashford, 1993). In turn, allowing management to make good use of the input to generate future improvement. Nonetheless, line manager that voice will invite a greater risk from those with higher status due to their formal position in the organisation (Morrison et al., 2011). This makes them more vulnerable towards retaliation and becoming ever critical when evaluating the risk associated with speaking up (Burriss, 2012). Their willingness to voice hence raises the issue about the work environment, such as the fear of retaliation or being punished for doing the right thing (Ashford, Rotbard, Piderit, & Dutton, 1998; Deter & Burriss, 2007).

Furthermore, emerging research that interviewed line managers from several higher education institutions has found evidence that line managers face blockage for voice, as well as the absence of formal voice channels. This often requires them to find other means such as productive resistance and informal channels to voice their concern. The research also highlighted line managers voice as an important source that can enact non-managerial employee's voice (Mowbray, 2018). Therefore, the positive benefits of line managers voice warranted attention as it would imply a

change-oriented behaviour to alter the organisation's status quo for the benefits of non-managerial employees. In other words, line managers willingness to voice will provide employees with the opportunity to express work-related ideas, playing a critical role in linking them with larger organisational influence (Liu et al., 2013; Tangirala & Ramanujam, 2012).

Overall, the current study aims to provide knowledge about their extra-role commitment through the perspective of line managers by examining a trickle-down model that incorporates the influence of multiple higher-level management. In doing so, this study argues that line managers voice will promote changes to counter non-normative behaviour that is condoned by leaders at the top. As an extension of prior research (see Aryee, Walumbwa, Modejar, & Chu, 2017; Griffin, Neal, & Parker, 2007; Parker & Collins, 2010). It is important to examine the line managers voice because these managers have a greater influence on non-managerial (or bottom-line) employees due to their direct involvement and daily engagement (Peng & Kim, 2020). Line manager voice would further signal their commitment to uphold standards and not to misuse the power granted by their position in the organisation (Hoogervorst, De Cremer & van Dijke, 2013). For example, Detert, Burris, Harrison, & Martin (2013) argued that line manager who voice for work group improvement must be able to filter relevant information to gather higher management support. The current study aims to capture line manager motivation that emerges out of their willingness to demonstrate challenge-oriented behaviour. Thus, the current study will examines line managers work engagement to align this extra-role behaviour with engagement at work (Schmitt, Den Hartog, & Belschak, 2016).

2.2. Line manager work engagement

According to Kahn (1990), employees that are cognitively engaged is authentic when displaying their feeling at work. Engagement is thus the central part of organisational life that provides understanding on how individuals develop meaning through personal interaction in the work environment (Schaufeli, Bakker, & Salanova, 2006). In contrast to voice behaviour that allows line managers to exert control and improve the process through initiating changes (Crant, 2000), work engagement is a form of attitude that is related to a contingent motivational and the psychological attitude of presentism. Work engagement is a particular state of motivation where an increase in such an attitude often outlines the individual's personal ability to fulfil the demands of the work role expectations. This positive affective state of motivation is categorised through high-level of dedication, vigour, and absorption with work task (Schaufeli, Salanova, González-romá, & Bakker, 2002). Accordingly, research has found vigour and exhaustion strongly related on the opposite ends of a continuum called "energy". Dedication, on the other hand is strongly associated with "identification" (González-Romá, Schaufeli, Bakker & Lloret, 2006; Schaufeli & Bakker, 2001), while absorption does not seems correspond to negative self-efficacy (Schaufeli & Salanova, 2007). Meta-analysis research further found that dedication was positively associated with a stronger relationship, commitment, and turn over at work, while vigour was shown to correspond the most with health and wellbeing (Halbesleben, 2010).

Many recent research on work engagement has focuses exclusively on vigour and dedication, leaving absorption out of the analyses (Spreitzer, Lam, & Fritz, 2010). For example, absorption was more associated with the notion of "flow" and is more reflective through the broader construct of engagement, rather than capturing efficacy

— the third dimension of burnout (Halbesleben, 2010). Besides, being engrossed in a role, as well as the intensity of focus was found to fluctuate individual's involvement at work (Sonnentag, 2003). An engaged employee will thus feel vigorous, dedicated and become absorbed while performing own role at work. At the same time, it is possible that individual may feel vigorous and dedicated but not necessarily absorption. Nonetheless, Work engagement explains employee's motivation and confidence to engage at work and is important because it captures employee's experience, understanding their willingness to devote time and effort to pursuing and engrossing in work that they find meaningful (Bakker, Schaufeli, Leiter, & Taris, 2008).

Work engagement is a positive experience that is closely related to positive work affect (Rothbard, 2001; Schaufeli et al., 2002), as an example, engaged employees will demonstrate a greater level of energy and perceive a stronger control over their life (Bakker, 2009). Meta analytic research has found work engagement intervention to buffer against the negative effect of job role demands (see Knight, Patterson & Dawson, 2019). However, there are scholars who suggested that a top-down effect may result in unintended negative side-effect and impact the organisation in ways that were not considered (Briner & Reynolds, 1999). For this reason, although work engagement will help employees to attain positive benefits even when work is stressful (Britt, Adler, & Bartone, 2001), in turn, increasing commitment towards the organisation (Sonnentag, 2003). Research found that excessive levels of work engagement is not beneficial and will not impact turnover intention. As a result, highly engage employees might consider leaving the organisation when they deem the job is too stressful or when resources are not adequately provided (Caesens, Stinglhamber, & Marmier, 2016). Nevertheless, it is clear that suffice level of work engagement has

a positive relationship with job resources (Halbesleben, 2010), and meeting the demands of work goals and personal growth (Bakker & Demerouti, 2007).

The current study argues that work engagement acts as a form of positive feedback that outlines both the organisation and personal resource when performing at work (Bakker & Leiter, 2010; Bakker, Albrecht, & Leiter, 2011). Accordingly, Kahn (1990) stated that such physical, emotional and psychological resources are necessary for engaging at work, and such a proposal was supported by past research, which has shown that work engagement is a relatively stable resource (Sonnentag, 2003). We know that resources at work would intrinsically motivate employee's autonomy, relatedness and competency needs, and provide a long-term motivation to achieve bottom-line objectives such as job performance and improve financial returns (see Bakker et al., 2011). In highlighting the aforementioned implications, the researcher argues that engagement tends to be weaker when experiencing poor relationship /or being in a work role that does not fit well into one's ideological stance. Hence, this motivational state is important because it expresses a connection with the wider state of participation at work (Kahn, 1990).

This study also focuses on line managers work engagement and suggests that such effect is important because line managers must be motivated to influence other behaviour that is promoted in the work environment and the organisation (Kahn et al., 1964; Katz & Kahn, 1966). Line managers work engagement is examined in connection with voice behaviour because extra-role behaviour requires more effort and persistence (Frese, Fay, Hilburger, Leng & Tag, 1997). Specifically, line managers that voice may encompasses positive emotions with own work, allowing them to expand ideas and direct changes to improve the working process (Schmitt et al., 2016). Besides, line managers are expected to promote these positive affective-

motivational to lower-level employees. Line managers that lack vigour, dedication and absorption may also take a more lackadaisical approach in their management (Spreitzer et al., 2010). Therefore, taking the initiative to improve the work procedure by mean of challenging the status quo is an active approach and would require much more cognitive resources to execute (Crant, 2000; Sonnentag, 2003). At the same time, an engaged leader will give followers the psychological safety to thrive (Edmondson, 1999).

Hence, line managers will weigh the cost and benefits of voicing, on the flip side, being engaged at work can be initiated without any associated risk (Schmitt et al., 2016). This personal initiative is characterised through taking an active approach at work but do not go beyond the requirements of the formal work role. Work engagement thus would not signal the intention to reshape the process, but solely focuses on investing in personal development and commitment to high-performance standards (Bakker & Leiter, 2010).

Work engagement would only signal the intrinsic motivation of line managers instead of challenging the status quo at work. For this reason, being engaged at work would underline the positive motivation categorised through an increase in mental resilience at work (Den Hartog & Belschak, 2012). Work engagement can also instil pride by giving meaning to work (Schaufeli et al., 2006; Schaufeli et al., 2002). It is suggested that work engagement and voice behaviour must co-exist to demonstrate a line manager active participation at work since both constructs are related to being involved at work. For example, voice behaviour emerges as a result of work engagement under condition of low job strain (Schmitt et al., 2016). However, some scholars have called for research to examine work engagement as the outcome of voice behaviour instead (see Kwon, Farndale, & Park, 2016). Indeed, research has

confirmed that employee's voice behaviour can affect their work engagement (Cheng, Lu, Chang, & Johnstone, 2013; Rees, Alfes, & Gatenby, 2013). The role of superior along the relationship between voice behaviour and work engagement has also been highlighted in both research.

Although various models have been developed to explore the antecedent of work engagement, the current study is concerned with the understanding the precondition of line manager behaviour and affective state of motivation. This study will hence approach work engagement as an outcome to extend knowledge about good management practices. Scholars have also defined work engagement as a positive fulfilling state of mind (Schaufeli et al., 2002). However, some scholars have argued that work engagement is nothing more than a composition of commitment, work satisfaction, organisational citizenship behaviour and turnover intention (Bakker et al., 2011). Therefore, this study will treat work engagement as an outcome construct and demonstrate an added-value benefit to knowledge when it is being examined alongside voice to clarify its relationship. In doing so, line manager work engagement would signal their commitment towards the organisation (Schaufeli & Bakker, 2010), at the same time, challenge the organisational processes through voicing (Schmitt et al., 2016).

In sum, a growing body of research is beginning to pay attention to meaningful work by including the attitude and behaviour that give work a meaning (Demirtas, Hannah, Gok, Arslan, & Capar, 2017). For this reason, leadership behaviour is seen as an important antecedent that motivates line manager attitude and their behaviour, because it gives meaning to performing work role (Piccolo, Greenbaum, Den Hartog, & Folger, 2010). The current study hence aims to address this question by examining the role of higher-level and middle-level managers in shaping this agenda. Katz and

Kahn (1978) stated that the authority for allocating resources to address the problems and reap the benefits from lower-level behaviour is rested with leaders higher up the organisational hierarchy. If, value does flow from the source and helps line managers to be critical (Cumberland, Alagaraja, Shuck, & Kerrick, 2018; Jacquart & Antonakis, 2015). Line manager willingness to voice may only emerge when there is a safety net to be critical (see Paterson & Huang, 2019; Van Dyne & LePine, 1998). To this end, the study will examine higher-level and middle-level manager ethical leadership as the antecedent of line managers voice and their work engagement through a role theoretical perspective in a Malaysian multinational set-up to explain the relationships.

2.3. Higher-level and middle-level manager's ethical leadership as antecedents of lower-level line manager's voice and engagement

Ethics is defined as the “the pertaining of morality and moral principles by which a person is guided” (Oxford English Dictionary, 1991, p. 534). Ethics and moral are concerned with the rules of conduct (see Oxford English Dictionary, 1991, p. 1114), and it answers the question about what it means to be a good human being (Narvaez & Lapsley, 2009). The meaning of ethics and moral are synonymous with individual identity (i.e., ways of thinking, sense of self) and characteristics, such as how individual feels, thinks and regulates behaviour to underscore moral as a function of own behaviour (Solomon, 1992). Ethical leader will define moral principles as premises of own character (Blasi, 1993), and through the prescriptive understanding of the moral standards (i.e., an enforcement of rule) to do good in the respective environment they resided (Rest, 1986). According, the Kohlbergian perspectives of cognitive moral development (Jennings, Mitchell, & Hannah, 2015; Jordan, Brown, Treviño & Finkelstein, 2011; Kohlberg, 1969), it is argued that moral developed individual will

provide ethical reasoning that increases the likelihood of being seen as ethical leader. Thus, ethical leadership is defined as “the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct in employees through two-way communication, reinforcement, and decision-making” (Brown et al., 2005, p. 120).

According to Treviño et al. (2000), an ethical leader must embody both a moral person and a moral manager and demonstrate honesty, trustworthiness and fairness – treating employees with dignity and respect (Treviño et al., 2003). At the same time, an ethical leader must ensure moral standards are followed by making it clear to employees about expectations regarding their behaviour (Brown et al., 2005) while influencing others in ways that deter unethical actions at work (Lemoine, Hartnell, & Leroy, 2019).

Table 2.1. shows how ethical leadership is compared with other positive leadership styles. Research shows that ethical leadership focuses heavily on the issue of moral management and would use reinforcement to inform ethical decision making and behaviour. In contrast to transformational leaders that can be differentiated between authentic- and pseudo- (Bass & Steidlmeier, 1999), where the latter is associated with a higher level of fear, obedience and job insecurity (Barling, Christie, & Turne, 2008). More importantly, research that augmented ethical leadership with other positive leadership theories (see Hoch, Boomer, & Dulebohn, 2018) have found ethical leaders to reduce unethical behaviour. Ethical leaders also do not always emphasize vision and change which is central to transformational leadership (Bass, 1985). Hence, ethical leadership has broader prescriptive information, taking a more normative approach when defining its ethical form in comparison to transformational leadership (Hoch et al., 2018).

Table 2.1. A summary of research that has defined ethical leadership, authentic, servant, transformational, and LMX.

	Ethical Leadership	Authentic Leadership	Servant Leadership	Transformational Leadership	LMX
Behavioural					
Fairness	X	X	X	X	X
Moral manager	X				
Uses reinforcement	X				
Ethical Decision making	X				
Serving behaviour		X	X		
Value					
Co-creation	X	X	X		
Promotes wellbeing	X	X	X	X	X
Helping Behaviour	X	X		X	
Attitudinal					
Moral individual	X	X	X	X	
Altruistic	X	X	X	X	
Self-awareness	X	X		X	
Visionary	X			X	
Committed/ Motivated	X	X		X	
Relational					
Role-modelling	X		X	X	
Transparency	X	X			
High-quality relationship	X	X	X	X	X
People-oriented	X		X	X	X
Two-way communication	X	X		X	X
Power-sharing	X				X

Note: Research² that augmented ethical leadership with other positive leadership theories. Research³ that underlined the definition within the respective leadership theory.

² [Hoch, Boomer, Dulebohn, & Wu (2018); Mayer, Aquino, Greenbaum, & Kuenzi (2012); Peng & Kim (2020); Price (2003); Schaubroeck, Lam, & Peng (2016); van Knippenberg & De Cremer, (2008); Walumbwa, Mayer, Wang, Wang, Workman, Christensen (2011)].

³ [Atwijuka & Caldwell (2017); Barbuto Jr & Wheeler (2006); Brown & Treviño (2006a); Downe, Cowell, & Morgan (2016); Hirst, Walumbwa, Aryee, Butarutar, & Chen (2016); Hooper & Martin (2008); Kalshoven, Den Hartog, De Hoogh (2013); Laschinger & Fida (2014); Luu (2019); Munir, Nielsen, Garde, Albertsen, & Carneiro (2012); Neubert, Kacmar, Carlson, Chonko, & Roberts (2008); Rahimnia & Sharifiad (2015); Sosik & Megerian (1999); Vogelesang, Leroy, & Avolio (2013); Treviño, Brown, & Hartman (2003); Walumbwa, Avolio, Gardner, Wernsing, & Peterson, (2008); Zhu, Avolio, Riggio, & Sosik (2011)].

Ethical leadership has explicitly included transactional effort like using reward and punishment to enforce ethical conduct in an organisation (Den Hartog, 2015). This contrasted transformational effort because employees are expected to meet certain expectations for reward, but will restrain from using punishment when the outcome fails to meet the expectations (Bass, 1985). Meta-analytical findings show that contingent rewards are highly effective for transactional leadership and in some cases, more than transformational leadership (Judge & Piccolo, 2004, p. 764). Accordingly, Mayer, Aquino, Greenbaum, and Kuenzi (2012), ethical leadership predicts unethical unit outcome after controlling for the idealised influence which is key to transformational leadership (Judge and Piccolo, 2005).

Two major theoretical foundations underpin ethical leadership theory (Brown & Mitchell, 2010). First, social learning theory (Bandura, 1977; 1986), which argues that employees that answer to an ethical leader will role-model after the leader to develop the normatively appropriate behaviour. Second, the social exchange theory (Blau, 1964), which argues that employees will reciprocate received fairness from ethical leadership because they feel indebted to the fairness provided by the leadership (Brown et al., 2005). The latter theoretical perspective also focuses on the high-quality exchange between the leader and the follower (Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016), often overlapping in concept when focusing on people-oriented effect and behaviour (Kalshoven, Den Hartog, & De Hoogh, 2011a). Leader-member exchange (or LMX) capitalises on the different types of exchange between the leader and its employee (Dansereau, Graen, & Haga, 1975). As an example, LMX was shown to influence an employee's extra-role behaviour when an ethical leader provided the support and the protection against retaliation (Bhal & Dadhich, 2011). However, research has argued that LMX is a mediator between ethical leadership and distal

outcomes rather than a leadership theory on its own (Walumbwa et al., 2012). Hence, a high-quality relationship with followers is related to ethical leadership rather than the process itself (Den Hartog, 2015).

Ethical leadership emerged from the meteoric increase in interest in moral leadership behaviour and was driven by the increasing focus on moral and ethical attitudes of leadership. There are two other leadership theories, which are authentic leadership and servant leadership that is commonly linked to positive employees' attitudes in an era that is increasingly focusing on the importance of leader's morality (Dinh et al., 2014). Authentic leadership (see Luthans & Avolio, 2003) is defined as a moral character that is "deeply aware of how they think and behave and are perceived by others as being aware of their own and others' values/moral perspectives, knowledge, and strength" (Avolio, Gardner, Walumbwa, Luthans, & May, 2004, p. 802). Theorists have argued that being authentic may not necessarily make the individual genuine in their approach to providing moral connotation (Price, 2003). For example, an authentic leader is only concerned with self-concordance (Luthans & Avolio, 2003), which made the moral judgement of an authentic leader free from any opposing normative pressure in comparison to ethical leadership (Lemoine et al., 2019). Servant leadership also tends to focus more on serving employees through the belief that long-term organisational objectives can only be achieved when the employee's wellbeing is prioritised (Hoch et al., 2018). However, ethical leaders will demonstrate and promoting ethical values as a meaningful way of serving the needs of stakeholders (Lemoine et al., 2019). This, in turn, allowed ethical leaders to create value for the communities it serves (Liden, Wayne, Liao, & Meuser, 2014).

Attention should also be given to charismatic leadership. Charismatic leaders (see Howell, 1998) may vary in their ethical stance. As an example, Howell and Avolio

(1992) found that charismatic leadership can be a double-edged sword when allowing employees to rationalise their behaviour as a bearer of moral standards. Also, the use of power and trust to ensure influence may institute a heavier reliance on the leader's authority (Howell & Avolio, 1992, p. 50). Therefore, charisma as a relationship has to be jointly produced by both the leader and the followers to develop a mutual relationship before shaping the distal organisational outcome (Howell & Shamir, 2005, p. 108). Adding to the conversation of a mutual relationship, Brown et al. (2005) argued that ethical leader is motivated by altruism to serve others, while employees are responsible for reciprocating and modelling behaviour, as well as transferring the acquired behaviour to others (Brown & Mitchell, 2010; Mayer et al., 2009). Nevertheless, Treviño et al. (2003; 2000) perspectives have strongly outlined the moral foundations (i.e., moral person and moral manager) of ethical leadership to distinguish it with other positive leadership theories.

More importantly, a well-established and growing literature continues to evidence the importance of ethical leadership (above and beyond other positive leadership styles) for a range of employee and organisational outcomes. As an example, meta-analytic findings have shown that ethical leadership will promote organisational citizenship, extra-role helping behaviour, and prevent deviant behaviour (Bedi et al., 2016; Ng & Feldman, 2015; Tu & Lu, 2016). Ethical leaders will also utilise multiple processes (see Walumbwa et al., 2012) to deter employees' from behaving unethically. Accordingly, research has linked ethical leadership with organisational citizenship behaviour (OCB) (Kalshoven et al., 2011b; Mayer et al., 2009; Mozumder, 2018; Sharif & Scandura, 2014; Tu & Lu, 2016; Walumbwa, Mayer, Wang, Wang, Workman & Christensen, 2012), counterproductive work behaviour (CWB) (Den Hartog, & Belschak, 2012), and deviant or unethical behaviours (Stouten, van Dijke,

Mayer, De Cremer, & Euwema, 2013). This encourages the leaders to use legitimate power to steer employees' behaviour towards a common goal (Brown & Treviño, 2006a; De Hoogh & Den Hartog, 2008), and inform what is normatively expected in an organisation (Hannah et al., 2014).

This study has also highlighted the important relationships between ethical leadership in promoting line manager voice behaviour and work engagement (see p. 9). As an example, ethical leadership was found to substitute line manager's justice enactment on employees engagement in discretionary behaviour (Koopman, Scott, Matta, Conlon, & Dennerlein, 2019), and mitigate the relationship between employee entitlement and workplace engagement when ethical leader perception is high (Joplin, Greenbaum, Wallance, & Edwards, 2019). Ethical leadership will also directly predict engagement levels (Den Hartog & Belschak, 2012; Demirtas et al., 2017) and employee voice (Avey et al., 2012; Chen & Hou, 2016; Mo & Shi, 2018; Walumbwa & Schauboreck, 2009). There are also several examples about the indirect nature of ethical leadership role on employee voice, for instance, ethical leadership was found to predict employee voice via organisational and relational identification (Zhu, He, Treviño, Chao, & Wang, 2015), cognitive engagement (Lam et al., 2016), and ethical role modelling (Bai, Lin, & Liu, 2019).

Because research has tended to focus on the relationship between the line manager and non-managerial employees to underscore the benefits of ethical leadership. Research that examined ethical role model did not find evidence that manager will always see higher-level leaders as an ethical role model (Brown & Treviño, 2014). Furthermore, Shin (2012) showed that ethical leadership research has largely overlooked the role of higher-level leadership and their influence on the wider organisation. This is important because seminal ethical leadership theory aims to

expand our knowledge about executive leadership by emphasising the importance of higher-level leaders on bottom-line objectives (see Treviño et al., 2003). Therefore, the propagators of seminal ethical leadership theory argued that ethical value must come from the very top of an organisation, and “if there isn’t an observed ethical leadership at the top, you won’t find it in the organisation” (Treviño et al., 2000, p. 140).

This study argues that line manager will role model after higher level leaders to gather their support when they voice for work group improvement. Given that organisations have begin to recognise the importance higher-level leaders ethical values. They’re influences on lower level line managers is important because line managers tend to have a stronger influence on non-managerial employess (Peng & Kim, 2020). Existing research (see Qi & Ming-Xia, 2014) has also shown that ethical leadership will improve and employee’s voice through an increase in organisation identification. Therefore, current study aims to expand knowledge on the influence of higher-level and middle-level manager ethical leadership (see Demirtas, 2015; Demirtas & Akdogan, 2015; Mayer, Kuenzi, & Greenbaum, 2010; Neubert et al., 2009; Shin et al., 2015) to understand these leader’s impact towards line manager voice.

This study exerted that line manager voices will signals their commitment to uphold standards and not misuse the power granted by their formal position (Hoogervorst et al., 2013). Coupled with the presences of higher-level and middle-level ethical leadership, line manager that voices will provide evidence about own commitment to their behaviour and encourages those below them in the organisational hierarchy to also uphold the standards set forward by leader higher up. Due to the challenging nature of voice behaviour that may invite unfavourable reactions from the recipient of the voice (Burris, 2012). The presences of higher-level and middle-level ethical leader are likely to provide line manager with a perception of psychological

safety in defending the standards at the lower-level of the organisation. This is also consistent with views that have associated speaking up with ethical issue and signalling the leader's commitment to ethical value at work. Therefore, line manager that voice will be influenced by the presences of a higher-level and middle-level ethical leadership, leading to the increase of willingness to speak up. In contrast, when the perception of higher-level and middle-level ethical leadership is low, line manager will be less willing to challenge the status quo and take personal risks, as well as bearing potential unfavourable reaction from higher-level by voicing. As a result, the presences of higher-level and middle-level ethical leadership will provide line-managers with confidence to present ideas and offer suggestion and thus more likely to speak up. Thus, the following hypotheses are proposed:

Hypothesis 1: Higher-level ethical leadership is positively related to lower-level line managers' voice behaviour.

Hypothesis 2: Middle-level ethical leadership is positively related to lower-level line managers' voice behaviour.

Line manager work engagement is examined as a second outcome because the current study is concerned with the understanding of the precondition that affects line manager positive affective state of motivation. Although work engagement embodied three dimensions, the current study will only examine the influence of higher-level and middle-level manager ethical leadership on the work engagement as a whole. Nevertheless, recent research in the field suggested that certain leadership behaviour can affect vigour, — “the willingness to invest effort in one's work, and persistence even in the face of difficulties” and dedication, — “a sense of significance, enthusiasm,

inspiration, pride, and challenge” (Schaufeli et al., 2002, p. 74), more prominently (see Moss, 2005; Salanova et al., 2011) than absorption. Absorption, — “being fully concentrated and deeply engrossed in one’s work,... and has difficulties with detaching oneself from work” (Schaufeli et al., 2002, p. 74), does not seem to correspond to personal efficacy, but rather more reflective to the broader construct of engagement. This development may also be due to construct validity issues when being associated with the dimension of burnout (Schaufeli & Salanova, 2007). Therefore, some researchers argued that absorption would play a different role in comparison to vigour and dedication and would perhaps be a consequence of work engagement rather than a constituting component (Salanova, Llorens, Cifre, Martinez, & Schaufeli, 2003). Nonetheless, the current study will align itself with that underline work engagement as an outcome, as well as subsequent mechanism that will deter unethical behaviour (Den Hartog & Belschak, 2012) and promote employee’s wellbeing (Chughtai, Byrne, & Flood, 2015).

The current study thus asserts that the presences of a higher-level and middle-level ethical leaders are likely to entrust line managers with responsibility as a way of increasing perception about the importance of their position. It is hypothesised that higher-level and middle-level ethical leadership will increase line manager’s sense of control and perception of individual responsibility through a sense of psychological meaningfulness to induce greater positive affective-motivation. Besides, the presences of a higher-level and middle-level ethical leaders will increase line manager energy and mental resilience and steer the willingness to invest effort at work even in the face of difficulties – vigour. At the same time, line manager will become more involved at work through the accompanied feeling of enthusiasm and significance

with a sense of pride and inspiration – dedication. For these reasons, the following hypotheses are proposed:

Hypothesis 3: Higher-level ethical leadership is positively related to lower-level line manager work engagement.

Hypothesis 4: Middle-level ethical leadership is positively related to lower-level line manager work engagement (H4).

2.4. A trickle-down model of higher-level leader and middle-level manager's ethical leadership

In explaining the seminal ethical leadership theory, research proposes a trickle-down model, where ethical leadership is promoted and embedded from the highest levels, i.e., higher-level leader's ethical leadership to the lower-level line managers via middle-level managers (Mayer et al., 2009). The theory of ethical leadership was established by informing the role of higher-level ethical leader as the source that drives the moral standards in an organisation through a top-down approach (Treviño et al., 2000; 2003), and impacting leaders at the lower hierarchy. Higher-level ethical leadership hence plays an important role in setting up the formal process of an organisational ethical climate (Shin, 2012) and ethical culture (Martin & Cullen, 2006; Treviño & Weaver, 2003). To provide another layer of understanding, this study draws on the perspective from the economics literature, whereby higher-level leader's behaviour is closely associated with the corporate governance principle mandate that is adopted by many large organisations to hold this level of leaders accountable for misconduct. This is important as the significant growth of business compliance initiative in a large organisation over the last two decades have drawn an increase in

interest in the corporate governance framework. Thus, making the corporate governance a “virtual mandate for the organisation to invest in ethics and compliance programs” (Dalton & Metzger, 1994 p. 8).

The trickle-down model is a dynamic social process (see Mayer et al., 2009; Schaubroeck et al., 2012) that is commonly observed through social learning and social exchange theory (Wo et al., 2018). The model argues that higher-level leadership (the source) behaviour is transferred to the lower-level leaders (the recipient) through middle-level managership (the transmitter). In other words, “the perceptions, attitudes or behaviours of one individual can influence the perceptions, attitudes, or behaviour of a second individual, which then influence the perceptions, attitudes, or behaviour of a third individual” (Wo, Ambrose, & Schminke, 2015, p. 1848). Accordingly, the model aims to argue the role of higher-level leadership from one individual to another (i.e., $A \rightarrow B \rightarrow C$) and has primarily focused on the indirect influence (Bass, 1990; Bass et al., 1987).

The trickle-down model has indeed received the most attention from leadership research, particularly, on value-based leadership such as ethical, authentic and servant leadership (Hirst et al., 2016; Mayer et al., 2009; Schaubroeck et al., 2012; Stolberger et al., 2019; Wo et al., 2018). Because multiple leaders across the hierarchy sharing the same discourse is often perceived as the organisation identity to inform lower-level leader’s behaviour through a top-down approach (Den Hartog, 2015; Treviño et al., 2008). The model is hence widely adopted and observed in other disciplines beyond leadership theories, for example, behaviour integrity (Simons, Friedman, Liu, & McLean Parks, 2007), psychological contract breach (Bordia, Restubog, Bordia, & Tang, 2010), justice perception (Ambrose, Schminke, & Mayer, 2013; Tepper & Taylor, 2003), abusive supervision (Aryee, Chen, Sun, & Debrah,

2007; Mawritz et al., 2012; Liu, Liao, & Loi, 2012), trustworthiness (De Cremer, van Dijke, Schminke, De Schutter, & Stouten, 2018), and task and development idiosyncratic deals (Rofcanin, Las Heras, Bal, Van der Heijden, & Taser Erdogan, 2018).

Within the ethical leadership literature, there are around twelve studies that have examined the trickle-down model to underscore the importance of higher level manager's ethical leadership on lower-level manager/employee behaviours (see *Table 2.2.*). Accordingly, two studies have incorporated three-levels of management into the trickle-down model (see Schaubroeck et al., 2012; Mozumder, 2012). First, Schaubroeck et al. (2012) suggested that higher-level ethical leader will embed expectations into the ethical culture of an organisation. Through this mechanism, they will then indirectly influence immediate employees' attitude and behaviour and their respective level of ethical culture. For this reason, higher-level ethical leaders are paramount to ensuring that ethical value is well embedded into the fabric of the organisation to sustain the effect and promoting ever lower ethical behaviour. As such, the presences of higher level ethical leaders are presume to set the ethical culture of the organisation and acted as an antecedent of middle-level manager ethical leadership.

Mozumder's (2018) research further extended the three level management model by examining the trust propensity of direct-report (i.e., middle-level manager trust in higher-level leadership) on line manager's satisfaction and well-being (lowest-level), group OCB (middle-level), and organisational performance (higher-level). The author found that higher-level ethical leadership will trickle-down through next level management trust propensity that is consistent with social learning theory. Besides, Wang et al (2018) have also looked at the mechanism between higher-level and have—

Table 2.2. Research that has examined the trickle-down model in ethical and integrity leadership

No.	Year	Author	title	Theory	Summary of Study
1	(2009)	Mayer, Kuenzi, Greenbaum, Bardes, & Salvador	How Low Does Ethical Leadership Flow? Test of a Trickle-Down Model	Social Learning/ Social Exchange	The first study to examine the trickle-down process between top management and lower-level supervisory ethical leadership on the group level outcome of OCB and research group deviance. The study argued that social learning and social exchange theories will underline the trickle-down process. Findings suggest that higher-level ethical leader influence may be stronger in an organisation with less hierarchy. The findings also suggested that co-researchers may exert informal influence due to proximity. Furthermore, the researchers highlighted the lack in understanding of how ethical leadership would act as an antecedent on ethical climate. Therefore, future research should identify the boundary condition and mechanisms of the framework on (un)ethical behaviour.
2	(2011)	Ruiz, Ruiz, & Martinez	Improving the “Leader–Follower” Relationship: Top Manager or Lower-level supervisor? The Ethical Leadership Trickle-Down Effect on Follower Job Response	Role-Set Theory	The study examined the theoretical mechanisms that would consider top-management and lower-level supervisors as ethical leaders. The result has shown that middle-level ethical leaders will play an important role in communicating and interpreting formal and informal policies to mediate the effects of higher-level ethical leadership on lower-level employees' behaviours and attitudes. The researchers also argued that only two types of leadership figures will exist in an organisation regardless of their complexity. They suggested that co-researchers can act as an informal leader that amplified the trickle-down process effect on followers' job performance. Therefore, future studies should control for social desirability bias (SDB) that can affect ethical research and examine the influences of co-researchers on the trickle-down process.

3	(2013)	Gentry, Cullen, Sosik, Chun, Leupold, & Tonidandel	Integrity's Place Among the Character Strengths of Middle-level Managers and Top-level Executives	Stratified Theory Systems	The study examined the manifestations of middle-level managers' integrity behaviour concerning their performance ratings. The results found leader's character strength to be highly theoretical driven and suggested that future studies should conduct a time-lagged survey on leaders' integrity to test the degree of favouritism within the dyadic relationship of higher-level and middle-level managership. Furthermore, because integrity, such as ethical consideration and authenticity are shown to impact performance. The researchers argued that other mechanisms may affect the relationship between integrity and performance. Hence, future research should consider increasing the generalizability of leadership integrity through a more heterogeneous sample to explore what constitutes integrity across culture. For example, if culture moderates its effect on performance.
4	(2012)	Schaubroeck, Hannah, Avolio, Kozlowski, Lord, Treviño, Dimotakis, & Peng	Embedding Ethical Leadership Within and Across Organization Levels.	Social Learning	According to Wo, Schimke, and Ambrose (2018), review on the trickle-down framework. This is the only study in the field of ethical leadership that have fulfilled the criteria of the trickle-down process. The researchers developed a multilevel and multisource model to examine unit-level ethical culture as the embedding mechanism on the trickle-down process. However, the researchers argued that military data may not be transferrable to an organic organisation due to the military define hierarchical status. Therefore, future research should examine this relationship in an organic organisation and identify other mechanisms that may increase the strength of the trickle-down process.

6	(2013)	Hansen, Alge, Brown, Jackson, & Dunford	Ethical Leadership: Assessing the value of a multifoci social exchange perspective.	Social Exchange	The study examined the relationships between ethical leadership and employee commitment through a multi-foci (within-foci and cross-foci effects) social exchange perspective. The findings suggested that higher-level ethical leadership will affect employee outcomes both directly and indirectly. At the same time, both levels of ethical leaders are positively related to employee organisational commitment and lower-level supervisor respectively. However, the study found that different types of social exchange will mediate these relationships. Besides, the researchers suggested that the model may not be generalisable outside of the environment of the surveyed organisation and proposed that future study be conducted within a large organisation to understand the transmission of organisational leadership towards lower-level employees in a more salient relationship.
8	(2016)	Mozumder	A Multilevel Trust-based Model of Ethical Public Leadership	Social Learning	The study developed and tested a multilevel trust-based model of ethical public leadership. The study examined the relationship between ethical leadership and trust on employee well-being, satisfaction, group organisational citizenship behaviour, and perceived group organisational performance. Results suggested that future study should do a multiple time-lagged survey methodology to eliminate common method bias. Besides, the researchers found that lower-level supervisors have very limited opportunity to observe higher-level ethical leadership and suggested that future study might consider moderating factor such as followers' moral awareness.
9	(2016)	Letwin, Wo, Folger, Rice, Taylor, Richard, & Taylor	The "Right" and the "Good" in Ethical Leadership: Implications for Lower-level supervisors' Performance and Promotability Evaluations	Social Learning	The study explored the extent being ethical is related to leaders' performance and promotability through the perspective of manager and follower. Results showed that the demand for ethical leadership can change over time to affect other organisational outcomes. The study draws heavily on the utilitarian approach to ethical behaviour and suggested that the surveyed environment may influence the outcome of the findings. Therefore, future research should examine the influence of cultural variation on the perception of ethical leadership and consider other potential moderators on the outcome at leader-level.

10	(2018)	Peng & Wei	Trickle-Down Effects of Perceived Leader Integrity on Employee Creativity: A Moderated Mediation Model	Social Learning	The study examined the integrity of the manager and lower-level supervisor on follower's creativity. The researchers argued that integrity and trust is a part of ethical leadership and highlighted the implication of psychological safety and the effects of intrinsic motivation on lower-level supervisor integrity and employee creativity. Although a trickle-down relationship on employee creativity was confirmed, past findings have suggested that an increase in employee creativity may foster dishonesty. Therefore, future studies should investigate the mediating effect of trust in top-management.
11	(2018)	Wang, Xu, & Liu	How Does Ethical Leadership Trickle Down? Test of an Integrative Dual-Process Model	Social Learning	The study examined ethical efficacy expectation and ethical outcome expectation between manager and lower-level supervisor's ethical leadership. The researchers argued that social learning theory is more suitable in explaining the trickle-down process of ethical leadership. Besides, the results showed that female demonstrate a higher ethical efficacy, which made them two times more likely to exhibit ethical behaviour. The researchers highlighted the lack of a proper efficacy scale in literature and suggested that future studies should incorporate social exchange theory or social identity theory to explore the reciprocity and identification of manager and lower-level supervisor.
12	(2018)	Byun, Karau, Dai, & Lee	A Three-Level Examination of the Cascading Effects of Ethical Leadership on Employee Outcomes: A Moderated Mediation Analysis	Social Learning/ Social Exchange	The study developed a multilevel model to examine the embedment of ethical leadership using dyadic data. Results found that higher-level ethical leadership will trickle-down to a lower-level leader and negatively influence social loafing, while positively influence task performance. The study established the link between the literature of social loafing and ethical leadership. The researchers suggested that higher-level ethical leader can exert a wider influence on the organisational phenomenon. The authors further highlighted the limitation of past studies methodology and call for the use of a multilevel and multisource methodology to examine the trickle-down process.

found that ethical efficacy and ethical outcome expectation to mediate the relationship between middle-level and lower-level ethical leadership. More importantly, the authors argued that social learning would remain important when explaining the trickle-down model, but future study should incorporate other theory to explore why lower-level manager will reciprocate ethical value in an organisation. Research by Byun et al (2018) also found that higher-level ethical leadership will trickle-down to a lower-level leader and negatively influence social loafing, while positively influence task performance. The authors further suggested that higher-level ethical leader would actively demonstrate ethical standards in their organisations to foster a general ethical climate across the organisational hierarchy. This, in turn, allowed managers at the respective hierarchy to learn the appropriate behaviour vicariously by observing which behaviour would elicit reward and punishment (Brown & Treviño, 2006a).

Another major implication of the trickle-down model is highlighted by Schaubroeck et al (2012) and Mozumder (2018), which resonated with the original purpose of the trickle-down model – to balance the conflicting perspectives on issues about higher-level, middle-level and lower-level line managers (see Mayer et al., 2009). Because an organisation is a multilevel social entity that espouses of leader across the hierarchy (Katz & Kahn, 1966), examining three levels of leadership aims to establish how values are transferred across hierarchical levels by presenting a more holistic view about proximal and distal leadership processes that are needed to appreciate ethical leadership influence in a complex organisation (Mozumder, 2018; Schaubroeck et al., 2012). Indeed, both pieces of research have presented several limitations when examining the flow of ethical value. Mainly, despite providing arguments to associate the ethical value of public and private organisations, both were conducted in organisations (i.e., public council and military organisation) that had a

tradition of the close corporation and highlighted the generalisation issues when interpreting the findings. To perplex this issue, research has further found individuals to perceive black business leaders as being less ethical when they are ambiguous about the leadership (Marquardt, Brown, & Casper, 2018). Besides, employees' status was found to influence their perception of ethical leadership, in this case, when their perception is lower by virtue of their status in the organisation (Pucic, 2015). Hence, future research should pay attention to the organisational context as well as the close association between the leader and employees (Schaubroeck et al., 2012) .

Furthermore, the state of literature lacks consensus about higher-level and middle-level ethical leadership role along the trickle-down process, for example, Mozumder (2018) argues that middle-level ethical leadership embeds both a downward and upward role, at times, making their development "the single most efficient policy for an organisation to adopt" (p. 180). Indeed, scholars have argued that ethical value must be embedded through multiple leaders in an organisation to support moral standards (Hansen et al., 2013). Therefore, leaders at different management level will play an important role in establishing the moral standards in an organisation (Brown & Treviño, 2006a). To this end this research would examine this trickle-down model where higher-level ethical leadership influences lower-level line manager voice behaviour and work engagement via middle-level ethical leadership. This is important because this study extends our understanding about line manager voice behaviour and work engagement antecedents by incorporating two-levels of leadership to extend argument about the chain of influence from the very top of the organisation in an indirect way (i.e., $A \rightarrow C$ via B) (Solinger et al., 2020).

Based on the above arguments and drawing on the trickle-down model, higher-level leadership function will transmit to lower levels line manager through the middle

level manager (Katz and Kahn, 1978). It is suggested that middle-level managers will mediate the influence between the higher-level leaders and the lower-level employees (Wooldridge, Schmid, & Floyd, 2008). If ethical leaders are seen as an attractive and credible role models for employees, and they consistently communicate the importance of ethical standards to employees. Middle-level managers are much more motivated to adhere to ethical behaviour (or values) similar to those demonstrated by higher-level ethical leadership. The influence of higher-level ethical leaders are also more likely to inform the organisation's performance management system, which then signals the expected work attitudes and outcome to lower level management and employees (Byun et al., 2018). Therefore, the current study expect that higher-level ethical leadership will trickle-down and influence the behaviour of lower-level frontline manager voice behaviour via middle-level ethical leadership.

It is argued that middle-level manager will develop leadership patterns by imitating the desirable behaviours of higher-level leaders who often serve as the conspicuous role models of the organisation (Schaubroeck et al., 2012). In return, the status of a higher-level ethical leader is used as a reference for own behaviour (Brown & Treviño, 2006a). The presences of higher-level and, in turn, middle-level ethical leader is also likely to provide line manager with a perception of psychological safety in defending the standards at the lower-level of the organisation. However, higher-level and middle-level manager ethical leadership have to be consistent in order to influence line manager voice. For example, when the perception of middle-level ethical leadership is weaker than higher-level manager, line manager maybe less willing to speak up because middle-level ethical leaders tend to disseminate the general values presented by higher-level to lower-level line managers. For these reasons, the influence of higher-level ethical leadership is two-fold: (1) higher-level ethical leaders

will influence lower-level line manager by establishing the expectation in the organisation, and (2), higher-level ethical leader will influence middle-level manager and, in turn, lower-level line manager. Specifically, when it comes to taking personal risks and bearing potential unfavourable reaction from higher-level by voicing. As a result, middle-level ethical leadership will fully mediate the positive influence of higher-level ethical leadership and affect line manager's voice behaviour. Thus, the following hypotheses are proposed:

Hypothesis 5a: Middle-level ethical leadership mediates the positive relationship between higher-level ethical leadership and lower-level line managers' voice behaviour.

Like voice behaviour, the current study also exerted that line manager work engagement is influence by higher-level and, in turn, middle-level ethical leadership. In particularly, when the perception of middle-level ethical leadership is weaker than higher-level manager, line manager may experience poorer motivation because of conflicting message between higher-level and middle-level manager. Taken altogether, the current study suggested that presences of a higher-level and middle-level ethical leaders will increases line manager energy and mental resilience and steer the willingness to invest effort at work even in the face of difficulties. At the same time, line manager will become more involve at work through the accompanied feeling of enthusiasm and significance with a sense of pride and inspiration by mean of dedication and absorption. While the presences of strong ethical leadership at both higher-level and middle-level may increases line manager's work engagement, leaders may also create a situation where employees failed to challenge the status

quo. As such, employees may fail to react to environmental changes due to the work intensity (Spreitzer et al., 2010). For these reasons, the following hypotheses are proposed:

Hypothesis 5b: Middle-level ethical leadership mediates the positive relationship between higher-level ethical leadership and lower-level line managers' work engagement.

2.5. A role theory perspective towards the line manager's voice behaviour and work engagement: The mediating influence of line manager's perception of an ethical leader role

The current study sought to explain the impact of higher-level leadership and in turn middle-level manager's ethical leadership on lower-level line manager voice behaviour and their work engagement. As such, the trickle-down model is important to the ethical leadership theory because it assumed that the transfer of ethical value will be the same across all levels (Wo et al., 2018). However, Simons et al. (2007) argued that recipient at the lower-level can receive conflicting expectations that decreases satisfaction and trust towards higher-level leadership and increases conflict. The limitation of the social learning model also bears the same credence of recent ethical leadership research that found certain conditions to diminished learning from the leader (Tu & Lu, 2016; Velez & Neves, 2018).

To advance our understanding of this issue, perspective is borrowed from research in the field of trust and justice that found values to trickle-down via different processes (Wo et al., 2015). This implies that research should not always take for granted that ethical leadership value will almost always trickle-down and affect every

other organisational behaviour for a similar reason (i.e., a middle-level ethical leader will role-model after higher-level ethical leadership to transfer value) (De Cremer, van Dijke, Schminke, De Schutter, & Stouten, 2018; Wo et al., 2015). In highlighting this limitation, this study assumes that line managers will voice and engage at work when they are well aware of their ethical duty. Thus, this study extends this limited research by introducing a new role theory perspective on higher-level leaders, and in turn, middle-level ethical leadership impact on lower-level line managers' voice behaviour and work engagement.

According to role theory (Kahn et al., 1964; Katz & Kahn, 1978), lower-level line managers will take on a leadership role in an organisational system, governing their choices to behave (Sluss et al., 2011), in this case, this study examines their voice behaviour, as well as work engagement. In contrast to social role theory (Eagly, 1987; Eagly, Wood, & Diekmann, 2000), which tends to classify the role played by the leader and the situation that cluster around gender and politics to accentuate social exchange obligation (Kacmar, Bachrach, Harris, & Zivnuska, 2011) — roles are bounded by an organisation which influences individual attitude and behaviour rather than vice versa. Organisational research has in the past, illuminated the process of socialisation and social network (Sluss et al., 2011). Therefore, the roles prescribed by the individual can emerge out of their own identity, influencing own self-concept and their subsequent relationship in a working organisation (Sluss & Ashforth, 2008).

A role theory perspective help explains why valued ethical behaviour is embedded within an organisation, allowing them to emerge as a result of answering to ethical leadership (Eisenbeiss & Giessner, 2012). Because a leadership role in an organisation is espoused through being in a formal position that is associated with a legitimate status. The position can influence the line manager's self-concept, affecting

the way they interact across the network of relationships, as a result of their occupied role (Katz & Kahn, 1978). It also provides lower-level line managers with an informal platform to understand their role. This, in turn, help them to institutionalise the expectations of higher-level leaders and develop practice within their respective social structure. Hence, the position withheld by line managers will help define and legitimised their role and through vis-à-vis social interaction with others that occupied the similar role (Reay, Golden-Biddle, & Germann, 2006; Biddle, 1986).

The roles line manager held will help them to understand their position and expected behaviour in the social system (Mead, 1934). It is suggested that line managers are more likely to demonstrate extra-role behaviour when they can assume a set of patterns and behaviour that is expected by the organisation (Biddle, 1979). As the role line managers will embed the very value that aims to sustain the organisation. This study argues that line manager ethical leader role perception would serve as an antecedent that informs their voice and engagement (Morrison, 1994; Salancik & Pfeffer, 1978; Sluss et al., 2010). Role theory also described this social phenomenon as a role-taking process that is created through the process of socialisation by assuming a set of expectation and aligning their actions with the respective presented social norm (Katz & Kahn, 1966). Therefore, line managers will view their behaviour as a desirable social transaction (Heimer & Matsueda, 1994), as well as the consequences of their ethical leadership role.

Based on the role theory perspective, this study argues that line managers will develop ownership, in this regard, appropriated by lower-level line managers' perception of an ethical leader role. Line manager's perception of an ethical leader's role is germane to the maintenance of moral standards and will influence their behaviour. However, recent research argued that the existence of ethical leaders will

take the weight off ethical responsibility allowing employees to embrace less norm conforming role, such as creativity (Liu et al., 2020). Although line managers that voice can be seen as a norm-challenging behaviour, the current study argues that line manager would engage in voice to fulfil the normative expectations and acquire positive rewards (see Duan, Kwan, & Ling, 2014). For this reason, when line manager that perceive own ethical leader role, as a result of answering to an ethical leader.

Furthermore, line manager will feel responsible for enforcing standards that are compatible with their role expectation (Katz & Kahn, 1978). In this instance, their ethical leader role would highlight their ethical commitment and responsibility as a response to ethical leader. In this regard, line managers are more willingness to speak up against inappropriate organisational actions and emphasise doing things the right way without the fear of facing retaliation. Indeed, past research has shown that employee who voices more are less likely to have exit intentions when answering to an ethical leader (Lam et al., 2016). To this end, perceiving own ethical leader role would guide their behaviour and allows them to voice because they believe that they can influence the organisation, under the presences of higher management ethical leadership. Thus, the following hypothesis is proposed:

Hypothesis 6a: Lower-level line managers' perceptions of assuming an ethical leader's role in their job is positively related to their own voice behaviour.

Role theory further suggests that individuals are better able to fulfil their needs and goals when they are aware of their role at work. In applying this perspective, line managers are better engaged at work when they feel that their values and those of the organisation are well aligned with their expectations (Solomon, 1992a). This study

addresses the issue on the paucity of line manager's perception of their ethical leader role and argues that the line managers that understand the expectations and responsibility of their role are more engaged and are willing to voice. However, because work engagement embodied three dimensions, which is vigour, dedication and absorption. Research has suggested that leadership role can affect vigour and dedication more prominently than absorption, as it does not correspond to personal efficacy, but rather more reflective to the broader construct of engagement (Schaufeli & Salanova, 2007). Besides, when a line manager is overly dedication and absorbed in the responsibility of own role, they may fail to see the necessary change, resulting in a failure to react towards the need of the environment. The increase of work intensity as a result of absorption may result in work conflict, as they may have a difficult time separating work and personal relationship (Spreitzer et al., 2010). Nonetheless, the current study suggested that line manager that have a defined perception ethical leader role are more engaged as a whole. It is hypothesises that line manager's understanding of own ethical role expectation is more likely to increases personal willingness to invest in the work, at the same time develop a stronger involvement through a feeling of enthusiasm and significance. For these myraids of reasons, the following hypotheses are proposed:

Hypothesis 6b: Lower-level line managers' perceptions of assuming an ethical leader's role in their job is positively related to their own work engagement.

Line managers are expected to assume a set of patterned behaviours or roles expected behaviour at work (Biddle, 2013). In contrast to social learning, which argues that behaviour is developed by role modelling after the leader (Bandura, 1977; 1986),

the role line managers held at work can affect their ability to role model from superior as leaders up the hierarchy can be very inaccessible to supervision (Katz & Kahn, 1966). Their tendency to be simplified in the view of the recipient suggests that social learning theory does not fully account for this relationship at work, because an organisation has both formal and informal hierarchies as well as defined responsibilities (Paterson & Huang, 2019). Katz and Kahn (1978) stated that roles are a set of recurring interrelated actions that an individual develops in the organisation. Therefore, roles are shaped by the expected behaviour rather than transcending from individual differences (Vandenberghe et al., 2017).

Roles are also part of a larger social network that aims to articulate the expectation of the organisational system. In other words, individuals will develop roles through being aware of their superior behaviour and this logic suggests that line manager will take on an ethical leadership role to prescribe to the rules, norms, and expectations to maintain order in the organisation (Paterson & Huang, 2019; Katz & Kahn, 1966). The role is thus defined by a set of behaviour expectations that are attached to the position an individual held in an organised set of social relationships (Merton, 1957; Stryker & Burke, 2000). These behaviour expectations will specify the meaning and character needed to perform the role, for example, line manager's role is attached to the structural position and their ability to interpret role will help them to organise the information and meaning that is associated with the role expectation (Sluss et al., 2010). This role perception can hence lead to an expression of role requirements (Kahn et al., 1964), where the line manager is expected to develop and demonstrate behaviour that is consistent to the expectation displayed by leadership up the hierarchical level. Thus, this study argues that line manager perception of an ethical leader role will fully mediate the relationship between higher-level manager

ethical leadership and their own voice behaviour, as well as respective dimension of work engagement.

Hypothesis 7a: The relationship between middle-level ethical leadership and voice behaviour is mediated through the lower-level line managers' perceptions of assuming an ethical leader's role in their job (as in H6a).

Hypothesis 7b: The relationship between higher-level ethical leadership and voice behaviour is mediated through the lower-level line managers' perceptions of assuming an ethical leader's role in their job (as in H6a)

Hypothesis 8a The relationship between middle-level ethical leadership and work engagement, is mediated through the lower-level line managers' perceptions of assuming an ethical leader's role in their job (as in H6b).

Hypothesis 8b The relationship between higher-level ethical leadership and work engagement, is mediated through the lower-level line managers' perceptions of assuming an ethical leader's role in their job (as in H6b).

Furthermore, this study aims to extend the trickle-down literature by explaining the relationship and linkages between higher-level leaders, and in turn, middle-level manager's ethical leadership on lower-level line managers' perception of an ethical leader's role. Role theory advances our understanding about the role of leadership up the organisational hierarchy and the interactive processes as being a part of the social system that occurs to shape attitude and develop actions. This helps unfold the process through defined dyads and pattern of expected behaviour (Georgakakis, Heyde, Oehmichem, & Ekanayake, 2019). Besides, the role theory perspective would circle around ethical leader up the organisational hierarchy to help explain individual

identities, needs and goals (Kahn et al., 1964). Building on this perspective, this study pays attention to various assumptions about roles that are shaped by ethical leaders at different organisational levels (Georgakakis et al., 2019). In underlining the perspective of role theory, this study will examine the link between higher-level leadership and middle-level manager's ethical leadership to provide a systematic testing about executive leader role on frontline manager behaviour. More importantly, it provides a new theoretical lens to explain why ethical value trickle-down from the top of an organisation.

Last but not least, this study argues that line managers' perception of an ethical leader role will inform their understanding of the role expected behaviour in an organisation. Because voice is a particularly high-risk extra-role behaviour that can lead to criticism and ostracism (Van Dyne & LePine, 1998). Line managers that are well aware of their ethical leader role are more oriented to demonstrate voice behaviour. Accordingly, role theory suggests that perception of own ethical role and responsibility will influence individual's willingness to take the necessary risk as they understand the expectations of the organisation (Katz & Kahn, 1978). Because individuals that take on a leader role are also aware of the responsibility that makes them a critical actor (Biddle, 1979). It is suggested that line manager who perceive own ethical leader role will challenge the work process by engaging in voice to fuel the normative expectations (Duan et al., 2014). Although voice can be associated with harming the organisation (i.e., whistleblowing), the current study argues that line managers who feel valued are more likely to play their part in the decision-making process by expressing their opinions (Morrison & Milliken, 2000). Thus, line-manager that perceive own ethical leader role will demonstrate stronger commitment in their work.

To this end, this study argues that middle-level manager ethical leadership and, in turn, line manager perception of ethical leader role will fully mediate the relationship between higher-level ethical leader and their voice behaviour and work engagement, which is categorised by vigour, dedication, and absorption.

Hypothesis 9a: The relationship between higher-level ethical leadership and voice behaviour (as in H1), is mediated through the middle-level manager's ethical leadership and lower-level line managers' perceptions of assuming an ethical leader's role in their job (serial mediation)

Hypothesis 9b: The relationship between higher-level ethical leadership and work engagement (as in H3), is mediated through the middle-level manager's ethical leadership and lower-level line managers' perceptions of assuming an ethical leader's role in their job (serial mediation).

2.6. Moral identification as a boundary condition towards line managers' perception of an ethical leader role

There is a well-established body of work that has examined the various individual differences that may heighten or buffer the effect of ethical leadership on employees' attitudes and behaviours (Bedi et al., 2016; Ng & Feldman, 2015). As an example, research has shown that lower-level leader's self-enhancement motive can accentuate higher-level ethical leadership and negatively influence social loafing, as well as positively predicting task performance (Byun et al., 2018). Although these boundary conditions have focused on exemplifying the influence of ethical leadership, more research is needed to examine boundary conditions that accentuate the relationship between line managers' ethical leader role and their voice behaviour and

work engagement. Therefore, this study aims to extend research to understand the influence of self-interest behaviour (see Winterich, Aquino, Mittal, & Swartz, 2013) in organisations.

Particular interest has been paid to research that examines the role of individual's moral identity, which is defined "as a self-conception organised around a set of moral traits" (Aquino & Reed II, 2002, p. 1424) and their attitude under ethical leadership. Moral identity has in the past, provided an understanding about the relationship between a moral individual and their response to ethical leadership, predicting ethical leadership behaviour (Babalola et al., 2019; Jordan et al., 2011; Mayer et al., 2012), as well as affecting employees' moral identity (Gerpott et al., 2017; Zhu et al., 2016). However, research has devoted less attention to understanding how those who answer to ethical leader construe own behaviour. For example, Moore et al (2019) found that ethical leaders provide a redeeming characteristic for individuals low in moral identity. At the same, research that was conducted in China found ethical leader to provide "virtuous synergy" for individuals with high moral identity (p. 18). It is thus possible that unique organisational sample, such as the extent to which one accepts the moral responsibility in an institution might attribute to the differences in their response to ethical leadership.

Past research has indeed shown that differences in moral identity between the recipient and provider of ethical leadership will lead to negative sentiments and lower the perception of ethical leadership (Qin et al., 2018; Zhu, Treviño, & Zheng, 2016). In underlining the complexity of moral identity and how perception about an ethical leader can differ according to the studied population. This study draws on moral identification, which is defined "as the perception of oneness or belongingness associated with an organisation that exhibits ethical traits..., which also involves a deliberate concern of

the employee-ship with an ethical organisation” (May et al., 2015, p. 682). Moral identification with the organisation values is a form of individual differences. It is suggested that individuals have the tendency to seek identification with the organisation on the basis of moral alignment. Just as having moral identity will proliferate their willingness to socially learn from an ethical leader (Brown et al., 2005), the line managers can develop moral identification with the organisation due to its synergy with personal value (Blau, Surges, Tatum, & Ward-Cook, 2003). This allows the line managers to express their ethical leader role through behaving in a manner that is consistent with the moral standards presented by the organisation. For this reason, line managers moral identification will affect their motivation to engage in an ethical leader’s role.

Moral identification is drawn to extend the role theory perspective. Accordingly, identifying with the value that is demonstrated by the organisation is a salience driver that will expand the role expectations (Sluss et al., 2011). The relationship between line managers self and their occupied role is central to the behaviour they intend to particularise. Identification with an organisation is a partial definition as to how one defines themselves in terms of the role relationship (Sluss & Ashforth, 2007). It is suggested that individuals will expand their role relationship as a consequence of their identification, making it central to their role identity (Aron & Aron, 2000). Having a degree of moral identification will thus increase their role expected behaviour as well as the association between own preoccupied role to particularise the role expectations (Sluss et al., 2011)

Treviño et al. (2008) stated that line managers will take on this meaning through the social interaction with the environment, which helps conceptualised their identity and attitude through the role they occupied in the organisation. An increase in moral

identification will, therefore, motivate them to carry out role expected behaviour to maintain a positive self-image and connection with others in the same social structure (Wrzesniewski & Dutton, 2001). Besides, the increase in moral identification can foster the psychological feeling of inclusion (Ashforth, Harrison, & Corley, 2008). It is suggested that identification with the value of the associated organisation can lead to an individual feeling needs for belonging and safety (Pratt, 1998). This, in turn, helps the individual to satisfy their needs through their occupied role and become more willing to display extra-role behaviour, enacting the expectation that is associated with the expectancy of the role (van Dick, Wagner, Stellmacher & Christ, 2004).

They will also become more engaged as a result of their role expectation (Bauer & Green, 1996). As the line manager's moral identification is concerned with the moral standards that are exhibited in the organisation and will influence their role in taking attitude and behaviour (see Georgakakis et al., 2019). Moral identification will thus shed light on why line managers are attracted to an ethical organisation. A role theory perspective states that identification is a driver of salient identity that will increase an individual's response towards the organisation as a result of the foci of management practices. A line manager that perceives the moral attribute of the organisation as a salient and distinctive pattern from another organisation (Hogg, 2006), may want to maintain their membership with the identified organisation (Tajfel, 1969). Once the identification is developed, the line manager becomes more motivated to demonstrate behaviour that is consistent with the role expectation of the organisation (Ashforth & Mael, 1989).

However, moral identification is far beyond a distinct concept from the simple self-categorisation that is commonly associated with group membership (see Ashforth & Mael, 1989; Reed & Aquino, 2003). As such, the line managers that feel morally

accepted at the work are more likely to transfer their moral values forward (see De Cremer et al., 2018), making it a symbolic message of acceptance of the moral standards (Tyler & Blader, 2000). The acceptance of moral standards can also be a result of fair procedure presented through the top-down process (De Cremer & Blader, 2006). The moral standards that emerge from the top as a consequence of ethical leadership up in the organisational hierarchy will inform the condition through a myriad of social artefacts, acting as a token that rewards line managers for embedding the moral standards down the organisation (Walumbwa, Cropanzano, & Hartnell, 2009). The current study argues through the premise of role theory that line managers will develop ethical leader role from ethical leaders up in the organisational hierarchy (Treviño et al., 2000; 2008; Schaubroeck et al., 2012).

In stating the aforementioned perspective, the relationship is sustained, influencing line manager's extra-role behaviour when the value is well associated with those expected by the organisation. According to the ethical job-fit theory (Coldwell, Billsberry, Van Meurs & Marsh, 2008), individuals that find themselves fitting in the organisation will trigger a sense of belongingness, increasing their willingness to protect the organisation. This ethical fitness can further serve as a strong force in shaping the line manager's ethical leader role due to perceive fit between their value and those associated with the organisation. The latter can further attract similar individuals to maintain membership with the organisation, allowing them to define themselves due to an association with an ethical organisation (Dutton, Dukerich, & Harquail, 1994). Moral identification will thus capture the extend where line managers feel morally accepted in the organisation (May et al., 2015). Specifically, when line managers value the fair behaviour it promotes while answering to an ethical leader up the organisational hierarchy (Hoogervosrt et al., 2013), they become more willing to

embed the moral standards by increasing their ethical leader role as well as demonstrating voice to protect the organisation from harm (Lam et al., 2016).

Moral identification that develops on the foundation of moral identity further suggests that line managers that have a stronger moral concern at work are particularly sensitive to the moral standards as compared to those who have a lesser concern (Reed & Aquino, 2003). In perceiving the similarity with the attribute of the organisation, they become much willing to demonstrate their role expected behaviour in the social structure (Haslam, 2001). Moral identification can also become a bottleneck through its increase associated with the same attributed value that the line managers use to define themselves (May et al., 2015). For this reason, line managers that do not identify with the moral values of the organisation may choose not to demonstrate extra-role behaviour due to a mismatch with their own identity (Sluss et al., 2011; van Dick et al., 2004). In other words, line managers that are low in moral identification are more likely to leave the organisation due to dissimilarity (May et al., 2015).

Moral identification will embed the moral standards, where a positive association is categorised through a better person-environmental fit. Moral identification has been shown to deter unethical pro-organisational behaviour (May et al., 2015), whereby research has found an increase in organisation identification can foster individual to develop unethical pro-organisational behaviour under ethical leadership (Kalshoven et al., 2016). Therefore, a line manager is more likely to maintain self-consistency, serving as a powerful self-regulatory force, restraining them from engaging in unethical behaviour. This allows them to embed the expected moral standards when answering to the higher-level leader and middle-level ethical leadership. Moreover, examining identification mechanism in the content of morality

aims to extend understanding about the motivation to behave per the moral attributes on the basis of role theory.

Lastly, although the foundation of moral acceptance has provided substantial evidence that consistent fairness will increase mutual respect. This study examines moral identification to extend the knowledge about the condition that sustains line manager ethical leader role and their voice behaviour and work engagement. Moral identification may serve as an explanatory mechanism that can accentuate such relationship. Drawing on role theory, this study proposes that lower-level line managers' perceptions of ethical leader's role will mediate the positive relationship between middle-level ethical leadership and their voice behaviour. This relationship is also significantly stronger when their moral identification is high, rather than low. Generally, empirical research has shown that identification with work group, team, or organisation is associated with attitudes and behaviour at work (Ng, 2015; Riketta, 2005). For example, line manager that perceive ethical leader role and consider it to self-defining (i.e., high moral identification; Sluss & Ashforth, 2007) will hence become more aware of their moral responsibility in the organisation. This made them more likely to demonstrate voice behaviour to improve the work process.

Furthermore, line managers that take role from middle-level manager ethical leadership are more likely to engage at work when their moral identification is high (versus low). Given that this study view engagement as an affective state of motivation (see Section 2.2.), it is presumed that line manager with high moral identification will yield a stronger work engagement with own perception of ethical leader role. More importantly, line manager that a lack of personal bond with the organisation — categorised through low moral identification, could weakens their ethical leader role perception. In this regard, line manager with high perception of own ethical leader role

will continue to demonstrate voice behaviour and engage at work when they're moral identification is low. In contrast, line managers that are low in both ethical leader role perception and moral identification are less likely to voice, as well as engage. Thus, the following hypotheses are proposed.

Hypothesis 10a: Lower-level line manager's moral identification will moderate the association between middle-level management ethical leadership and line manager voice behaviour (as in H2). Such that, the relationship is stronger when both moral identification and ethical leader role perceptions are high.

Hypothesis 10b: Lower-level line manager's moral identification will moderate the association between middle-level management ethical leadership and line manager work engagement (as in H4). Such that, the relationship is stronger when both moral identification and ethical leader role perceptions are high.

2.7. Chapter summary

The current chapter provided a review of the state of literature to approach the objectives of this study in understanding the antecedents of line managers' voice and work engagement. Seminal ethical leadership theory has long provided the understanding of a trickle-down model to outline how values will flow down and affect the behaviour of lower-level organisational members (Mayer et al., 2009). Accordingly, the trickle-down model aims to outline an organisational process by incorporating the different levels of leadership. Despite the process model's importance in the field of ethical leadership, research has mainly focussed on proving its existence rather than outlining its effect in an organisation (Wo et al., 2018). Therefore, limited research has examined this model by incorporating three levels of leadership.

The trickle-down model is very prevalent for research that intends to understand how certain behaviour can be exemplified (or mitigate). In borrowing literature from the domain of justice and ethical behaviour, the trickle-down model on abusive supervision has shown evidence that prevention-focused individual differences can prevent such behaviour from escalating down the organisation (Liu et al., 2012). However, research on justice perception trickle-down has found that line manager's monitoring behaviour can increase employees' justice perception (Tepper & Taylor, 2003) through different theoretical mechanism (Wo et al., 2015), which reveals a fragmented theoretical knowledge in the literature (Wo et al., 2018). In paying attention to social influence theories to understand why line managers will voice and engage at work, this study draws on the role theory to argue a model that supported the transfer of value from the very top of the organisation. Thus, this study adds on to the current literature by examining the model in a new theoretical perspective to proliferate understanding about the trickle-down process that supports line manager voice behaviour and work engagement.

This study argues that line managers will take on an ethical leader role in an organisation that encompass ethical leaders at higher-level and middle level. This implies that leaders up the organisational hierarchy of an organisation are important for providing a line manager with ethical role expectation. As an example, an organisation that has a policy for promoting ethical leadership will enforce moral standards through higher-level leadership and middle level managership. This, in turn, enforces a salient ethical climate and culture in the organisation (De Cremer, van Dijke & Mayer, 2010; Den Hartog, 2010; Rubin et al., 2010; Schaubroeck et al., 2012). Through providing the descriptive moral standards, the line manager is expected to uphold the role expectation from above to maintain the moral standards (Brown &

Treviño, 2006a), down the management. Thus, line managers will enact role expectations and demonstrate role behaviour when having an ethical leader up the organisational hierarchy.

This study also extends the role theory perspective by examining the boundary conditions of moral identification to further knowledge. It is suggested that line managers that demonstrates strong moral identification are more likely to enact the role expectation and behaviour (Sluss et al., 2011). As such, this study presented moral identification and explained its relationship between line managers' perception of ethical leader role and their voice and engagement. This study argues that line manager moral identification will activate their identity and strengthens the relationship between their perception of an ethical leader role and behaviour. In providing this argument through role theory perspective, this study takes the perspective that environmental condition will play an important role in maintaining the role expected behaviour, preceding what is normally conveyed through training and development (Beer, Finnstrom, & Schrader, 2016; Solinger et al., 2020). Besides, examining identification in the content of morality further addresses the issue in past research that has found employee's organisational identification to enact unethical pro-organisational behaviour when answering to ethical leadership (Kalshoven et al., 2016).

As a summary, this chapter presented an overarching view about the importance of line manager voice and engagement at work. The line manager is the lynchpin of an organisation and is important in communicating and enforcing organisational values, objectives and goals (Wright & Kehoe, 2008). In doing so, this study draws upon the trickle-down model to describe the relationship between higher-level and middle-level ethical leadership as the antecedent of line manager voice and

engagement. This study also presents a new theoretical lens through role theory as an alternative explanation to why values are embedded in an organisation. Thereafter, the boundary condition of moral identification is presented to further our understanding about line managers' perception of ethical leader role and its work-related consequences. This implies that the structure is an important condition for an organisation to embed the relationship between ethical role and their voice and engagement (Morrison, 1994; Salancik & Pfeffer, 1978; Sluss et al., 2011). Thus, the study operational model is presented in the figure above (*see Figure 2.1.*).

CHAPTER 3: METHODOLOGY

3.0. Chapter summary

This chapter aims to outline the overall philosophical and methodological approach taken in this research. First, a broad discussion is provided on alternative approaches to philosophy in management research and ethical leadership research. It is followed by an explanation of the philosophical underpinning of this study. This is followed by a discussion of the overall research strategy and design adopted, namely a quantitative, survey-based study. The research organisation, sample and sampling method, and method of data collection including the measures used in the questionnaire surveys are then introduced and discussed. The chapter concludes with a broad discussion on the ethical challenges facing management research, and how these were addressed within the present study.

3.1. Research philosophies in social science and management

This research adopted a positivist view in the philosophy of science through quantifying the objective laws that govern human behaviour (Bryman & Bell, 2015). Management research often understands the social processes that accentuate (or diminish) the effective behaviour by borrowing methods from the discipline of natural sciences (Jex & Britt, 2014). In this regard, positivism maintains that the social phenomena, despite its complexity can be observed in nature if we exert the right methodology. This implied that the positivist methodology allowed the researcher to categorise the subjective method to deduce a possible direction that legitimises the methods. The perspective of positivism suggests that the reality of nature is driven by “immutable laws and mechanics” (Alvesson & Deetz, 2000, p. 109). Although the

reality can be “imperfect and probabilistic apprehend-able” (Guba & Lincoln, 1994, p. 109), the doctrine of positivism argues that a researcher’s role is to generate materials for the development of laws (Bryman & Bell, 2015). In doing so, it allows researchers to test the developed hypothesis through the fundamental belief that an organisation is a concrete entity where data can be collected and conclusion can be derived from the behaviour of a population nested in this entity (Pugh, 1983, p. 48).

Positivism was coined by Comte in 1853. According to Andreski (1974), Comte believed that it is “through reason and observation combined, of the actual laws that govern the succession and similarity of phenomena. The explanation of the facts, now reduced to its real terms, consists in the establishment of the link between various phenomena and a few general facts, which diminished in number with the progress of science” (p.20). In other words, the philosophy of the adopted method which we intend to observe nature and the general law of mechanism is grounded in a personal deterministic view of the social phenomena. In answering the research question, it also recognised that the interpretation of the observation would not be value-free. Hence, the researcher and reader can defer in their view when interpreting the observable construct. Therefore, a positive view of social phenomenon aims to guide the understanding of how theories can outline the relationship in the natural environment by being an objective inquirer (Johnson & Duberley, 2000).

In extending the work of Comte, Mill (1874) argued that scientific methods must be replicable to govern the measurement of the described relationship. As such, he suggested that a causal relationship that was discovered through the same method must indicate a similar trend on the result in a future application. This repetition of testing the same mechanism is commonly known as theory testing, which then gives rise to logical positivism that assumed the neutral point of observation will exist in the

subjective world. As an example, picturing theory argued that the subjective view of the external world will always be represented by the meaning of the words, or else, its measurement would be meaningless (Wittgenstein, 1922). In other words, the statements of observation for theory testing must be “a direct comparison between the theory and the real” (Hindess, 1977, p. 18). Hence, when both failed to correspond, the theory is perceived as false and would be rejected.

Positivism view also assumed that science is logical, factual, and value-free. Because positivism is simultaneously committed to both deduction and empiricism to reject the metaphysical idea of reducing observation to its cognitive meaning. It is suggested that the researcher must tease out the understanding of the sentence, in particular, when measuring value such as moral and ethics. More importantly, a positivism stance asserts that moral doctrine owes nothing to the supernatural and moral question is often associated with the society to determine order and standards. In essence, moral will only govern the behaviour and habits when it is supported by the wider institution by taking into account every affective individual phenomenon. Thus, the nonphysical existence of a psychological state can be empirically measured, observed, and verified rather than being rejected for unattainable reasons.

However, Popper (1967) stated that logical positivism is too dogmatic with its application to confirmed laws “to the point of neglecting refutations” (p. 50). His argument also goes against most logical positivism ideas that science is a fact and it is suggested that “the empirical basis of science has nothing absolute about it” (Popper, 1959, p. 111). Therefore, post-positivism would replace “logical positivism’s inductive and verificationist principles with those of deduction and falsification” (i.e., the hypothesis deductive reasoning) (Johnson & Duberley, 2000, p. 28). Accordingly, the main difference between positivism and post-positivism is the concern over the

way science is being conducted more so than the discipline itself (Braithwaite, 1964). As an example, the theory can be observed by falsifying the null to provide an understanding and observation of the theoretical perspective (Guba & Lincoln, 1994). This form of reasoning is also highly influential in social science and management research because it allowed the null hypotheses to be falsified. In falsifying the null hypothesis, the researcher can test the theory on the relationship. Hence, the epistemology of post-positivism confronted this asymmetry between the verification and falsification through empiricism.

The researcher also recognised the interpretive perspective, which argues that research should “be undertaken in a manner that creates knowledge equal in validity to that of objectivist social science” (Leitch, Hill & Harrison, 2010, p. 68). Accordingly, interpretive perspective argued that “the theory of how research should be undertaken including the theoretical and philosophical assumptions upon which research is based and the implications of these for the method or methods adopted” (Saunders, Lewis, & Thornhill, 2007, p. 602). Thus, the question confronting the researcher should include an explanation and, if, the social reality can be deduced from observable facts. The perspective of interpretivism is developed on the fundamental idea that understanding the social world cannot happen without proper interpretation (Johnson, 1987). In other words, such approach captured the “actual meanings and interpretation that actors subjectively ascribe to phenomena to describe and explain their behaviour” (Johnson, Buehring, Cassell, & Symon, 2006, p. 132). Hence, generating a rich description of actual events in preserving the meanings that those ascribed to them.

However, adopting an interpretive approach is best formulated for a theory that is less established. Granting that research in organisational behaviour, in particular, ethical leadership theory is a very established theory, it is more important to persuade

the reader of the research proposition in formulating the researcher view through extending the natural paradigm (Guba & Lincoln, 1989). Thus, Popper (1962) argued that both the readers and researcher can be biased based on their perception and interpretation. This made neutral observational language, important, to mitigate this prejudice to establish independent reference that constituted the facts of the social environment (Giddens, 2013). Thus, in adopting a positivist perspective, the researcher believes that “the social reality is an objective fact, a description of ‘it is true if’, and only if it corresponds to the reality, and scientific consensus at any moment, may in principle be true or false” (Lessnoff, 1974, p. 165). Therefore, the epistemology of post-positivism would emerge as a critique and extension of positivism, where it entails the subjectivity of an unobservable nature by relying on an observational language to exert logic on the observing behaviour.

The Aston Studies is perhaps the best-known example of positivism in which its objective was to generalised the relationship through systematic comparison across different organisations (Bryman & Bell, 2015). Hence, positivism in social science and management research will follow the same principle by attempting to make practice replicable through a specific view of what scientific knowledge should be about (Ackryod, 2004). This allowed the nature of positivism to continue to falsify the null by emphasising the importance of repeated measures. However, this means that researcher who adopted such approach will have to go through a series of trial and error that allowed science to understand the appropriate theory through falsifying the null hypothesis (Johnson & Duberley, 2000). Indeed, Guba and Lincoln (1994) have stated that “theories and facts are not independent, neither are values and facts”. Therefore, the creation of an inquiry process “through the interaction of inquirer and phenomenon” must take place behind a one-sided mirror to observe the occurrence

of reality in its most natural form (p. 107). In doing so, the nature of the inquiry process is based upon the natural paradigm defined through three ontological questions (positivism), epistemological (post-positivism), and methodological (constructionism). Thus, these questions served as a major focus to observe the natural paradigm, whereby theory can be observed.

Management research through positivism has stuck closely to empirical observation by dedicating time to develop objectively measurable measurements (Fleetwood, 2001). The developed objective measurements would give researchers a mode to test theories that are concerned with observable behaviour. Subsequently, it shows that management research cannot be understood if subjectivity is excluded in its measure (Johnson & Duberley, 2000). Although the positivist view also suggested that observations can be falsifiable and theories can be reversed given the changing nature of social phenomena (Cox & Hassard, 2005). The adoption of a theoretical perspective remains important as it helps explain the observable behaviour through logical accuracy. Therefore, a deductive approach through “logical validity can be viewed as a function of the synthetic structure” (Evans, Newstead, & Byrne, 1993, p. 5). As an example, “the posture of proponents that claims about reality must be subjected to the widest possible critical examination to facilitate apprehending reality as closely as possible” (Guba & Lincoln, 1994, p. 110). In highlighting this perspective, attention is also given to critical realism as the discourse that mediates the debate between post-positivism and positivism.

Critical realism has incorporated many recent epistemological developments to move the debate forward by taking an approach of the ontological issues. The critical realist perspective argues that boundaries are not diametrically opposite but share many commonalities. It is suggested that science is an attempt to know where or not

if the phenomenon truly exists and, on this account, no claim is immune from challenges as discourse can be wrong about their objectification (Patomäki & Wight, 2000). Therefore, the scientific inquiry that aims to provide knowledge by explaining social phenomenon requires constant social evaluation (Bhaskar, 1993). In highlighting the perspective of critical realism, the researcher acknowledges that a realist inquiry can help maintain and underline the social phenomenon through prediction regardless of physical (research environment) or human (participant). Therefore, a positivist and realist views are drawn upon to meet the objective and aim of this study, which is to understand the impact of higher-level ethical leadership and its impact on lower-level manager behaviour in a large Malaysian multinational organisation.

This study adopted a positivism philosophical approach through empiricism to standardise methods and overcome fragmentation in the management literature (Pfeffer, 1995). As the strong philosophical tradition in social management research aims to explain the laws and mechanics that governed human behaviours (Johnson & Duberley, 2000; Whitley, 1984). The approach through a recollection of multiple perspectives aims to create a subjective epistemology (Guba, 1990a; Guba & Lincoln, 1994). Thus, the ability to carry out methods rested on the researcher's ability to replicate and control observable paradigm over time and in an environment which reduces it to basic observable element (Hesse, 1980).

3.2. Research philosophy in ethical leadership research

Debates between positivism and interpretivism about social order is reflected in many managerial development pieces of research as interpretivism give meaning to those involved in the social entity rather than conditioning behaviour. Although the

constructivism approach on manager's behaviour is partially grounded in the interpretive view that contrasted the perspective of positivism, sharing views of different social world requires different logic to best reflect the distinctiveness of human and order since prescriptive business ethics draws on theories about the nature of goodness (ontology) that is specified in the situation (epistemology) (De Cremer & Vandekerckhove, 2017). The discourse in interpretivism is concerned with the aspect of life without a system which gives theory application a different conception and role. However, the pressure to display consensus from a normative conception can affect a unified social phenomenon that creates more contradictions than it solves and questions the logic of displaying a unified culture (Martin, 1992). Thus, this study adopts a positivist approach to appraise social entity as communities that share important characteristics (Alvesson & Deetz, 200).

The dominant approach adopted in ethical leadership research has provided compelling argument about the theory. In this sense, "leadership" and "moral standards" are both seen as a social construct that is derived out of a personal relationship with the social environment (Brown et al., 2005). As a result, understanding line managers behaviour through a functionalist discourse highlighted the surface level of this relationship (Mabey, 2013). To illustrate this study approach, ethical leadership research has provided a degree of understanding about the benefit of this leadership in promoting positive and deterring negative organisational behaviour through a quantitative perspective (Hoch et al., 2018; Lemoine et al., 2019). As an example, ethical leadership was shown to prevent workload and poor working condition, mitigating the effect of bullying through a large-scale survey (Stouten, Baillien, Van den Broeck, Camps, De Witte, & Euwema, 2010). Given that ethical leadership is a measurable behaviour through other ratings, the researchers need to understand how

experience can be reflexive on actual behaviour. Accordingly, Kant (1785/1993) argued that humans are motivated to acquired morals through a deontological system that governed the moral action, and it is suggested that human morality is derived out of the “respect of the law” rather than relying on the moral judgement of others. Thus, the objective reality to which theoretical entity constitutes must be observable and measurable (Guba, 1990b).

In adopting both positivism and critical realism to underline the condition that allowed the reproduction of a certain phenomenon in nature, the researcher acknowledges that literature on ethical leadership tends to be deductive and theory testing (Bedi et al., 2015). Moreover, the trickle-down model outlined in this study has mainly been examined through conducting a multilevel and multisource survey (Mayer et al., 2009; Mozumder, 2018; Schaubroeck et al., 2012). Therefore, critical realism perspective has acknowledged that phenomenon is an interpretation of the relationship between the institution, where the structure is the reality of the social order that must be embedded in the social process. In other words, social forms are in place to support the reproduction of the same operating disposition which would otherwise be easily dissolved by the action of a single individual (Ackryod, 2004). This further implies that values drive perspectives like ethical leadership must be presented in a situation rather than through an experiment to ensure the advantages of the disposition is understood. For this reason, the possibility of the occurrence and its interpretation will supplement “the internal consistency and environmental plausibility” that drive theoretical advances (Bhaskar, 2013, p. 153).

The trickle-down model has mostly relied on using a survey to obtain observable information about leadership behaviour (Wo et al., 2018). As such, the real domain of reality where the phenomenon existed will not be entirely visible unless they

are well represented by the surveying sample. This conceptualisation is necessary to ensure that the investigation best reflects reality as close as possible. It also helps ensure that the subjective interpretation can be imposed through the criterion of the epistemology. Hence, a positivist and realist approach suggest that observation must happen in the reality of its structure (i.e., line manager at respective level) to understand the whys of such behaviour as outlined by the research objective. Because we can never be truly certain if the mechanism exists and can only be accepted as being imperfect (Bhaskar, 2011, 2013). The pragmatic approach of this study aims to approach the problem through past observation to underline its ontological perspective (Zachariadis, Scott, & Barrett, 2013).

In using past research as a guiding principle to appraise the study theoretical framework, it helps inform the current state of literature and future direction (Philips, 1990). Therefore, the researcher believes that the formulated laws will extend the state of research through an increase in predictive variance in the social environment, as nature has always been objectively driven and human behaviour is the best observed through the interaction of relationship that is linked with the targeted behaviour (Johnson & Duberley, 2000). Accordingly, a multilevel model through deductive reasoning will help generate the epistemology (Ackryod, 2004). Thus, the internal validation is maximised through the reliability and validity of the measurement (Schriesheim, Powers, Scandura, Gardiner, & Lankau, 1993).

3.3. Research philosophy and approach of this study

In providing the argument from both deductive and inductive approaches, this study adopted a positivist epistemology to appropriate the use of the quantitative methodology for observing line manager behaviour in a large multinational

organisation. Kuhn (1970) stated that the philosophical paradigm is a cluster of beliefs that will dictate how research should be done and how the results should be interpreted. Given that an organisation is a complex social system that will provide the condition to inform line manager's behaviour (Lemoine et al., 2019; Solinger et al., 2020; Weaver et al., 2014). A positivist approach to the methodology helps observe the "subculture of norms, beliefs, and values" where leaders and line managers operate (Bass et al., 1987, p. 84). Accordingly, Burns (2000) has stated that "quantitative research methods are employed to establish general laws or principles, and such scientific approach is often termed nomothetic and assumes nature is objective and external to the individual" (p. 3). Thus, a positivist approach aims to corresponded with the phenomenon through adopting theories, deriving hypotheses, data sample, models, parameters and using equations, which is accepted as valid and true to present an unbiased view of the phenomenon (Zyphur & Pierides, 2017).

3.4. Research strategy and design

This study is part of a wider project that aims to understand the role of management ethical leadership, leader's voice, and the effectiveness of the Human Resource policy and practices in two subsidiaries of a large Malaysian multinational organisation. Apart from the presented construct, this study also gathers information about the organisation's opportunity-enhancing HR practices, higher-level and middle-level manager voice behaviour, leader's prototypicality and status, as well as their corresponding similar management level co-worker's status and ethical work behaviour⁴. The current study thus aims to provides knowledge by examining the concepts of management science through a quantitative method of natural sampling.

⁴ The full survey is displayed in Appendix B.

According to Mathieu, Aguinis & Culpepper (2012), there is no direct way of examining if the population sample truly exists. In an ideal scenario, the researcher could conduct a pilot study to estimate the value directly from the preliminary data. However, these authors also noted the resources needed to conduct an elaborated pilot study to estimate power and further suggested the usage of past research as a guide to determine the sample estimate. Given that this research gathers data from a large multinational organisation through targeted sampling, access was provided under the guaranteed condition to the principal researcher and Aston University with DeltaCo. The research also examined past research in the realm of the trickle-down model to determine the appropriate effect size to extend and support. This hence provides a proper estimate of the targeted sample size. Nonetheless, trickle-down research has historically tended to rely on one level data (i.e., employees report both direct and indirect manager's behaviour) due to the complexity of obtaining and matching independent data (see Mayer et al., 2009).

A quantitative research method is associated with the process of deductive reasoning and is held up as a method of "true science" that is considered truly rigorous (Ackryod, 2004). It is suggested that such a method allowed the researcher to discover the theorised social phenomenon in a sample population with a particular characteristic. The aim of a quantitative method is thus to provide a piece of descriptive information to generalise its inference on the population where the sample is derived. In other words, a quantitative method goal is often descriptive, and this logic of enquiry aims to test a theory that is precisely estimated based on probability theory (Brannnen, 2017). A quantitative method is always associate theoretical and statistical inference to postulate rather than trying to establish the connection. In doing so, the sample

must be carefully selected to survey due to the strong need to generalise the theoretical connection that is presumed to exist in the parent population.

This study adopted a survey research design to observe the social phenomenon. Survey research is a social scientific method that is used to interpret, translate and imply human behaviour through the voice of the respondents (Allport, 1954). Therefore, a survey research design aims to observe the phenomenon in its natural environment and avoid the problem of reactivity (Jex & Britt, 2014). In its most basic form, a survey design assumed that knowledge is acceptable only if the phenomenon can be verified with hard facts. The use of precise terminology as depicted by the survey question aims to classify the process, providing quality assurance in the process of knowledge production (Chia, 2002). In addition to observing the phenomenon using a reliable construct, it further establish the researcher as an intuitive observer that is free from the value and emotion (Bryman & Bell, 2015).

The researcher may also influence the research project in numerous ways. For example, learning is described as acquiring new knowledge, values and preferences which can be reflected in the way the research is being reported. It is important that the researcher recognised his influence in this research project and his connection with the project funder when reporting about the outcomes. This allowed the researcher to recognise the distinctive knowledge acquired as part of this study. More importantly, the researcher role in communicating and collaborating with senior executives can change personal values. For this reason, allowed the researcher to gain a sense of understanding about the organisation's policy and practices pertaining ethical/moral commitment beyond the exchange of formal documents. Nonetheless, the involvement of the researcher may influence the priorities and preferences in terms

of the research objectives. In doing so, the research design, analysis, and interpretation used a close-ended question, as opposed to an open-ended question and aims to provide a comprehensive understanding of the sample population perspective.

Quantitative survey design hence provide knowledge about the social phenomenon through a detailed analysis of the data to explain the relationship based on theory. However, it is important to underline the issue of common method bias that is typically associated with survey research design (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Common method bias occurs the most when the measure is derived from a single data source, which can distort substantively driven effect (Fuller, Simmering, Atinc, Atinc, & Babin, 2016). As an example, information can illicit common cues that influence the retrieval of certain memory required by the survey (Sudman, Bradburn, & Schwarz, 1996). However, scholars have stated that the common method is less threatening when substantive measurement facets are not included as alleged methods (Lance, Dawson, Birkelbach, & Hoffman, 2010). In other words, adopting certain procedures may help mitigate the issue, providing a much detail observation when adopting a survey research design.

A multisource survey design (Magalhães, dos Santos, & Pais, 2019) is used to observe leadership behaviour and the boundary condition that accentuate (or diminishes) the leader role. Measuring multiple sources can help eliminate the effects of consistency motifs and minimise bias in the observation. This study surveyed two management levels in a large multinational organisation. Accordingly, multilevel survey design is a common method in management science to provide knowledge about representation (Raudenbush & Bryk, 2002). The narrative of an unbiased inference to test hypothesis is very well related to the sample of a defined population

(Hacking, 2006). As quantitative research requires formal logic through statistic and probability when producing representation, the researcher often finds the probabilistic interference to limit issue based on being contextually relevant (Wick & Freeman, 1998). Indeed, past research has highlighted the complicated relationship of line managers in an organisation through ways social influence is reciprocated (Stauss, Folger, Ford, Bardes, & Dickson, 2010). This form of surveying method hence aims to reduce social desirability effect associated with monomethod (Spector, 2006).

The current research design sampled line managers and their direct-reporting middle-level managers, corresponding to the population it intends to observe. Measuring sample population that corresponds to the research objective is germane to bridging the purpose and the orientation to how quantitative research is conducted (Zyphur & Pierides, 2017). There is a possibility that line managers may provide a much favourable rating of their behaviour and the perception is more accurate if it is grounded in an organisation (Eisenbeiss & Giessner, 2012). In highlighting this issue, this study exercised control, informed by preliminary analysis. Besides, this study incorporated data from two levels of management to reduce random noise when capturing the robustness of the trickle-down model (Wo et al., 2018). This further provide a better understanding of the antecedent and condition that would normally take place in the larger processes of an organisation.

Furthermore, this study conducted a common factor analysis to investigate the measure, using data stimulation to underline the construct distinction (see Podsakoff et al., 2003). This form of analysis provides a much-sophisticated test to underline the model's uniqueness, providing a stronger understanding of the ethical issue of leadership (Toor & Ofori, 2009). Moreover, it allowed the researcher to observe the model and advance knowledge through a large survey research design (Blau & Scott,

1963). In sum, this study adopted a multilevel and multisource survey research design to examine the antecedent of line manager voice and work engagement. Hence, the following section will provide a detailed discussion about the research process, constructs, and ethical consideration.

3.5. Data collection

This section outlines access negotiation, participants sampling, data collection procedure, ethical consideration and methods for protecting the research participants. In providing this information, a discussion is provided to outline the systematic process in obtaining the data for analysis.

3.5.1. The research organisation, design and co-production

DeltaCo is the sole funder of the current research project. The research organisation, DeltaCo, is a large Malaysian conglomerate with close ties and substantial investment in the United Kingdom. Preliminary knowledge about the research organisation was provided in chapter one. As the research was funded by DeltaCo, the organisation has informed and contributed to the identification of the research topic and question, which is to understand the level of ethical leadership and its implication in a Malaysian business organisation. The co-production aspect of the research allowed the researcher to also gather data on other measurement (see *Appendix B*). Although the initial project aims to collect data from a number of other organisations, apart from the research organisation, the early termination of relationship with another organisation, BetaCo only allowed the current study to use

the data to pilot some scale measure, but not hypotheses testing⁵. In explaining the design and co-production nature of the research, the current study hypotheses are tested using data obtained from two levels of management in a single large Malaysian multinational. The first data collection took place from October to December 2018 at the UK office, and again in March to May 2019 at the Malaysia's office. Each data collection period lasted approximately 6 to 8 weeks. An Email from the director to convey their support of the research was sent to both middle and line managers before the start of the data collection, which helped to improve the number of respondents.

3.5.2. Access negotiation

Access to participants in an organisation required a long-term research relationship. Therefore, the access negotiation began 5 months into the doctoral programme through the support of the University's campaign and legal team. During this period, several past alumni that were currently in senior management at large multinational organisations in Malaysia were contacted by the researcher through the support of the University's alumni office. Informal access was first granted by a medium-size multinational organisation, BetaCo, from Malaysia through a knowledge

⁵ The data collection design was similar to those employed in *DeltaCo*. As BetaCo participation in the research was established before the submission of the ethical approval on the 10th of November 2017, the research process is protected by the guidelines set forward in the ethical approval document. BetaCo board senior executives also did not request signature for a non-disclosure agreement. In this case, a coordinator was assigned to deal with the administration and communication with IT and HR services. The survey was also hosted on the researcher's Qualtrics platform, which meant that *BetaCo's* coordinator only furnish the researcher with the management name list and organisational structure chain for coding purpose. Because BetaCo senior executives hope to gather data for succession planning, the organisation requested that we furnish them with information about the department with the highest number of ethical leaders nested at higher and middle management. As the research relationship was terminated after a month after the start of the data collection with lower-level line manager due to a board overhaul, insufficient data was collected to provide the organisation with information about higher-level and middle-level management leadership. Nonetheless, the data was used to pilot some scale measures but not for hypotheses testing.

transfer partnership (KTP) to support the organisation's leadership succession planning. However, the research relationship was ended prematurely after losing the support from senior management due to a corporate board overhaul. Therefore, the current study used BetaCo sample as a pilot the scale measurement.

This flagged the importance of senior management commitment and support throughout the research process, particularly, during the data collection. The experience hence informed my subsequent negotiation process through onboarding the full support of senior management.

The second negotiation process was more thorough, and the entire negotiation process took about ten months and the signing of two non-disclosure research agreement (NDrA) between Aston University Business School and the organisation, DeltaCo for research access. Access was also granted on the ground that this study is funded by the board of directors of DeltaCo. As such, multiple meetings and conference calls were held between the principal researcher and DeltaCo board leadership and regional Human Resource (HR) director in the UK and Malaysia respectively to identify the research scope and target population. While DeltaCo board of directors have supported the researcher financially through its charity foundation, it is important to acknowledge any potential conflicting of interest. In this instance, the researcher has followed formal protocol through submitting a formal research proposal and conducted the research access negotiation with good faith. In exchange, this study provides DeltaCo management with an understanding about the level of ethical leadership at both top and middle-level management, overall management voice behaviour, and management perception about the organisation's HR policy

effectiveness across both offices⁶. The researcher also highlighted further research benefits in the covering letter and the research proposal. Lastly, an executive summary and presentation were provided to the organisation before the submission of this doctoral thesis and there was no conflict of interest during the entire research process.

3.5.3. Participants sample

This study utilised a targeted sampling method to survey participants. The survey was conducted entirely in English. It is important to note that Malaysian business organisations have traditionally maintained an all-English business environment due to its historical association with the UK. Bahasa Malaysia, which is the country national language is only spoken informally in a business setting. Therefore, Malaysians are competent in English and the survey will not be translated. DeltaCo has traditionally maintained an organisational structure with management nested at the respective level. In this regard, line manager and leaders are clustered at the respective level and according to their function. For example, line managers which form the bottom level of management reports directly to middle-level managers and this chain of supervision are overseen by a respective higher-level leadership. However, even the most perfect sample can be limited by its generalisability and transferability. To ensure that findings can be generalised and transferred across other DeltaCo's subsidiary, some strength and limitation must be laid out to provide an understanding of the researcher's approach in sampling.

There are two approaches to sampling, non-probabilistic and probabilistic sampling method, where the latter is based on random selection to generate a list of

⁶ *Note:* The organisation requested the research to collect such data in order to understand if line manager understand about the policy and practices in place across the organisation.

participants (Andres, 2012). However, non-probabilistic sampling is used as the researcher is granted access to a targeted population sample (i.e., line managers and middle-level manager). The strength of such sampling allowed the researcher to generalise the finding on the targeted population. The considerable amount of effort to identify the target population aims to increase the transferability and generalisability of the study findings. The researcher worked closely with the HR executives at each respective office to identify eligible line managers and their respective middle-level manager. This process allowed this study to meet its research objective by ensuring the survey goes out to the targeted middle-level manager and line-manager as stressed by the research objective.

To define the research population, line managers are the first unit of analysis, while their direct-reporting middle-level managers are identified as the second level unit. Every middle-level manager has more than one line manager reporting to them. However, the researcher also included middle-level managers that only had one downline to ensure power in the analysis. There is a limitation to such sampling method, mainly, targeted sampling requires more disclosure since the population is identified by the management. As such, more effort is needed to develop ethical safeguarding to protect the respondents from harm and risk. A split sample design is suggested as an alternative approach to minimise common method variance. As an example, research that uses a split-sample design tends to obtain a sample from different sources, dividing the sample into two groups (see Ostroff, Kinicki, & Clark, 2002). However, the access was granted with the condition, whereby data collection can only be carried out within a defined period to avoid clashing with other internal organisational activities (i.e., the organisation's work programme survey, performance survey, training, etc). Hence, this form of sampling was not possible as it demanded

greater resources from the organisation and could potentially make identification of the respondents easier.

Discussion about mitigating the issue of potential identification will be extended in the ethical consideration section of this chapter. In obtaining the list of participants for the research, the researcher began working with the organisation's legal team to develop the consent based on the General Data Protection Regulation (2016) framework. The researcher was granted access to 90 middle-level managers and 234 line managers from two offices (156 line manager and 62 middle-level managers in the UK and 78 line manager and 28 middle-level managers in Malaysia). In total, 73 middle-level managers and 204 line managers responded to the survey, yielding a response rate of 81.11% and 88.31% respectively.

3.5.4. Data collection procedure

Data collection took place between October 2018 to December 2018 at DeltaCo UK's office, and March 2019 to May 2019 at DeltaCo Malaysia office. Both offices provided a coordinator to support the research and aliases the researcher with relevant departments (*i.e.*, IT services, legal, etc) throughout the research process. The coordinator also supported the researcher during the coding process by providing the researcher with relevant documents about the management hierarchy for the coding process. This would allow the researcher to match the data at up to three represented management levels (*i.e.*, higher-level, middle-level and line manager).

However, the researcher did not share the code with the internal coordinator and was responsible for the system implementation to ensure confidentiality. In doing so, line managers and middle-level managers are invited to participate in the survey through a bespoke Email link and the confidentiality of their responses were

highlighted in the Email. In addition to the coding, participants are asked to check a statement that consent the sharing of information with the researcher at the end of the survey. Data of participants that do not consent to the statement are removed from the system. This consent aims to adhered to the guideline set forward by the GDPR (2016) framework and was requested by DeltaCo's GDPR legal advisor.

The survey at DeltaCo office in the United Kingdom was co-administered with the performance manager (the assigned coordinator), where the researcher has worked closely with during the development and implementation phase. A communication Email from the Chief Executive was sent out to all targeted middle-level managers and line managers to convey their support for the study. The survey of DeltaCo Malaysia office was administered solely by the researcher using the same platform. In this case, the board of directors issued a communication Email an hour before the survey went live to communicate their support. Both line managers and middle-level managers then received a bespoke link through the survey invitation Email. By clicking on the bespoke link, managers are directed to the research page which displayed the research information and consent. Managers who consented to the research are directed to the survey, while managers that did not consent are directed to a page with a message that thank them for taking their time to read the research information. Managers who did not consent to the research will not be able to undo the consent.

The line managers' survey consisted of two parts. In the first part, they were asked to evaluate their direct reporting middle-level manager's ethical leadership behaviour and voice behaviour. In the second part of the survey, they were asked to provide scoring of own ethical leader role, work engagement, moral identification, and voice behaviour. Line managers were also asked to provide their power distance

orientation, status, and demographics related input (i.e., organisation tenure, age, gender). Middle-level managers, on the other hand were asked to rate their direct-reporting higher-level ethical leadership behaviour and other relating constructs (see Appendix B). Middle-level managers were then asked to provide information about own status and demographics variables, such as organisation tenure, gender and age. It is important to note that the study measured the demographic variables using categorical range. This was requested by the organisation's GDPR legal advisor to ensure that participants cannot be traced or profiled. The researcher also withholds the copyright to the participants' coding. Therefore, no identifying information apart from the code is associated with the final set of data. Finally, before submitting, managers are asked to check a second consent that agrees to share data with the researcher and Aston University. Responses of managers that did not agree to the second consent will automatically be deleted.

3.5.4.1. Developing the ethical leadership survey

The survey questionnaire was developed using past validated scales. Reliability, validity, and correlation of the measures were scrutinised to ensure that it is not highly correlated. The researcher also worked closely with the organisation's HR executives to ensure that the questions were a good reflection of their HR practices. Furthermore, the organisation performance improvement team have reviewed the survey to ensure the sentence structure and grammar were accurate.

The experience management software Qualtrics XM was used to host the survey. First, the survey was formatted in a Qualtrics Survey Solution (QSF) file in an extensible mark-up language (XML) for developer use. The survey file was then transferred to the performance manager of DeltaCo's UK office to ensure the survey

format is standardised to the organisation's own platform. After developing the code on the researcher end of the software, the researcher travelled to DeltaCo's UK office to implement the system file that allowed the software to send out bespoke link to every identified line manager and middle-level manager through the organisation's Qualtrics XM platform. During this period, the researcher tested the system multiple times with the coordinator to ensure that the completed survey is anonymous and only displayed the responding participant's code to remove any identifiable information.

Digital consent was also administered through the Qualtrics XM Platform, where the survey was only displayed to participants that had provided their voluntary consent. Therefore, participants that refused the consent will automatically be directed to the end page of the survey which thanked them for taking their time to go through the information. Hosting the digital consent through the platform further allowed the researcher to streamline the research process, while adhering to the General Data Protection Regulation's (2016) framework for voluntary consent. Furthermore, because Qualtrics XM server is located in the European Union, the European Data Protection framework continues to form the basis of the research's ethical framework and protocol regardless if data is collected outside of the union.

3.5.5. Measures

All responses, otherwise stated, on the items were made on a five-point Likert response scale, where 1 = strongly disagree, and 5 = strongly agree (complete measures can be found in APPENDIX B).

Line manager voice behaviour. Line manager voice behaviour was measured using Van Dyne and LePine's (1998) six-items voice behaviour scale. A sample item is *"develops and makes recommendations concerning issues that affect this workgroup"*.

Line manager work engagement. Line manager work engagement was measured using Schaufeli, Bakker, and Salanova's (2006) nine-items short questionnaire scale. The researcher adopted the shorter scale at the request of the organisation. A sample item for vigour, dedication, and absorption are *"At my work, I feel bursting with energy"*, *"I am enthusiastic about my job"*, and *"I feel happy when I am working intensely"*. Responses on the item were measured using a five-point Likert scale, where 1 = never, and 5 = always.

Ethical leadership. Both senior-level ethical leadership and middle-level ethical leadership are measured using Brown et al.'s (2005) ten-item scale. A sample item is *"Listens to what employees have to say"*.

Moral identification. Line manager's moral identification is measured using May, Chang and Shao's (2015) five-items moral identification scale (MI). Participants were first asked to read the description of a moral vignette before answering the question;

"Characteristics, including caring, compassionate, fair, friendly, generous, helpful, hardworking, honest, and kind, may describe a person. The person with these characteristics could be you or it could be someone else. For a moment, visualize in your mind the kind of person who has these characteristics. Imagine how that person would

think, feel, and act. When you have a clear image of what this person would be like, answer the following questions”

The line manager must check that they have read the vignette before being directed to the question. A sample item is *“Being a member of the organisation whose members have these characteristics is an important part of who I am”*. A pre-test was carried out in a separate Malaysian multinational organisation, *BetaCo*, to determine if their employees understood the meaning of the vignette⁷.

Line manager’s perception of their ethical leader role. Line manager’s perception of ethical leader role was measured using Paterson and Huang’s (2018)’s five-items scale. Line managers were asked to provide the rating after the statement, “In my role, I”. The five items are 1) *“conduct my personal life in an ethical manner”*, 2) *“define success not just by results, but also the way they’re obtained”*, 3) *“discuss business ethics or values with employees”*, 4) *“set an example on how to do things the right way they are obtained”*, and 5) *“asks “what is the right thing to do?” when making decision”*.

Because the measure was developed by augmenting Brown et al.’s (2005) ten-item ethical leadership scale using methods employed by Morrison (1994) and McAllister et al. (2007) to appropriately measure ethical leader role-behaviour. After collecting the five-item measure, a confirmatory factor analysis (CFA) was conducted to assess the measurement factor loading and validity and to determine if the scale was distinct from line manager’s rating of the middle-level manager ethical leadership. The two factor CFA underlined the factor distinction at $X^2(5) = 7.22$, root mean square error of appropriation (RMSEA) = .05, confirmatory fit index (CFI) = .98, Tucker-Lewis

⁷ See section 3.5.1 and 3.5.2. for remarks about design and ethics

index (TLI) = .97, standardised root mean square residual (SRMR) = .02. The results suggested that ethical leader role perception is distinct from line manager rating of their middle manager ethical leadership.

Control variables. Statistical control of extraneous variables is a common analytical method that is widely adopted in many leadership studies. However, “purification principles” that impose a conceptual structure on the data to estimate for higher-level leadership effectiveness are often assumed without proper theoretical justification for their control (Spector & Brannick, 2010, p. 288). This may result in a reduced degree of freedom with lower statistical power, and in some cases, excluding the number of explainable variances on the outcome associated with the targeted predictors (Carlson & Wu, 2011).

Aligning with best practice recommendation by Bernerth and Aguinis (2016), the study controlled for **Gender** and **Organisation Tenure** and **Organisational Membership (i.e., UK or MY)**. Research has shown that gendered norms can affect the strength of the relationship (Kacmar, Bachrach, Harris, & Zivnuska, 2011). Because this study intends to integrate role theory into the social learning framework, controlling for gender allowed us to test a model of how line manager will perceive ethical leadership without the influence of gendered-normed goals. Besides, social identity theory suggested that an increased in organisational tenure may result in a higher identification compared to newly inducted colleagues (Robinson & O’Leary-Kelly, 1998; Walumbwa et al., 2012). Therefore, employees who have been with the organisation longer are more likely to demonstrate behaviour consistent with the expectation (Mawritz et al., 2012; Wang et al., 2018).

This study also controlled for organisational membership as the data is collected from two offices (UK and Malaysia). The study also controlled for **Perceived Status** and **Power Distance**. Perceived status has shown to affect one's perceptual behaviour in an organisation (van Dijke, De Cremer, Mayer, & Van Quaquebeke, 2012). Recent research has further found that deeply embedded employees can engage in (un)pro-organisational behaviour as way of promoting and maintaining perception of status when answering to poor ethical leaders (Lee, Oh, & Park, 2020). Furthermore, **Power Distance Orientation** is measured and controlled using an eight-items power distance scale by Early and Erez (1997) and was adapted from previous individual-level research (see Brockner et al., 2001; Kim & Leung, 2007).

Power distance is controlled due to the multinational nature of this research sample. This study uses power distance as a control instead of nationality because power distance orientations will address individual-level variation in value, status, and authority behaviour in an organisation (Farh, Hackett, & Liang, 2007; Hofstede, 2001; Kirkman, Chen, Farh, Chen, & Lowe, 2009). Accordingly, past research that has found the interaction of power distance to affect the relationship between ethical leader and work engagement (Den Hartog, & Belschak, 2012). In this regard, employees with low power distance will presume higher similarity with they're leadership and become more attracted to fairness procedure that is being promoted by the leadership (Loi et al., 2012). Nonetheless, the researcher will drop the controlling variable, after the preliminary analysis, if the control was not shown to correlate with any of the observing variables (see *Table 4.1.*). The controlling variables were only exercised if they were found to influence the observing variables.

3.5.6. Rating leniency

In the field of quantitative survey research, rating leniency is operationalised through the level of ratings with higher ratings demonstrating greater leniency. Consistent with prior research, leniency is operationalised through the average ratings of the raters on the rated leadership behaviour. Participants at both management levels were asked to rate their direct-reporting manager and individual behaviour. A total of 19 and 30 behavioural statements were scored by the manager and lower-level line manager respectively.

3.5.7. Rater source

Rater source was coded using a dummy variable, company (1 = UK, 2 = MY). The data was collected from two different sources, the middle-level manager and lower-level line manager, to examine the hypothesised model (see Figure 2.1.). The sample size is representative of the hierarchical level that was pre-determined through the researcher's relationship with DeltaCo. Considering the parameters of the research. In this case, all middle-level manager that have two or more direct reporting frontline managers and their lower-level line managers that have more than one downline are invited to participate in the survey and to avoid potential noise throughout the sample.

The survey was administered to lower-level line managers to measure the research variables (i.e., middle-level manager's ethical leader behaviour, and their self-rated moral identification, power distance, voice behaviour and work engagement). As managers and lower-level line managers were pre-identified, middle-level managers were invited a day after the line managers' survey was administered, requesting them to provide their response on the research variables

(i.e., higher-level leader's ethical leadership behaviour and HR practices). Both lower-level line managers and middle-level managers were asked to report their demographics respectively.

Participants in DeltaCo UK's office were given two reminders over the period of eight weeks, whilst participants at DeltaCo Malaysia's office were given three reminders over the period of seven weeks. Reminders were administered through the Qualtrics XM platform on intervals and the schedules have been pre-agreed by the organisation's management team to ensure that the researcher fulfilled the ethical policy and the research agreement of not intruding on the participant's privacy, as well as the organisation's working process. Codes were preassigned to every identified participant regardless if they responded to the survey.

The data was returned with the codes, which anonymised the participant's responses as up to five frontline managers will share the same coding (i.e., team and middle manager codes). Middle-level manager were also grouped according to their respective higher-level manager. The demographic variables were measured categorically, for example, age was measured at a 5-year interval (i.e., 26 to 30, 31 to 35), while organisational tenure was measured using a 1-year interval (i.e., less than a year, more than a year and less than 2 year)⁸. The following categorical measurements aims to make profiling and identification impossible.

⁸ The demographic variables were developed in conjunction with DeltaCo's performance team and was approved by DeltaCo's legal team which oversees the General Data Protection Regulation (GDPR, 2016) in the organisation. As such, all demographic variables were categorised, and nationality was removed from the demographic to avoid potential detection. The categories are highlighted in Appendix B, page 264. The researcher and the supervisory team have agreed to the term bounded by non-disclosure agreement (see Section 3.8.) that meets the legal team approval as a demonstration of compliancy with the research and DeltaCo ethical policy.

3.6. Data Analysis strategy

This research employs a multilevel analytical methodology as both line managers and middle-level managers operate at different management level. The ordinary least square (OLS) method is adopted because such method demonstrates flexibility concerning the environmental model that it can evaluate (Kozlowski & Klein, 2000). The data analysis is completed using the Mplus statistical software which allowed the hypothesised model to be tested simultaneously and across multiple paths. The software also allowed me to estimate both observable and latent variable (Muthen & Muthen, 1998-2017). For example, confirmatory factor analysis (CFA) was used to examine the distinctiveness of the latent construct (or model fitness) before examining hypotheses. From a methodological standpoint, Preacher, Zyphur and Zhang's (2016) general framework on MLM was applied to assess the multilevel nature of the data sample.

The exchange of information across a wider organisation may influence resource by combining different elemental content and develop a perspective about the phenomenon (Klein & Kolozski, 2000). This made multilevel modelling (MLM) an important statistical method to observe the relationship across multiple levels of social actors by considering the interdependence of the data. MLM allowed the researcher to account for the dependency that can affect the variance estimate by taking into consideration the mean differences of multisource rating (Gavin & Hofmann, 2002). In other words, this analysis procedure provides a better estimation on line manager attitude and behaviour through the consideration the differences of other raters (Raudenbush & Bryk, 2002). Besides, the variable at the between-level can influence variable at the within-level and it is quite clear that such a relationship exists across multilevel levels (Hofmann, Griffin, & Gavin, 2000).

This logic of causal order can also be reconstructed through clustering the predicting variable due to the advancement of statistical packages (Johnson & Duberley, 2000). The data source should be organised into different levels to represent its nature in social reality. As line managers, which respond to the same middle-level managers are naturally clustered together are expected to perceive the attitude of the same leadership (Shadnam & Lawrence, 2011). This clustering is presumed to exert a unique hierarchical effect that may be left out in research if the analysis were to be conducted at a within-level. Hence, the failure to aggregate observed data is often due to over-reliance on the respective theoretical argument that did not refer to interdependence (Bliese, 2000).

While the condition that naturally occurs at a higher level is an important condition that helps predict individual behaviour (Aguinis, Gottfredson, & Culpepper, 2013). Data modelled through linear modelling often operate on the assumption that these observations are mutually independent and discounted the assumption of non-independent effects. Although adopting a multilevel analysis improves our understanding about the interactional relationship across both between and within levels, for example, the dependent observations from a unit of line manager would be accounted for a unit social interaction from within through shared experiences, role expectations, and environmental effects. Obtaining and modelling multilevel data is not without challenges as the process of analysis integrates both between and within-level perspectives (Aguinis et al., 2013), making it sensitive to the sample power.

According to McNeish, Stapleton, and Silverman (2017), MLM is useful in most situations when trying to capture random effects, but in a smaller or moderate number of clusters, violation of either assumption can affect the inference of model estimates. Because MLM required large sample size to produce a reasonable estimate (Preacher

et al., 2010), sufficient consideration must be given to the data sample size as this improves the estimates, allowing the hypothesis to be tested. This premise of statistical analysis also allowed the researcher to translate the complexity of multilevel theory (Kozlowski & Klein, 2000). As an example, with sufficient information, multilevel estimate allowed aggregate variables at a between level to exert influence on a within level regression (see Aiken & West, 1991), approaching a multilevel environment (Bauer, Preacher, & Gil, 2006). Having stated this information, the moderating influence of moral identification, which is an individual difference that is naturally clustered at the within level was examined using a single-level bootstrapping technique.

The mediating variable aims to provide an understanding of the relationship between line managers ethical leader role and their voice behaviour and work engagement. Bootstrapping technique is used to examine the boundary condition of moral identity because it provides the same asymptotic results through informal resampling residuals (Freedman, 1981). In a layman's term, bootstrapping can apply the underlying assumption of sampling distribution through employing large numbers of repetitive computations to estimate the shape of a statistical sampling distribution, allowing researchers to draw inferences about population parameters (Mooney & Duval, 1993), and would be particularly relevant for smaller sample sizes (Freedman, 1981; Moulton & Zeger, 1991). Hence, such an analysis method will provide a better understanding of the condition with smaller sample size.

In adopting the respective statistical analysis, it allowed the researcher to examine the impact of higher-level and middle-level ethical leadership, and the moral identification of line managers to understand the antecedent of line managers' voice behaviour and their work engagement. Whilst this study controlled for certain

associative demographics (i.e., company, perceived status, and power distance). Such an analytical approach allowed this study to examine why line managers will develop an ethical leadership role in a complex organisation, underlining the equality constrained at both between and within-level of a single level variable. This analytical strategy is recommended as a best practice by Aguinis et al (2013) to improve the accuracy of substantive conclusion and the challenges of modelling cross-level interaction.

In addition to the cross-level interaction, the bootstrapping analysis aims to underscore the population, providing knowledge about the conditions that can affect line managers voice behaviour and their work engagement. Granting that the data is obtained from different management levels (i.e., middle-level managers and line manager) and are interdependence of observation (Raudenbush & Bryk, 2002). The dynamics of such a phenomenon tends to occur in boundaries through the constraint of the organisation system. As such, Katz and Kahn (1966) stated that behaviour will originate in the cognition, affect, and characteristic of employee-ship, including the interaction is manifested towards a higher phenomenon. In sum, the philosophy of positivism is used to steer arguments for adopting a quantitative methodology. In doing so, above I outlined the research design, leading to a discussion about the multilevel theorising and perception that differs across the organisation. The data collection in DeltaCo was used to underline the interdependence nature of the data, followed by the ethical consideration of researching large multinational.

3.7. Research ethics and governance

The research received its ethical approval from the Aston Business School Ethics committee on the 10th of November 2017 (Ref: 08:10/17), before approaching

any organisation for research support. Ethical consideration and procedures were developed to reflect research best practice and the research is governed by the Aston Business School Research Ethics committee. A formal research proposal was submitted together with the ethical application which outlined the procedure and prevention of harm of participants. The two main considerations that were put forward by the researcher for this research, being 1) The role of participants, and 2) the research organisation. In stating the two considerations, this section will provide a detailed outline of the systematic process adopted by the researcher to mitigate any ethical lapses that would otherwise occur during the research process.

The research exercised guidelines set forward by the British Psychological Society code of conduct (2009) due to its psychological and social nature. In doing so, it laid out four main areas to underline the research integrity with following Diener and Crandall (1978). First, participants identification and minimising risk of harm. As stated in the previous section, participants are identified through targeted population sampling, highlighting the concern about participants identification. To prevent identification, the researcher worked closely with the coordinator to first identify line managers and their respective middle-level manager by name. Thereafter, the coding assignment was done solely by the researcher (*see section 3.5.4*). The assigned code is associated with the respective manager's Email, which allowed the system to send out a bespoke link to all identified line manager and middle manager. The researcher is responsible for coding the system to minimise the involvement of the coordinator with data that could identify any respondent. Because up to five managers may share the same code, this aims to make their response unidentifiable. Furthermore, during the interim meeting with the organisation's legal advisor to develop the consent, the researcher has agreed to use categorical variables when collecting demographic

information. This was to limit identification, preventing respondents from being identified. In adopting this protocol, managers are presented with an informed concern, informing their right throughout the research process. Furthermore, the researcher adopted a secondary consent towards the end of the research, where only respondents that confirmed their willingness to share the data with the University for research is recorded. Hence, these processes helped to minimise harm through the use of anonymous coding and categorical demographic variables, allowing participants to respond with confidence and free from the association.

Second, informed consent and the right to withdraw. The research process was operated under the framework set forward by the General Data Protection Regulation (GDPR, 2016), where participants were provided information about the role of the researcher, the researching organisation and Aston University Business School. The consent (*see Appendix A*) aimed to ensure participants about their rights to their data and the withdrawal right, for example, section 9(2)j of the GDPR article is used to outline the purpose of the data processed. In this regard, the data will only be used for research study, feedback, and maybe submitted for academic publication. A statement about the withdraws of consent to share responses is also provided to ensure the participant is well aware of a secondary consent. A second and final consent at the end of the survey aimed to ensure that participants were well aware of their responses and their withdrawal right before submitting their responses. This protocol was developed through the guideline of the organisation's GDPR's advisor as a mode of safeguarding against unwanted sharing of data. Data of participants that did not check the second consent box (*see Appendix A*) before submitting will automatically be removed. In total, two participants have chosen not to share their data for the research purpose.

Third, protecting anonymity and confidentiality. Participants were also ensured about the anonymity of their data and the removal of all identifying information as depicted in the consent form. The final set of the data was completely anonymised, relinquishing any opportunity to identify the respondent. Nonetheless, some codes are associated with the responses to allow the research to match line manager data with their direct-reporting middle-level manager. The practical aspect of this area was to ensure that participants are willing and voluntary participating in the study. In doing so, a statement about voluntary participation was enclosed in the consent form, holding all private and sensitive information in confidence. Another aspect was previously laid out through the use of categorical demographic variables to prevent potential identification. The researcher also adopted a sensitive approach to data collection, for example, the participant was made aware of the duration of storage, which is five years from the completion of the survey. Besides, participants are offered guaranteed about safe storage. The data is stored in the researcher's encrypted hard drive and only the researcher and his supervisors have access to view the digital copy of the data. Therefore, the data is safeguarded through password encryption down to the excel sheet that the data is recorded. It is important to note that such safeguarding was adopted as part of the research agreement between DeltaCo and Aston University Business School, which acted as a guarantor of the study.

Fourth, avoiding deceptive practices. A cover letter was provided to the research organisation, DeltaCo, informing them about the confidential and anonymity to protect the organisation's reputation from harm. In doing so, a stringent disclosure policy is guaranteed by the signature of two research agreements between Aston University and DeltaCo Malaysia and UK offices. It is important to note that deceptive practice may fly in the face of informed consent. However, the role of the researcher

is to perform the study with good faith, maintaining regular communication with the researching organisation and his supervisor. At no point, the researcher is involved in covert research, where the identity of the observer is not shared with participants. Hence, a process framework was developed to ensure that participant's privacy was not invaded, and communication was kept to a minimum to safeguard both the researcher and the participant's privacy. In adopting this process, the entire research was conducted in a very transparent manner from submitting the research proposal through data collection to ensure integrity, quality, and transparency as underlined by the Economic and Social Research Council (2015, p. 4).

The processes are developed together with the research organisation's legal team, ensuring that adequate ethical safeguarding is set up to afford to the participant. The process also guarantees the participant's freedom of choice to participate in the research study. The process framework outline three main criteria, first, communication. The researcher is barred from contacting any participant and this was guaranteed by the research agreement. Second, the researcher and the organisation will develop strategic communication to increase respondent and not force response. As such, an agreed communication template was designed and approved by the organisation's legal team before being approved by higher-level management for communication distribution. Third, a survey reminder was scheduled two weeks after the first distribution to improve response rate. This was scheduled with pre-agreement from the organisation's HR director and the board of directors for the UK and Malaysia's office respectively. In this regard, the organisation pre-agreed the date and time when the reminder can be administered to prevent it from disrupting the participant's work. Thus, in highlighting the researcher's stringent approach and the

adoption of a process framework, it demonstrated the researcher's integrity, and to maintain a future partnership with the researching organisation.

3.8. Protecting the organisation and the non-disclosure research agreement

The agreement between Aston University Business School and DeltaCo was laid out in two non-disclosure research agreements (NDRAs). The signing of the document was facilitated by the researcher. The signing of both documents was completed in November 2018 between Aston University and the UK office, and in March 2019, between Aston University and the Malaysia office. The agreements are legally binding until the end term of the document, which will last approximately five years until the data is destroyed. All future publication using the data must adhere to the research agreement terms and condition, subject to the organisation's approval, where Aston University acted as a guarantor. In addition to specifying the role of the organisation, the research agreement is briefly summarised in the next two paragraphs.

“First (1), the organisation will support the researcher in identifying relevant hierarchical level employees, seeking their voluntary participation without warranty on sufficient sample. Second (2), the organisation will furnish the researcher with the completed questionnaire in an encrypted and password-protected format. Third (3), the organisation will provide any additional assistance on the research study subject to agreement in advance writing and with the organisation. In fulfilling this condition, Aston University agreed to treat the research study with the highest confidential information, guaranteed by the GDPR regulation and Data Protection Act of 2018. Aston University and the

researcher will also take all necessary steps to prevent any unauthorised dissemination of confidential information that is not related to the research study. Therefore, Aston University must not do anything that will harm the organisation, its subsidiary or affiliates into disrepute.

In discussing the findings, the researcher must make the reader aware of the confidentiality information represented by the agreements. Without prejudice, the organisation reserves the right to terminate and destroy all confidential information provided to Aston without keeping any copy. As such, Aston is bounded by the indemnify clause. Last, Aston University and the researcher will grant the organisation a non-exclusive and royalty free and worldwide licence to use the research study output where the organisation sees fit. This license will also survive the termination clause. Aston University and the researcher is, therefore, bounded by the consent and rights granted by and to the organisation through this agreement. Thus, all parties have agreed in signature that any dispute of claim that arises out of connection in this agreement is the subject matter governed by and construed in accordance with the English Law that is governed in England, Wales, and Malaysia.”

3.9. Summary of methodology

The current study adopts a positivistic and critical realist approach to answer the research objectives. In providing the philosophical discussion, the researcher debated the different perspective to exert the logic of enquiry and approach theory testing of the hypothesised relationship using a quantitative survey research design. This chapter also layout the research strategy to obtain data from a large Malaysian

multinational to examine the trickle-down process across three levels of management. Access negotiation and participants sampling is then discussed to outline the researcher's approach towards the organisation. Take all together, this chapter demonstrates a systematic approach in which the data was obtained, the tested construct and the development of the research survey. The chapter thus concludes with a summary of the ethical governance of this study as well as how negotiation was conducted to meet both parties (the researcher and the organisation) obligation to sample the participants.

CHAPTER 4 – RESULTS

4.0. Chapter summary

This chapter aims to provide the analysis and findings of the hypothesised relationship presented in *Figure 2.1*. This chapter is twofold. In the first half, data exploration is conducted to examine the reliability, correlation and the distribution of the overall data set. As stated in the previous chapter (see *Section 3.3.2.*), data of this study is obtained from a large multinational organisation depicting three levels of management (higher-level, middle-level, and line manager). The detail examination of the data set is paramount because it provided readership with information about the research organisation, DeltaCo. The preliminary information provided certain understanding about the data sample due to its cross-sectional nature although the administration was conducted at two managerial level to depicts the management level it represents; preliminary examination also helps restrict bias on the sample due to the overarching positive/morality theme of this research. In narrating the investigation process, the researcher will use a first-person figure speech to depict the process. The hypothesis findings will also be presented systematically in ascending order.

Given that recent research argued that an aspect of the organisational environment can accentuate individual's moral trait, such that data from a different set of the population would accentuate (or impede) key outcomes (Moore et al., 2019). Data exploration, in this sense, ensured that the observed measures are reliability for analysis, moreover, addressing the hypotheses that are outlined in this research. Therefore, the examination of the correlation and descriptive statistic of the observed variables is followed by running a multilevel confirmatory factor analysis (MCFA) to determine the distinctiveness of the observing variables and the model fitness as well

as its suitability to run the proposed analysis. To ensure sufficient parameters for the model estimates, a parcelling strategy is used before running the MCFA. Furthermore, the interrater coefficient correlation (ICC)s is calculated to support the multilevel nature of the data before examining the data using multilevel path analysis. Multilevel path analysis is used to partition the variance into within and between-group variances (Muthén & Asparouhov, 2009). The two-level model will cluster data into two components, where level 2 variables (i.e., higher-level ethical leadership) have only between-group variances due to the nature it was collected. Level 1 variables, such as middle-level ethical leadership, line manager ethical leader role, line manager voice and work engagement will have both between and within components.

Hypotheses 1 to 9 are examined using multilevel path modelling, while hypothesis 10 is examined using the bootstrapping technique. Overall, this chapter aims to provide the reader with an understanding about the antecedents of line managers' voice and engagement, and the boundary condition that can accentuate line managers' ethical leader role through a systematic investigation.

Abbreviations

HL – Higher-level; ML – Middle-level; LM – Lower-line manager

4.1. Data sample

A total of 201-line managers (87%) and 73 ML-managers (81%) responded to the survey. From the sample, the researcher managed to obtain 67 matched responses (i.e., line-manager and middle-level manager in a team). A total of 27-line managers' and 6 ML-managers' data were removed because it could not be matched (i.e., ML-manager or line manager did not respond to the survey). The final data set

consisted of 174-line managers and 67 ML-managers nested under the supervision of HL-leadership (79.77%). As this study circles around understanding the antecedent of line manager behaviour. The cluster that has less than three employees responding to the survey are also preserved to ensure statistical power when running the multilevel path analysis. Guidelines would suggest a minimum of three lower-level line manager respondents for each middle manager respondent (see Hox, 2002). However, to preserve statistical power and in line with Kalshoven et al. (2016), this study retained data with less than three line managers that have rated their middle manager (Average group size = 2.59, minimum = 1, maximum = 8). Nonetheless, I acknowledge that statistical power is a complex issue for multilevel interactions and many guides (see Bosker, Snijders, & Guldemond, 2003; Raudenbush, 1997;) do not always provide the adequate power estimate. Therefore, estimating statistical power is generally much more complicated than computing for simple main effects (Scherbaum & Ferreter, 2008).

As an example, Hansen et al. (2013) reported a sample size of $N = 201$ participants from one large organisation operating in the United States, while Mozumder (2018) reported a much generous sample of $N = 284$ from three local councils in the North East of England. However, for recent research that used a matched data sample, Byun et al. (2018) research reported a sample size of 224 pairs of dyad obtained from six different organisations in South Korea. Furthermore, recent research by Stollberger et al. (2019) reported a sample size of 155 employees and 84 line manager data from three organisations in three different industry from the Dominican Republic⁹. In providing these examples, I provide evidence to have

⁹ Schaubroeck et al's (2012) research that was conducted with the United State military has a reported sample size of 2,572 active military service men and women. However, the researchers acknowledge that such sample and population is difficult to generalise outside of military organisation due to its

accounted for the possible trade-offs between both levels of sample size and the interaction effect on power estimate for multilevel interaction. Furthermore, a recent recommendation has cautioned against the rule of thumb (see Aguinis et al., 2013) in leadership research, the ICC estimates of middle-level ethical leader will also be estimated to provide a reasonable value as well as determining the multilevel structure of this leadership research (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007).

For the line manager's data, 65.17% of respondents identified as male, while 25.37% of respondents identified as female. The remaining 9.46% of respondents choose not to be identified. Age and tenure were measured categorically with up to 11 categories (see *Table 4.1's note for categorical range*). This was done to prevent easy identification of line managers and ML-managers as well as to fulfil the organisation's GDPR policy (see *chapter 4 for more information*). The mode of the line manager's age falls between 41 to 45 and 46 to 50 years old (total 33.83%) respectively. The second-largest age demographic falls between 31 to 35 and 36 to 40 years old (total 23.88%) respectively. 14.92% of the line managers fall in the age category between

defined hierarchical status. Peng and Wei's (2018) research on leadership integrity reported a sample size of 237 lower-level supervisors and 716 subordinates from a large china manufacturing organisation. The researchers did not provide information about lower-level supervisor's nesting.

Outside the field of ethical leadership, Wo et al's (2015) research on justice reported a sample size of 200 and 340 lower-level supervisor/subordinate dyads from a multitude of organisations in the United State. As for the field of abusive supervision, Lui et al's (2012) research from a single large manufacturing organisation in the United States reported 108 team leader and 762 team employees under the supervision of 22 department manager, while Mawritz et al's (2012) research reported a sample size of 1423 employees and 295 lower-level supervisor in 288 research group from a multitude of organisation in the United States.

Most high number of respondents relied on snowballing techniques which allowed the researchers to increase the sample size. Furthermore, only Lui et al's (2012) multilevel and multisource research data was conducted in one single large organisation, while the majority of trickle-down research tends to emerge from a multitude of organisation operating in industries including technology, government, insurance, finance, food service, retail, manufacturing, and healthcare (Mawritz et al., 2012).

26-30, while 10.94% falls in the age category between 51-55. The remaining age categories are 21-25 (3.48%), 56-60 (6.96%), 61-65 (2.98%), and over 65 (.99%), as well as respondents (1.99%) that did not provide an age range. The median age of line managers is between 41-45. For organisational tenure, 51.24% of line managers have been with the organisation for more than 10 years. 2.98% respondents have been with the company between 9 to 10 years, 1.99% between 8 to 9 years, 3.48% between 7 to 8, 6 to 7, and 1 to 2 years respectively (total 10.45%), 4.97% between 5 to 6 and 3 to 4 years respectively (total 9.95%), and 7.46% between 4 to 5, 2 to 3, and less than 1 year(s) respectively (total 22.38%).

For ML-manager data, 14 ML-managers identified as female (19.17%), while 55 respondents identified as male (75.34%). Four respondents did not provide their gender (5.48%). The mode of ML-managers age falls between 36 to 40 and 51 to 55 years old (total 30.14%) respectively, while the single largest age demographic falls between 46 to 50 years old (19.17%). Ten respondents fall between the age group of 56 to 60 (13.70%), 18 in the age group of 31 to 35 and 41 to 45 (total 24.65%) respectively, and 8 in the age group of 26 to 30 and 61 to 65 (total 10.96%). Only one respondent did not provide an age range. The median age of ML-manager is between 46-50 years old. For organisational tenure, 68.49% of ML-managers have been with the organisation for more than 10 years. 2.74% of respondents have been with the company between 9 to 10 years, 1.37% between 8 to 9 years, 1 to 2 years, and less than a year (total 4.11%). 2.74% between 7 to 8, 6 to 7, 3 to 4, and 2 to 3 years respectively (total 10.96%), 4.11% between 5 to 6, and 8.22% between 4 to 6 year

Table 4.1. Descriptive Statistics, Correlations, and Reliabilities

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1 Company (1 =UK; 2 =MY)	1.38	.48											
Middle-level (ML) Leader Rated													
2 HL-leaders ethical leadership	4.25	.49	.05	(.81)									
Line manager Rated													
3 Gender (1=Male; 2=Female)	1.18	.51	.23**	.04									
4 Organisation tenure	7.91	3.66	-.62**	-.08	-.06								
5 Perceived status	4.35	1.23	-.06	.08	.13	.21**							
6 Line manager power distance	2.61	.62	.00	-.06	-.22**	.11	.01	(.71)					
7 ML-managers ethical leadership	4.33	.60	-.07	-.07	.02	-.04	.24**	-.16*	(.90)				
8 Line manager moral identification	4.53	.54	-.23**	.08	.11	.06	.18*	-.05	.47**	(.84)			
9 Line manager ethical leader role perception	4.43	.45	-.16*	.04	.04	.09	.26**	-.12	.59**	.50**	(.72)		
10 Line manager voice behaviour	4.30	.57	-.33**	.08	-.01	.15*	.23**	-.08	.47**	.43**	.55**	(.84)	
11 Line manager work engagement	4.04	.56	.11	.16	.09	-.06	.19**	.09	.29**	.17*	.23**	.19**	(.86)

*Note: The data set includes dyads that have both line manager and ML-manager's rating, $N = 174$ line manager and $N = 67$ middle-level (ML) manager respectively. The variables in rows 1, and 4 to 12 was rated by line manager while variables from 1, 2 and 3 was rated by ML-managers. Organisational tenure is measured categorically (1 = under 1, 2 = 1-2, 3 = 2-3, 4 = 3-4, 5 = 4-5, 6 = 5-6, 7 = 6-7, 8 = 7-8, 9 = 8-9, 10 = 9-10, 11 = 10+ years). Alpha reliabilities are on the diagonal in parentheses. HL represent higher-level leadership.
 ** $p < .01$ level (2-tailed). * $p < .05$ level (2-tailed).

4.2. Preliminary analysis

Table 4.1. presents the means, standard deviations, intercorrelations, and the reliabilities of the study variables. Before examining the correlations, the reliability of the construct's item was examined. In this instance, I found that item 4 of the moral identity scale affected the reliability, bringing the reliability of the item below the cut off threshold at .58. Item 4 is a negatively worded item, which can be rather problematic on the empirical ground. Moreover, the item response theory (IRT) argues that negatively worded item tends to display negligible information and lower discrimination due to influence from the extraneous factor (Sliter & Zickar, 2013). Hence, I decided to drop this item as it affected the scale reliability, and instead rely on the remaining four items to construct the observed moral identification variable. The reliabilities of all measures are above the .70 threshold (*see parentheses in Table 4.1.*), which is considered as acceptable for research (Nunnally, 1978).

A Pearson correlation was conducted to determine the correlation between variables. From the correlation table, I found that ML ethical leadership is positively related with line managers' ethical leader role ($r = .59, p < .01$), voice behaviour ($r = .47, p < .01$), and work engagement ($r = .25, p < .01$), while line managers' ethical leader role is positively related to voice behaviour ($r = .55, p < .01$) and work engagement ($r = .23, p < .01$). The correlation of ML ethical leadership was positively related to line manager's moral identification ($r = .47, p < .01$). On the dependent outcomes, line managers' ethical leader role was positively related to line managers' moral identification ($r = .50, p < .01$), while line manager's voice behaviour is positively related to their moral identification ($r = .43, p < .01$). Line manager work engagement is also positively related to moral identification ($r = .35, p < .01$).

I did not find a significant correlation between line managers ethical leader role and power orientation, the control variable ($r = -.12, p < .10$). The correlation also did not show a significant relationship between HL ethical leadership and ML ethical leadership ($r = -.06, p < .10$). The correlation matrix also did not show any association between HL ethical leadership and the mediating variable and outcome variables. However, variable with zero-order correlation may still contribute to a proportion of explained variance and should not be excluded from the path analysis (Maassen & Bakker, 2001). Besides, it is interesting to note that company association (UK vs. Malaysia) were not correlated to power distance ($r = -.06, p < .10$). Power distance in this regard was only correlated to ML ethical leadership ($r = -.16, p > .05$). Furthermore, I decided to drop organisational tenure and gender from the control variables because both controls did not exhibit a significant on the outcome variables. However, I controlled for company membership (i.e., UK or MY), status and power distance, which have shown some effect on the outcome variables, while the latter on the predictor. The correlation between ML ethical leadership and line manager's ethical leader role and voice behaviour also showed an elevated correlation coefficient which can question if multicollinearity could influence study result (Bedeian, 2013).

When interpreting the mean (M) and standard deviation (SD), I found the average mean of the ethical/moral variables (HL ethical leadership, $M = 4.25, SD = .48$; ML ethical leadership, $M = 4.33, SD = .59$; moral identification, $M = 4.53, SD = .54$; line manager ethical leader role, $M = 4.43, SD = .45$) showed some degree of skewness. This can present a problem for the regression analysis as non-normality can causes a misappropriate effect on the parameter estimate (White & Macdonald, 1980), essentially making the data confidence intervals either too wide or too narrow. To determine if the data were skewed, I reviewed several past pieces of research to

determine the average statistic before proceeding with any statistical analysis to manipulate the data. In this instance, I examined publications that utilised data from an Eastern context versus a Western set-up, the Likert scoring, the sample size of the data, and data that comes from a single organisation. Accordingly, the majority of research that examined ethical leadership through other ratings tend to circle the mean, $M = 3.80$ average with a standard deviation, $SD = .55$ on a five-point Likert scale (Mayer et al., 2012; Moore et al., 2019; Paterson & Huang, 2018), while some research (see Letwin et al., 2016; Rubin et al., 2010; Zhu et al., 2016) has reported an average of $M = 4.20$, $SD = .53$. To satisfy the argument about the non-parametric concern, a skewness and kurtosis test are conducted with accordance to past research (see Zhu et al., 2016) for all four variables by measuring the normality assumption.

4.3. Skewness and kurtosis, and its inference on data

Table 4.2. Skewness and kurtosis test of the observed variables

	Skewness		Kurtosis	
	Est	Std Error	Est	Std Error
Higher-level Ethical leadership	-.45	.29	-.65	.58
Middle-level Ethical leadership	-1.32	.18	2.13	.36
Line manager ethical leader role	-.52	.18	-.27	.36
Line manager voice	-.79	.18	.61	.36
Line manager work engagement	-.66	.18	1.22	.36
Line manager moral identification	-1.03	.18	1.34	.36

*Note: $N = 174$ line manager and $N = 67$ middle-level (ML) manager.

Table 4.2. presents the skewness and kurtosis test of the observed variables. According to Westfall (2014), data will not always be normally distributed and is necessarily discrete. In this case, the skewness test showed that only moral identification and ML ethical leadership was beyond the acceptable range ¹⁰. Because Small sample data is prone to non-normality, a valid question should emphasis on the distributed process. Besides, skewness and kurtosis statistic can only assess certain kind of deviation from the normality of data generation, the standard error they produce may not always be useful because it is only valid under normality assumption (p. 193). The effect size would matter more as smaller sample size can affect the rejection of formal hypothesis testing as it gives noise to the data (Stollberger et al., 2019). Therefore, the smaller sample size will always face the problem of non-normality and missing data tends to increase the complication by almost 18% (Muthén & Muthén, 2002).

Descriptive statistic conducted as part of the executive summary for DeltaCo's executive showed that most measurements only had a +/- .05 degree of error (and deviation) between the mean and the median which is commonly used to compute skewness and non-normal data. An item from moral identification was deleted to preserve its reliability, which may have further affected its distribution. Nonetheless, the use of small factor correlation in the confirmatory factor analysis (CFA) model will help determine if the model fits the overall research framework and provided better

¹⁰ The observed variables were mean centred, while ML ethical leadership is group-mean centre when running the analysis. Moral identification was examined using a nonlinear transformation, but it did not improve the scale massively. Therefore, I choose not to use the transformation variables in the analysis as any data transformation could change the meaning of the variable distribution, such as replacing a linear with a non-linear relationship (Russell & Dean, 2000). The natural log of the independent variable can also diminish returns relationship and affect the hypothesised model. Hence, a bootstrapping technique was used when examining the moderation of moral identification (Becker, Robertson, & Vendenberg, 2019).

strength on the model fitness. Yu, Jiang & Land (2015) further suggested that centering the data while performing multilevel analysis can make the intercept more meaningful and it will not change the coefficient nor its *p-value*. Granting that analysed data is standardised to overcome any bias by subtracting the mean to alleviate concern about multicollinearity (Hofmann & Gavin, 1998). Parcelling method is used to ensure that data could hold its estimation of the parameter to determine the maximum likelihood on the data structure.

4.4. Analysis of the multilevel structure

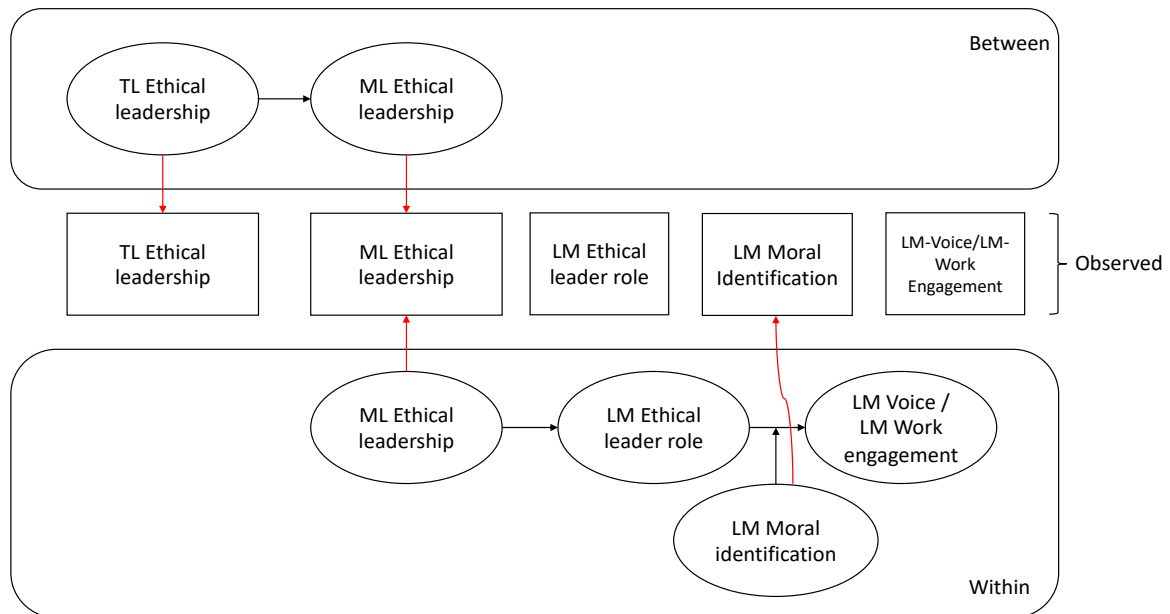


Figure 3.1. Theoretical model

Figure 3.1. highlight the theoretical model and how data was organised. In my proposed model, HL ethical leadership is naturally clustered at the between level, while ML ethical leadership is assessed at both within and between level. All dependent and outcome variables (i.e., line managers ethical leader role, line managers voice behaviour and work engagement) are assessed at the within-level,

which form a 2-1-1-1 model design. First, the ICC(1) for line manager voice behaviour and work engagement and ethical leader role are calculated to justified if the use of multilevel modelling to analyse the date. The ICC(1) of line manager voice, work engagement and ethical leader role was 0.23, .14, and .22 respectively. This suggested that 23% of the variance in line manager voice, 14% of variance in line manager work engagement and 22% of variance in line manager ethical leader role were due to differences between middle-level manager. Hence, a multilevel approach to data analysis is warranted (Snijders & Bosker, 2012).

Second, ML ethical leadership exist at both a between and within level, the interrater agreement index $rwg(j)$ is examined to indicate whether this item can be aggregated (James, Demaree, & Wolf, 1984). ML ethical leadership estimated value was well above the cut-off score at $rwg(j) = .90$, which indicates an adequate score of within level agreement. In contrast to HL ethical leadership which was naturally clustered at the between level as it was rated by ML manager, the $rwg(j)$ statistic was not calculated. The interclass correlation coefficient [ICC(1) and ICC(2)] are calculated to justify the use of multilevel analysis, specifically, aggregating ML ethical leadership. In this regard, ICC(1) is computed to determine the amount of between-person variability in comparison to the total variability (Hox, 2010; Snijders & Bosker, 2012), while ICC(2) represents the group mean reliability (Bliese, 2000).

The interrater agreement (IRA) and Interrater reliability (IRA) estimate were computed using the IRA and IRR excel computing tool by Biemann, Cole, and Voelpel (2012), where I ran an Excel with Macros enabled to determine the ICC(1) & ICC(2) of ML ethical leadership. The results showed that ML ethical leadership has an [ICC(1) = .26, $p < .01$] and [ICC(2) = .48, $p < .01$] respectively. The result was reconfirmed using a one-way analysis of variance (ANOVA) (Bliese, 2000), and the ICC results

showed that ML ethical leadership has 26% of the variance attributed to group membership. For ICC(2), ethical leadership is appropriately treated as a between level construct (Fleiss, 1986). As a note, ICCs is sensitive towards the group size. Therefore, Bliese (2000) argued that “when ICC(1) is small, multiple ratings are necessary to provide a reliable estimate for the group mean” (p. 356). Because group size played such an important role to determine the emerging relationship, larger group size will tend to produce higher value for the aggregated variable.

Furthermore, a multilevel confirmatory factor analysis is ran using Mplus to ensure the study variables are distinct. The Mplus statistical package provided a much reliable parameter estimate and standard error, which yields a much better accurate Type 1 error when dealing with non-independence rating among different employees (see Preacher et al., 2010). Mplus also allowed this study to avoid conflated within and between group’s relationship by calculating the indirect effect with better precision (Nohe, Michaelis, Menges, Zhang, & Sonntag, 2013). The analysis allowed variances to be clustered into two latent components, which is useful to determine if both HL and ML ethical leadership respectively will predict line manager voice behaviour and work engagement.

4.5. Parcelling strategy

Before running a multilevel confirmatory factory analysis, I adopted a parcelling strategy as such approach is preferred when the sample size is relatively small (Bagozzi & Edwards, 1998). Accordingly, Hau and Marsh (2004) state that parcelling can help overcome problems that are commonly associated with non-normality when the sample size is small. The main purpose of adopting a parcelling approach was to reduce the number of indicators to exacerbates indeterminacy (Rigdon, Becker, &

Sarstedt, 2019b). Recent research has indeed shown that parcelling will not affect factor indeterminacy and, in turn, does not affect a model's parameter estimate or standard errors (Rigdon et al., 2019a), and was found to exert a good fitness indication on the data (Moore et al., 2019; Koopman et al., 2019). This allowed a common factor to be reproduced as a unique function of the observed variable in the analysis model. Parcelling strategy through unequal weightage proportioned the loading of an observed variable. In doing so, a balanced item parcelling technique is used to help reduce problems with model estimation and identification that normally occurs with a complex model (Little, Rhemtulla, Gibson, & Schoemann, 2013).

The actual estimation will occur through the observed variable when testing the hypothesis. There are different strategies that the researcher can adopt when parcelling data for factor analysis, for example, homogenous (or equal weightage) parcelling strategy where parcels are formed through closely related item (Marsh, Hau, Balla, & Grayson, 1998). Equal parcelling weighting relies on the same loading residual in the original model to assign indicator which can load on the same residual variance as the original model (Rigdon et al., 2019a). As for the distributive approach, items are randomly distributed across different indicators. Marsh et al. (1998) argued that the distributive approach may worsen factor indeterminacy even if it is not explicitly intended. Therefore, a distributive parcelling with unequal loadings and proportional parcelling is favoured as such an approach will leave factor indeterminacy unchanged (Rigdon et al., 2019a). Furthermore, the researcher must ensure the unidimensionality of item structure when adopting parcel-approach (Crede, 2019; Williams & O'Boyle, 2008).

Exploratory factor analysis (EFA) was first conducted to determine the factor loadings of the latent construct for each observed variable before parcelling the

research constructs. Conducting an EFA before parcelling also allowed me to determine the factor loading and the dimension of the variables. EFA is commonly used in scale development as it allowed the researcher to determine the distinction, dimension and performance of the item as well as whether the items constitute the observed element (DeVellis, 2012). Generally speaking, the factor loading obtained from the EFA result indicates how much an item contributes to a variable and it is very similar to weighting in multiple regression analysis as they represent the strength of correlation (Kline, 1994). No item is removed to preserve the variable validity during the factor analysis unless it affects the reliability as previously highlighted about item 4 of moral identification.

Table 4.3. Example of factor analyses for HL-EL and ML-EL for parcelling strategy

	HL-EL	ML-EL
1. Listens to what the departmental employees have to say.	.53	.77
2. Disciplines employees who violate ethical standards. Conducts his/her personal life in an ethical manner. Has the best interests of employees in mind. Makes fair and balanced decisions.	.21	.55
3. Can be trusted. Discusses business ethics or values with employees.	.48	.57
4. Sets an example of how to do things the right way.	.67	.73
5. Defines success not just by results, but also by the way they are obtained. Asks "what is the right thing to do?" when making decisions.	.53	.77
6. Disciplines employees who violate ethical standards. Conducts his/her personal life in an ethical manner. Has the best interests of employees in mind. Makes fair and balanced decisions.	.58	.80
7. Can be trusted. Discusses business ethics or values with employees.	.57	.53
8. Sets an example of how to do things the right way.	.69	.82
9. Defines success not just by results, but also by the way they are obtained. Asks "what is the right thing to do?" when making decisions.	.70	.73
10. Asks "what is the right thing to do?" when making decisions.	.61	.65

Note: Please refer to Appendix B for full list of item questions. HL-EL = Higher-level ethical leadership, ML-EL = middle-level ethical leadership;

Through Mplus 8 (Muthén & Muthén, 1998-2017), I was able to determine the dimensions of all research variables to ensure that each variable is parcelled accordingly and as suggested by Crede and Harms (2019). Three indicators are then created for each observed variable and high loading item is paired with low loading item. *Table 4.3.* shows the example loading factor matrix of HL and ML ethical leadership. The three highest loading factors for HL ethical leadership (*i.e.*, item 8, 9, and 10) are used as the first three indicators, while the lowest factors (*i.e.*, item 2, 3, and 1) are then paired with the highest item. The sequential step is repeated until every item is assigned to one of the three indicators. The low loading of some items in HL-EL is mainly due to the small sample size of 67 ML Manager, in comparison to 174 line manager.

As for the multidimensional construct, such as work engagement, I used Kishton and Widaman's (1994) approach by using the first-order factor as an indicator to reflect the factor's component. Multidimensional parcelling method was only exercised on the work engagement scale and this is in line with the scale's theoretical foundation that has underlined a three-factor component during its development (Schaufeli et al., 2006). Throughout the data parcelling process, the EFA factor loading is used as a guide to balance the parcelling effect. Parcelling the item into three indicators helped reduce the construct's parameter. This, in turn, allowed better prediction and increased the stability of the factor structures (Little et al., 2002). All item loaded against the cutoff score of .32 (Tabachnick & Fidell, 2019).

Similar data parcelling strategy was also employed by research that has examined CEO ethical leadership, organisational culture, and organisation's ethics program due to small sample size (Eisenbeiss, van Knippenberg, & Fahrbach, 2015), as well as the influence of ethical leadership and moral disengagement through other

ratings (Moore et al., 2019). The data and findings of the research indicated several advantages of parcelling, for example, it made the data more parsimonious with lesser chances for the residual to be correlated and reduce sampling error (Little, Cunningham, Shahar, & Widaman, 2002).

4.6. Multilevel Confirmatory factor analysis (MCFA)

Table 4.4. Comparison of measurement models using two-level multilevel confirmatory factor analyses and chi-square test differences

	SRMR								
	X^2	<i>df</i>	ΔX^2	CFI	TLI	BET	WIT	RMSEA	<i>p</i>
Hypothesised six-factor baseline model	180.84	80	-	.93	.91	.01	.06	.08	<.01
Alternative models									
1. two-factor model	885.06	90	704.22	.48	.38	.01	.13	.22	<.01
2. three-factor model MI, LMVS, LMWE, & LMER combined	714.89	89	534.05	.59	.51	.01	.12	.20	<.01
3. four-factor LVMS, LMWE, & LMER combined	639.07	87	458.23	.64	.55	.01	.11	.19	<.01
4. five-factor model MI & ML-EL combined	330.25	84	149.41	.84	.79	.01	.09	.13	<.01

Note: $N = 174$ (line manager); $N = 67$ (ML-manager). HL-EL = higher-level ethical leadership; ML-EL = middle-level ethical leadership; LMER = line manager ethical leader role perception, LMVS = line manager voice behaviour, and LMWE = line manager work engagement; MI = moral identification. BET = SRMR between, WIT = SRMS within

Table 4.4. provides the comparison of the measurement models using multilevel confirmatory factor analysis (MCFA). Confirmatory factor analysis (CFA) and EFA are based on common factorial modelling and use the same maximum likelihood method. However, EFA is widely recognised as a precursor to running a CFA by yielding a useful heuristic strategy for model specification (Gerbing & Hamilton, 1996). The specification of a CFA is driven strongly by the research's theoretical framework as depicted in *Figure 3.1*. The acceptability of the confirmatory factor measurement model is examined by the degree of best fit which allowed research to underline the analytical framework of the collected data (Byrne, 2010). CFA also allowed the researcher to adjust for measurement error. Because a key assumption of the ordinary least square (OLS) method tends to approach regression on an error-free assumption, the measurement model hence allowed the researcher to estimate the relationship between constructs as reflected by their intercorrelation (Brown, 2014). This is important as the measurement can support evidence on the construct's validity (DeVellis, 2012). Therefore, the hypothesised measurement model and four other alternative models are analysed to demonstrate the structure distinction and its distinction against competing models (Byrne, 2010).

This study conducted a MCFA to determine the model fit indices. This two-level analysis method allowed this study to justify the distinctiveness of the variables measured and the model fit indices while estimating for the discriminant and convergent validity (Brotheridge & Lee, 2003). MCFA is also employed because line manager responses to middle-level manager ethical leadership are not entirely independent, given that line managers are nested in group. Modelled HL ethical leadership, which was completed by middle-level manager was modelled at the between-level, while other constructs (i.e., ML ethical leadership, line manager ethical

leader role perception, voice behaviour work engagement and moral identification) were modelled at the within level. The analysis was also ran using the parcels model to minimise potential estimation issues (Landis, Beal, & Tesluk, 2000). The model was compared with four other models.

The chi-square difference (X^2) and the test of differences across the model's chi-square (ΔX^2) are reported to establish the overall model fit (Hu & Bentler, 1999). X^2 estimate is examined to underline the variance and covariance of the observed variable in the sample. Although an insignificant of X^2 estimate is considered as optimal (Hinkin, 1998), generally, the closer the X^2 estimate is to the degree of freedom (df), the better the model fit (Thacker, Fields, & Tetrick, 1989). This also provided a much reasonable benchmark on the ΔX^2 when combining with other fit indices. There is not a single general agreement about which fit indices would provide the best model estimation, however, and thus most researchers have accepted the root mean square error of approximation (RMSEA), the comparative fit indexes (CFI), the Tucker-Lewis Index (TLI), and the standardised root mean square residual (SRMR) as the standard of fit measurement (Kenny, 2014). Hu and Bentler (1999) argued that sample size below 250 should place greater attention on the CFI and SRMR, as recent research has drawn attention on the RMSEA estimate as a dependent on the degree of freedom and sample size (Kenny, Kaniskan, & McCoach, 2015; McNeish, 2018). Nonetheless, the RMSEA, CFI, TLI, and SRMR of the parcelled data is reported with its respective cut-off score.

The measurement model consisted of six factors, which included ML-managers rated HL ethical leadership (HL-EL), line managers rated ML ethical leadership (ML-EL), moral identification (MI), line manager ethical leader role perception, line manager voice behaviour (LMVS), and line manager work engagement (LMWE). The six-factor

measurement model showed that all items loaded in the loading of their intended factor between (range = .70 to .32), which is considered adequate (DeVellis, 2012; Tabachnick & Fidell, 2019). The measurement model also showed a better fit to the data: $\chi^2(80) = 180.84$, $p < .01$, (root mean square error of approximation [RMSEA] = .08, confirmatory fit index [CFI] = .93, Tucker-Lewis index [TLI] = .91, standardised root mean squared residual between/within [SRMR between] = .01, [SRMR within] = .06. However, as suggested by Hu and Bentler (1999), the sample size below 250 should place greater attention on the CFI and SRMR. In this instance, the CFI of the six-factor model were below the cut-out score of $\geq .95$ (McNeish, 2018). I suspect that this is likely due to the cluster of groups, where up to 17 cluster only have one line manager that responded, as well as fewer number of groups relative to the number of parameters estimated might have contribute to the result. Thus, a less conservative approach was adopted and focuses on the RMSEA which showed an adequate fit of the data (see footnote¹¹ about non-parcelling model fit).

The measurement model was compared with five other alternative models, a two-factor model (all within combined), three-factor model (line manager voice, ethical leader role, work engagement and moral identification combined), four-factor model (line manager voice, ethical leader role, and work engagement combined), and a five-

¹¹ The result of the non-parcelled MCFA model terminated normally in Mplus. However, the result suggested that the model estimates may not be trustworthy due to model non-identification and cautioned due to the fewer number of groups in relation to the number of parameters estimated. This result is very likely due to the relatively small group level sample size. However, when examined using a one-level CFA, the non-parcel data showed a good fit on the six-factor measurement model at [$\chi^2(187) = 1878.04$, $p < .01$, RMSEA = .08, CFI = .72, TLI = .70, SRMR = .17]. I expected a poorer CFI and SRMR estimate due to the parameter estimate and confirmed my above argument about the sample size and its effect on data structure and parameters when running a (M)CFA. Some researchers have caution against running a CFA for data that has a smaller $N \leq 250$ as the goodness of fit indices are sensitive to small sample (see Chen, Curran, Bollen, Kirby, & Paxton, 2008; Kenny et al., 2015). Nevertheless, the analysis through the use of parcelling showed an adequate fit from the RMSEA estimate of the model.

factor model (moral identification and ML-EL combined). The one factor (all combined) model showed a significant worse fit: $X^2(80) = 885.06$, $p < .01$, RMSEA = .2, CFI = .48, TLI = .38, SRMR between = .01, SRMR within = .13. Neither did the five-factor model [$X^2(84) = 330.25$, $p < .01$, RMSEA = .13, CFI = .84, TLI = .79, SRMR between = .01, SRMS within = .09], the four-factor model [$X^2(87) = 639.07$, $p < .01$, RMSEA = .19, CFI = .64, TLI = .55, SRMR between = .01, SRMS within = .11] and three-factor model [$X^2(89) = 714.89$, $p < .01$, RMSEA = .20, CFI = .59, TLI = .51, SRMR between = .01, SRMS within = .12] showed a better fit.

Overall, the MCFA result above provided evidence about the research variables and their distinctiveness along with the hypothesised theoretical framework. I adopted a relaxed cut-off score on the model fit indices due to the increase factor on the parameter (Bagozzi & Edwards, 1998). I further demonstrated the use of parcelling and the theoretical as well as methodological grounding of such method to address the concern about non-normality on small sample data is addressed (Rigdon et al., 2019b). Methodologists have attempted to present an alternative correction model for predictors with smaller sample size (see Yuan, Yang, & Jiang, 2017). However, these models tend to have a correction that differs the value concerning the carrying out test statistic. As an example, Herzog and Boomsma (2009) suggested that the N to *df* ratio could only be applied to a larger model, while McNeish (2018) argued that it is more appropriate to rely on the theoretical assumption to determine the appropriate model fit measure. Because conducting the test on a smaller sample model is contagious to many assumptions, hence poorly justified model can be perceived by reviewers as tinkering with the model if methods are conducted without proper underpinning.

The overall analysis is conducted using the observed component of the variables. While it would be methodologically possible for the researcher to increase

the H1 iterations through Mplus to obtain a better the model fit (Muthén & Muthén, 2002), the result will not provide a meaningful explanation about the model fit indices because the model parameter estimate on the first-order derivative will not be trustworthy. Therefore, I acknowledged that the number of the sample size of 67 ML-manager and 174 line managers' data has restricted the fitness estimate.

4.7. Analysis of hypothesis one, two, three, and four: The direct effect of HL and ML ethical leadership

As outlined in the previous chapter, the hypotheses are tested using Mplus. Running multilevel path analysis with Mplus provided the best estimate and standard error with a much accurate Type 1 error rate than other non-hierarchical methods. Broadly speaking, the software package allowed a better prediction to deal with a non-independent rating. Because ML ethical leadership was rated by the line manager, while HL ethical leadership were rated by the ML-managers, the software also allowed intercepts and slope to vary randomly across the cluster (Preacher et al., 2010). In this regard, multilevel path analysis is also the preferred method because it can accommodate the cross-level nature of this research which is detrimental to the trickle-down model (Wo et al., 2018). Multilevel path modelling is also capable of observing variance at both within and between level and helps to understand the flow of ethical value across the organisation (Muthén & Asparouhov, 2009). Moreover, multilevel path analysis allowed the construct to be modelled at two different levels (between versus within) where random slope can be intercepted. In other words, a relationship that is embedded in a complex model can be tested simultaneously through different level of analysis (Byrne, 2013; Preacher et al., 2016). This form of analysis is very relevant due to the nature of this research.

The analysis will control for company membership, the line manager's perceived status and power distance. Although gender and tenure were cited as a control, the decision to drop both variables as control is supported by preliminary analysis findings (see *Table 4.1.*) that did not find a significant between line manager gender and organisation tenure. Some methodologists have provided a discussion on using control variables to address endogeneity concerns (Antonakis, Bendahan, Jacquart, & Lalive, 2014). However, I will take the approach Bernerth et al. (2017), arguing that "less is more", and decided to omit non-significant control is methodologically justified due to the complex methods and sample to avoid variance losses that might affect the analysis outcome.

To examine the first four hypothesis, categorised by the direct effect of HL and ML ethical leadership. Both constructs are arranged at the between level, while the control variables (*i.e.*, company, line manager perceived status, and power distance) are arranged at the within-level. This configuration also assume that ML ethical leadership has zero within variances. However, due to the nested nature of the study data (*i.e.*, line manager respondents nested in groups). The appropriateness of aggregating line manager reported data about their ML manager's ethical leadership from individual level to team level was justified (see *Section 4.4.*). Specifically, the within-group interrater agreement $rwg(j)$ values for ML ethical leadership were .90 exceeding the cut off value of .70 (Chen, Mathieu, & Bliese, 2004). The ICC values further of ML ethical leadership at $ICC(1) = .26$, and $ICC(2) = .48$, fell into an acceptable range for aggregation (Bliese, 2000; James, 1982). Therefore, supporting data aggregation of ethical leadership and leader ethical voice to the between level.

The analysis confirmed our preliminary analysis prediction that HL ethical leadership do not predict line manager voice behaviour at ($\gamma = .12$, $SE = .08$, $t = 1.41$,

$p > .10$) and work engagement at ($\gamma = -.02$, $SE = .09$, $t = -.21$, $p > .10$). However, ML ethical leadership was a significant predictor of both line manager voice behaviour at ($\gamma = .37$, $SE = .07$, $t = 5.04$, $p < .00$) and work engagement at ($\gamma = .18$, $SE = .08$, $t = 2.29$, $p < .05$). The findings thus allowed me to accept the second and fourth hypothesis and conclude that ML ethical leadership has a direct effect on the line managers' voice behaviour and their work engagement.

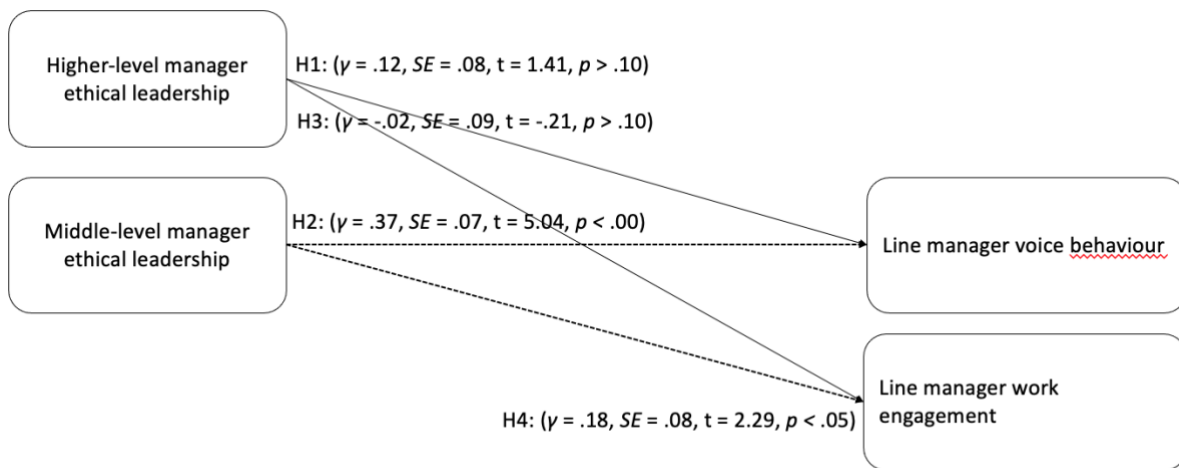


Figure 4.1. Analysis of hypothesis one, two, three, and four: The direct effect of HL and ML ethical leadership

Furthermore, I investigate the effect on the dimensions of work engagement, which are (H3a/H4a; vigor, H3b/H4b; dedication and H3c/H4c; absorption). ML ethical leadership was shown to only significantly affect vigour ($\gamma = .20$, $SE = .10$, $t = 1.94$, $p < .05$) and dedication ($\gamma = .28$, $SE = .08$, $t = 3.30$, $p < .00$), while absorption ($\gamma = .03$, $SE = .11$, $t = .31$, $p > .10$) was not significant (see Appendix C, table 1, p. 279). Dedication also showed the strongest relationship across three dimensions. In line with Salanova et al (2003) argument which suggested that absorption would play a different role in comparison to vigour and dedication. HL ethical leadership was not

shown to affect either dimension of work engagement¹². Overall, the analysis failed to accept the hypothesis on the direct effect between HL ethical leadership on the line managers' voice behaviour and their work engagement.

4.8. Analysis of hypothesis five: The trickle-down model

Hypothesis five depicts the trickle-down model, focusing on the indirect effect of HL ethical leadership towards line managers (H5a) voice behaviour, and (H5b) work engagement via ML ethical leadership. Although we did not find any significance in the direct effect between HL ethical leadership and line manager's voice behaviour and their work engagement (see *Table 4.3.*), the path is still coded into the analysis model to address the previous theoretical assumption that ethical values will "trickle-down" from the very top of the organisation through affecting line manager behaviour. Multilevel path analysis is used to examine the mediating influence of ML ethical leadership. For the purpose of this analysis, line manager ethical leader role, line manager voice and line manager work engagement, as well as the control variables (i.e., organisational membership, line manager status, and power orientation) are coded at the within level, while HL ethical leadership is coded at the between level. ML ethical leadership is group mean centred and arranged at both between and within level. This allowed me to analyse the model through a 2-1-1-1 design. The mediation path (a1b1 and a1b2 and totalAB) is computed under model constraint to specify the indirect pathway (Muthén & Muthén, 1998-2017).

¹² The work engagement scale was parcelled using a multidimensional parcelling method to highlight the scale's three-factor (see Section 4.5; Kishton & Widaman 1994; Schaufeli et al., 2006). The items that represented vigor, dedication, and absorption are parcelled according to its respective dimension.

Table 4.5.1 Analysis of HL and ML ethical leadership and the trickle-down model on line manager voice behaviour (H1, H2, H5a)

Direct Effect	Voice Behaviour			
	Est	SE	Est	SE
Intercept	Est	SE	Est	SE
Company	-	-	4.48**	.19
Perceived status	-.35**	.09	-.32**	.07
Power distance	.07*	.03	.06*	.02
HL ethical leadership	-.08	.06	-.01	.05
ML ethical leadership			.12	.08
via ML ethical leadership			.36**	.07
			$R^2 = .03$	

Table 4.5.2 Analysis of HL and ML ethical leadership and the trickle-down model on line manager work engagement (H3, H4, H5b)

Direct Effect	Work Engagement			
	Est	SE	Est	SE
Intercept	-	-	3.42**	.22
Company	.06	.10	.07	.09
Perceived status	.10*	.04	.09	.03*
Power distance	.02	.06	.03	.06
HL ethical leadership			-.02	.09
ML ethical leadership			.18*	.08
via ML ethical leadership			-.01	.02
			$R^2 = .01$	

The analysis confirmed preliminary prediction that HL ethical leadership does not “trickle-down” via ML ethical leadership to predict line manager’s voice behaviour at ($\gamma = .12$, $SE = .09$, $t = 1.27$, $p > .10$) and work engagement at ($\gamma = -.02$, $SE = .10$, $t = -.22$, $p > .10$). The findings also confirmed the preliminary assumption that HL ethical leadership would not bypass ML ethical leadership and affect line manager voice behaviour and work engagement. Overall, the findings did not support hypothesis five. In this regard, HL ethical leadership will not “trickle-down” via ML ethical leadership

and affect line managers voice behaviour. *Table 4.5.3* display the direct, partial, and full mediation.

Table 4.5.3. The direct, partial and full mediation model

Structural Model	X ² (df)	CFI	TLI	RMSEA	AIC	BIC	SRMR	
							WIT	BET
Model 0: Direct effect	1.07(4)*	.99	.99	.01	1987.51	2074.96	.010	.009
Model 1: Full mediation	5.01(5)*	.99	.99	.01	1987.22	2072.51	.012	.083
Model 2: Partial mediation	1.29(3)*	.98	.99	.01	1988.51	2080.12	.010	.009

Note: $N=174$ (line manager), $N=67$ (ML-manager). AIC = Akaike information criterion; BIC = Bayesian information criterion; HL-EL = Higher-level ethical leadership; ML-EL = Middle-level ethical leadership.

As a post-hoc analysis, I examined the influence of the trickle-down model on the three dimensions of work engagement (see *Appendix C, table 1, p. 279*). In this regard, the mediation was not significant given the insignificant relationship between HL and ML ethical leadership. Similarly, the analysis found that ML ethical leadership was only significant between vigour ($\gamma = .20$, $SE = .10$, $t = 1.94$, $p < .05$) and dedication ($\gamma = .28$, $SE = .09$, $t = 3.30$, $p < .00$), but not absorption ($\gamma = .03$, $SE = .11$, $t = .31$, $p > .10$). Dedication remained the strongest relationship across three dimensions.

4.9. Analysis of hypothesis six, seven, eight, and nine: Line manager ethical role as the mediating variable

The previous hypotheses (*i.e.* H1-H4, H5a/b) have failed to find supporting evidence that seeing HL as ethical leadership will influence ML ethical leadership behaviour, as well as, HL ethical leadership will directly affect line manager's voice behaviour and work engagement. The findings confirmed the preliminary analysis finding that HL may not contribute substantial variances on the model. As such, hypothesis nine (H9a/b) is not supported on the basis that HL ethical leadership will

not have a direct on ML ethical leadership or indirect effect towards line manager voice behaviour and work engagement. However, hypothesis eight (H8a/b) which predicted that line managers ethical leader role will mediate HL ethical leadership is examined. The current analysis will adopt a 2-1-1 design to examine HL and ML ethical leadership influence on the line manager's ethical leader role and its mediating effect. The modelling is very similar to the previous analysis, where the mediation path is computed under model constraint to specific the indirect pathway (Muthén & Muthén, 1998-2017).

Table 4.6.1. and 4.6.2. below displays the result of the analysis. The control variables are regressed at the within levels. In this analysis, path 'a1' is the relationship between HL and ML ethical leadership. Path 'b1' is defined as the outcome between line manager's ethical leader role and line manager's voice, while path 'b2' is defined as the outcome between line manager ethical leader role and work engagement. The path 'a2' is the relationship between ML ethical leadership and line manager ethical leader role while Path c1 and c2 is the bypass relationship between ML ethical leadership and line manager's voice and work engagement respectively. The "cluster" command in Mplus allowed me to specify the clustering of classification in data analysis and take into consideration the non-independence effect (Mackinnon, Lockwood, & Williams, 2004). The clustering specification also offers a much more accurate estimate and significance through controlling for non-independence effect at the between level (Muthén & Muthén, 1998-2017).

Table 4.6.1 line-manager perception of ethical leader role on voice behaviour (H6a, H7a, H8a) and comparison between alternative multilevel path structure models

Control	LMER			Voice Behaviour		
	Path	Est	SE	Path	Est	SE
Intercept		4.19*	.03		4.46*	.17
Company	a	-.12*	.07		-.26*	.15
Perceived status		.06*	.03	b1	.04	.02
Power distance		-.06	.05		.01	.05
		$R^2 = .01$			$R^2 = .02$	

Multilevel structural equation path coefficients					
Direct effect	Est	SE	p-value	CI (LO, HI)	
HL ethical leadership → LMER	.06	.07	.42	(-.05, .24)	
ML ethical leadership → LMER	.42	.08	.00	(.27, .69)	
LMER → line manager voice behaviour	.55	.15	.00	(.18, .90)	
Indirect effect	Est	SE	p-value	sig	
HL ethical leadership → LMER → voice behaviour	.03	.04	.44	(-.04, .14)	
ML ethical leadership → LMER → voice behaviour	.23	.06	.00	(.03, .40)	

Model Fit Indices	X ² (df)	CFI	TLI	RMSEA	AIC	BIC	SRMR	
							WIT	BET
Voice Behaviour								
Model 0: Direct effect	1.07(4)*	.99	.99	.01	1987.51	2074.96	.010	.009
Model 1: Partial mediation	15.11(7)*	.95	.88	.08	1810.39	1889.36	.068	.153
Model 2: Full mediation	12.18(6)*	.96	.90	.07	1809.46	1891.59	.070	.147

Note: $N = 174$ (line manager); $N = 67$ (ML leader). Line manager gender, organisation tenure, status and power distance are controlled at the within level while analysis is conducted at the between level. The indirect effect was reported using the estimate obtained from the analysis. The lower and upper confidence interval are listed below. LMER = line manager ethical leader role perception.

** $p < .01$ level (2-tailed); * $p < .05$ level (2-tailed).

Table 4.6.2 line-manager perception of ethical leader role on work engagement (H6b, H7b, H8b) and comparison between alternative multilevel path structure models.

Control	LMER			Work Engagement				
	Path	Est	SE	Path	Est	SE		
Intercept		4.19*	.03		3.49*	.21		
Company	a	-.12*	.07		.10	.11		
Perceived status		.06*	.03		.08*	.03		
Power distance		-.06	.05	b2	.04	.06		
		$R^2 = .01$			$R^2 = .03$			
Multilevel structural equation path coefficients								
Direct effect		Est	SE	p-value	CI (LO, HI)			
HL ethical leadership → LMER		.06	.07	.42	(-.05, .24)			
ML ethical leadership → LMER		.42	.08	.00	(.27, .69)			
LMER → line manager work engagement		.22	.19	.10	(-.21, .77)			
Indirect effect		Est	SE	p-value	sig			
HL ethical leadership → LMER → work engagement		.01	.02	.48	(-.03, .08)			
ML ethical leadership → LMER → work engagement		.09	.07	.21	(-.07, .23)			
Model Fit Indices	X²(df)	CFI	TLI	RMSEA	AIC	BIC	SRMR	
							WIT	BET
Work Engagement								
Model 0: Direct effect	85.29(10)*	.07	.01	.20	1955.81	2025.31	.07	.00
Model 1: Partial mediation	36.29(10)*	.67	.48	.12	1922.17	1991.67	.06	.31
Model 2: Full mediation	53.76(6)*	.41	.00	.21	1922.92	2005.05	.06	.13

Note: $N = 174$ (line manager); $N = 67$ (ML leader). Line manager gender, organisation tenure, status and power distance are controlled at the within level while analysis is conducted at the between level. The indirect effect was reported using the estimate obtained from the analysis. The lower and upper confidence interval are listed below. LMER = line manager ethical leader role perception.

** $p < .01$ level (2-tailed); * $p < .05$ level (2-tailed).

The result shows that line manager's ethical leader role will positively predict line manager's voice behaviour at ($\gamma = .55$, $SE = .14$, $t = 3.70$, $p < .00$). However, line manager's ethical leader role was not found to predict work engagement at ($\gamma = .22$,

$SE = .18, t = 1.16, p < .10$)¹³. This suggested that having a define ethical leader role influence willingness to voice, but it does not explain work engagement. Therefore, the analysis only found support for hypothesis 6a but not for 6b. ML ethical leadership was shown to positively predict line manager's ethical leader role at ($\gamma = .41, SE = .08, t = 5.02, p < .00$), and the findings confirmed the preliminary analysis and agreed with previous findings that HL ethical leadership do not predict line manager's ethical leader role at ($\gamma = .06, SE = .07, t = .80, p > .10$). While line manager's ethical leader role was found to mediate the positive relationship between ML ethical leadership and line manager's voice ($\gamma = .23, SE = .06, t = 3.61, p < .01$), the analysis did not found support on the indirect effect between ML ethical leadership on work engagement via line manager's ethical leader role ($\gamma = .09, SE = .07, t = 1.25, p > .10$). This is despite after adopted the work engagement scale with only vigour and dedication that was found to be significant in the previous analysis. As such, hypothesis 7a is supported, while 7b is not supported.

Going forward, the analysis did not find any support for hypothesis 8a and 8b. Hence, the analysis did not support the hypothesis that HL ethical leadership will influence line managers voice behaviour and work engagement via line managers ethical leader role. Accordingly, Schaubroeck et al (2012) use of a multilevel military personnel sample ($N = 2572$) also did not find any correlation between the company (equivalent to higher-level) and squad (equivalent to line manager) ethical leader behaviour. However, the authors were able to find some evidence that company ethical leadership will influence both platoon (equivalent to middle-level) and squad levels ethical culture through piecewise modelling. It is also worthy to note that ML

¹³ Supplementary analysis of the work engagement scale found that line manager ethical leader role marginally predicted line manager dedication at ($\gamma = .36, SE = .19, t = 1.82, p < .058$), but not vigour at ($\gamma = .30, SE = .20, t = 1.30, p > .10$). See Appendix C, table 2, p. 280.

ethical leadership will affect work engagement directly, but it not indirectly through a line manager's ethical role.

4.10. The moderating influence of line manager moral identification through bootstrapping (H10, H10b)

Bootstrapping method is used for the current analysis because concern about nonparametric was highlighted earlier on in the chapter (see *Section 4.3*). The long-standing interest of nonparametric statistic in social science pointed to bootstrapping method as an alternative to normal-theory test (Preacher & Hayes, 2004). Accordingly, Preacher, Rucker, and Hayes (2007) suggested using bootstrapping to assess moderated mediation model to generate confidence interval for the conditional indirect effect. This allowed the null hypothesis of the conditional indirect effect to be rejected if the confidence interval does not contain a zero. Therefore, the decision to adopt a bootstrapping method to observe the boundary conditions are two folded.

First, it allowed this research to draw an inference using small sample size about the population parameter. This analogy of the population from which the sample was drawn, circles around the idea that characteristics of the population can be resampled through realistic assumption to generate an empirical estimate of the sampling distribution (Mooney & Duval, 1993). Second, the bootstrapping method is a valid predictor under minimal conditions, whereby the sampling distribution helps predict the myriad of relationship through correcting the bias estimate to obtain the most accurate confidence intervals. This problem is especially relevant for multilevel analysis which often assumed the variables are measured without errors in practice (Cheung & Lau, 2008).

The analysis model is ran using Mplus bootstrapping method designed to test mediation and moderation simultaneously. In particular, the model was examined using the Stride et al.'s (2015) model-based off Hayes's (2017) Macros PROCESS. In doing so, the analysis adopted the authors' recommendation by standardising the variables to prevent a convergence failure. The mediating and moderating variables were then mean centred. As such, both moderator and mediator means were set at 0. ML ethical leadership was also group mean centred before running the analysis. The model examines both the direct and indirect relationship of ML ethical leadership towards line manager voice behaviour and their work engagement via line managers ethical leader role, and if moral identification improved the outcome. Furthermore, the analysis controls for company, perceived status, and power distance. In reporting the outcome, company as a control was significant at ($\gamma = -.26$, $SE = .08$, $t = -3.26$, $p < .01$) on voice and perceived status at ($\gamma = .06$, $SE = .02$, $t = 2.96$, $p < .05$). However, neither of the control impacted the pattern of relationship or the significant findings when they were excluded. Hence, for clarity and parsimony (Carlson & Wu, 2012), control variables were omitted from the table. Nonetheless, the control variables are mentioned in *Table 4.5.* and *Table 4.6.* above.

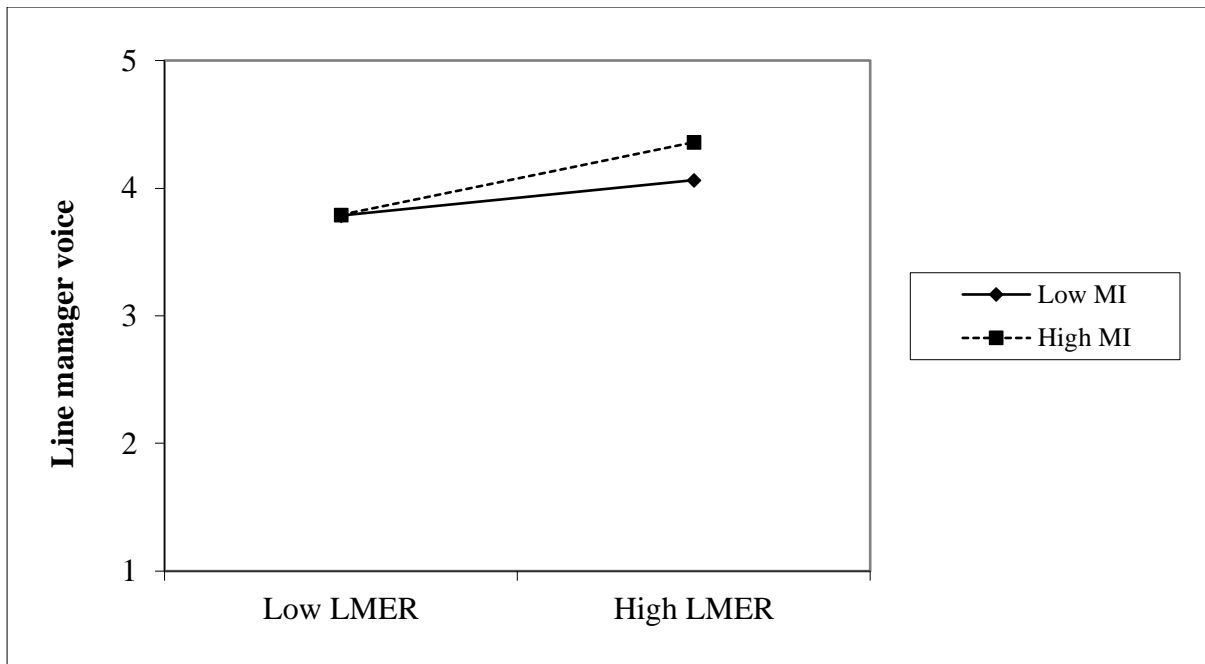
Table 4.7. and *Table 4.8.* below displays the result of the analysis for both line manager voice behaviour and work engagement respectively. The sample was estimated using a 10000 bootstrap. Aligning with the study's hypothesis nine, moral identification was shown to moderate line manager's ethical leader role towards line managers voice across all conditions (i.e., high, low, average). However, the relationship was stronger when moral identification and ethical leader role perception are both high versus low. Interestingly, when moral identification is low, while line manager ethical leader role is high, the relationship voice behaviour is stronger, in

comparison to when moral identification is high and ethical leader role is low (see *Graph 4.1*). This may suggest that line manager will continue to voice on behalf of the group when they have high degree of ethical leader role, regardless of if they're moral identification is low. Similarly, the indirect relationship showed that line managers ethical leader role will mediate the relationship between ML ethical leadership and voice behaviour, and this relationship is stronger when moral identification is high rather than low. The findings also showed that moral identification will directly and positively predict the line manager voice behaviour.

Table 4.7. The regression coefficient and conditional indirect effect estimates between ML ethical leadership and line manager voice behaviour, moderated by line-manager moral identification (hypothesis 10a)

Independent variables	LMER					Voice Behaviour (LMVS)				
	Path	Est	SE	LLCI	ULCI	Path	Est	SE	LLCI	ULCI
Intercept		-.01	.16	-.28	.24		4.64*	.19	4.33	4.95
ML ethical leadership (ML-EL)	<i>a</i>	.42**	.08	.30	.55	<i>c1</i>	.10	.08	-.03	.24
Moral identification (MI)							.14*	.09	.00	.31
LMER						<i>b1</i>	.47**	.11	.28	.67
LMER X MI							.30*	.08	.17	.45
		$R^2 = .16$					$R^2 = .19$			
Moderator	Conditional effect LMER X MI					indirect effect ML-EL on LMVS via LMER				
Moral identification										
- 1 SD		.441**	.142	.206	.671		.185*	.066	.092	.311
Mean		.478**	.118	.286	.671		.200**	.06	.121	.320
+ 1 SD		.514**	.135	.282	.719		.215**	.067	.118	.341

Note: $N = 174$ (lower-level supervisor rating); $N = 67$ (ML-manager rating). LMER = line manager ethical leader role perception; LLCI = Lower limit confident interval; ULCI = Upper limit confident interval. The table present a bias-corrected and accelerated 95% confidence intervals (CIs) calculated using 10,000 bootstrap samples. Significant conditions at ** $p < .01$ level and * $p < .05$ level (2-tailed) are in bold



Graph 4.1. Line manager’s moral identification and their voice behaviour

However, moral identification in general did not improve the relationship in their work engagement. Therefore, the findings only found support for hypothesis 10a, but not for 10b. It is also important to note that line managers moral identification was found to positively predicted line managers work engagement in comparison to their voice behaviour. It is perhaps that line managers are more likely to engage when they morally identified with the organisational value, bypassing the need of ethical leader role. A post-hoc analysis was performed on the model to understand the influence of moral identification on the three dimensions of work engagement. However, I did not find moral identification to enhance the direct relationship between line-manager perception of ethical leader role and vigour, dedication, and absorption. Neither did moral identification directly predicted any of the three dimensions (*see Appendix D for post-hoc output, p. 324-332*). Overall, *Table 5.1.* will summarise the hypotheses testing results in the following chapter before elaborating its relationship in the discussion.

Table 4.8. The regression coefficient and conditional indirect effect estimates between ML ethical leadership and line manager work engagement, moderated by line-manager moral identification (Hypothesis 10b)

Independent variables	LMER					Work Engagement (LMWE)				
	Path	Est	SE	LLCI	ULCI	Path	Est	SE	LLCI	ULCI
Constant		-0.01	.16	-.28	.24		3.45**	.22	3.09	3.84
ML ethical leadership (ML-EL)	<i>a</i>	.42**	.08	.30	.55	<i>c2</i>	.05	.09	-.09	.21
Moral identification (MI)							.33**	.10	.16	.48
LMER						<i>b2</i>	.05	.10	-.12	.23
LMER X MI							-.01	.19	-.24	.37
		$R^2 = .26$					$R^2 = .17$			
Moderator	Conditional effect LMER X MI					indirect effect ML-EL on LMWE via LMER				
Moral identification										
- 1 SD		.054	.158	-.223	.271		.023	.067	-.090	.122
Mean		.053	.108	-.120	.231		.022	.047	-.049	.103
+ 1 SD		.052	.144	-.190	.283		.022	.061	-.082	.120

Note: $N = 174$ (lower-level supervisor rating); $N = 67$ (ML-manager rating). LMER = line manager ethical leader role perception; LLCI = Lower limit confident interval; ULCI = Upper limit confident interval. The table present a bias-corrected and accelerated 95% confidence intervals (CIs) calculated using 10,000 bootstrap samples. Significant conditions at ** $p < .01$ level and * $p < .05$ level (2-tailed) are in bold

4.11. Chapter discussion, strength and limitations

As a summary, the results underlined the antecedents of the line manager's work behaviour, specifically, attention is paid to understand the role of higher-level leader and middle-level manager ethical leadership and the mechanism that predicted the line manager's voice behaviour and work engagement. In appropriating two-levels of management data from two offices of a large Malaysian multinational, the result suggested that middle-level manager's ethical leader matters more than higher-level ethical leaders when it comes to providing line managers with a voice and influencing their work engagement. However, the findings on the influence of middle-level manager ethical leadership and line managers voice and work engagement via their

ethical leader role are mixed. The result thus showed that line managers ethical leader role will mediate the relationship between middle-level ethical leadership and line manager's voice behaviour, but not work engagement.

The findings further suggested that line managers moral identification will accentuate the relationship between their ethical leader role and voice behaviour. An increase in moral identification hence allowed line manager to see the organisation as an ethical institution that supports their extra-role behaviour (May et al., 2015). Moral identification was also not shown to moderate the relationship between work engagement. Therefore, the result only found support that line manager's moral identification will directly predict their work engagement but does not moderate the relationship between their ethical leader role and work engagement.

Broadly speaking, the findings in DeltaCo provided an understanding of the myriads of condition that affected line managers willingness to voice. The results extended previous research and aligned with calls to understand how line managers will develop an understanding of their ethical leader role (see Kim & Peng, 2020). Granting that line managers will steer the strategy of an organisation, most research up to this point has mainly illuminated their ethical leadership influence on a wide variety of positive organisational behaviours (Hoch et al., 2016; Ng & Feldman, 2015). This has limited our knowledge about their development, particularly, why they would take on an ethical leader role. Furthermore, this study took a positive note about the antecedent of line manager voice behaviour and their work engagement. It also specified the condition of line manager ethical leader role through a role theory perspective. Thus, the following chapter will provide the discussion to explain the relationship through the aforementioned theoretical position.

CHAPTER 5 – DISCUSSION AND CONCLUSION

5.0. Chapter summary

This chapter provides a theoretical discussion regarding the findings presented in Chapter 4. The chapter will underline the theoretical and empirical implications of this study and supplement the discussion with practical implications before underlining the study's strengths and limitations and will conclude with an overall summary and conclusion of the study. First, the chapter will begin with a summary of the study findings, before addressing the trickle-down framework and the role of higher-level and middle-level ethical leaders. A role theory perspective is then discussed to explain why middle-level managers' ethical leadership will promote lower-level line manager voice behaviour and work engagement. Discussion about the role of lower-level line manager's moral identification as a new boundary condition is then presented, before providing a discussion about the generalisability of the role theory and the trickle-down model in the Malaysian multinational set-up.

5.1. Summary of study findings

Table 5.1. Summary of this study findings

<i>Hypothesis</i>	<i>Direct effect</i>	Supported
H1	HL Ethical leadership → LM Voice behaviour	NO
H2	ML Ethical leadership → LM Voice behaviour	YES
H3	HL Ethical leadership → LM Work engagement	NO
H4	ML Ethical leadership → LM Work engagement	YES
H6a	LMER → LM Voice behaviour	YES
H6b	LMER → LM Work engagement	NO

Indirect Effect		Supported
H5a	Trickle-down model on LM voice behaviour	NO
H5b	Trickle-down model on LM work engagement	NO
H7a	ML Ethical leadership → LMER → LM Voice behaviour	YES
H7b	HL Ethical leadership → LMER → LM Voice behaviour	NO
H8a	HL Ethical leadership → LMER → LM Work engagement	NO
H8b	ML Ethical leadership → LMER → LM Work engagement	NO
H9a	HL ethical leadership → ML Ethical leadership → LMER → LM Voice behaviour (Serial Mediation)	NO
H9b	HL ethical leadership → ML Ethical leadership → LMER → LM Work engagement (Serial Mediation)	NO
Moderating effect		
H10a	ML Ethical leadership → LMER x MI → LM Voice behaviour	YES
H10b	ML Ethical leadership → LMER x MI → LM Work engagement	NO

Note: HL = Higher-level; ML = Middle-level; LM = Line Manager; LMER = Line Manager Ethical Leader Role; MI = Line Manager Moral identification.

5.2. Theoretical implication of higher-level and middle-level ethical leadership

This study described and tested how ethical influence trickle-down across the organisational hierarchy. The focus on understanding the role of higher-level and middle-level ethical leadership and their influence towards line manager's voice behaviour and work engagement through a trickle-down model aims to explain how line managers ethical behaviour at the lower-level is developed. Leader high up the management level tends to embed their expectation into the fabric of an organisation to influence lower-level line manager (Schaubroeck et al., 2012; Schein, 1985; 2010). The current study aims to replicate the trickle-down model in a new setting by focusing on the role of higher-level (or top management) ethical leadership as depicted by seminal ethical leadership theory (Treviño et al., 2003; 2000). This study hence conducted systematic and rigorous testing of the trickle-down model to provide

knowledge about the cascading effect, as well as the role of higher-level and middle-level ethical leadership.

This study differentiated itself from other research that has mainly focused on the dyadic relationship between bottom-line and line manager ethical leadership when examining this trickle-down model. The present study empirically replicates and tests the influence of higher-level ethical leadership, connecting its perspective with the wider organisational behaviour. However, the results did not find a support that middle-level manager will develop ethical leadership behaviour from higher-level ethical leadership, moreover, cascading the effect of ethical leadership value from the very top. Further analysis through a role mechanism also did not find support that higher-level ethical leadership will influence the line manager ethical leader role. Therefore, the findings of this cross-level interaction in a multinational organisation are critical for understanding complex ethical system and provide a holistic view about proximal and distance ethical leadership that will impact lower-level line manager behaviour pertaining ethics. Nonetheless, this study contributes to several theoretical implications for ethical leadership up the hierarchy as well as the trickle-down model.

First, the current study builds on past research arguments (see Mayer et al., 2009) that ethical leadership value trickle-down from the very top of organisations and develop lower-level ethical leader behaviour (Wo et al., 2018). In this current study model, middle-level manager is depicted as the transmitter between higher-level and frontline manager. Other trickle-down research, for example, Byun et al (2018), have evaluated departmental ethical leadership influence on team ethical leadership and found departmental leadership to indirectly influence social loafing and task performance via team leader. Accordingly, this current study contributes to past trickle-down research by extending the testing of the model to higher-level leadership which

espoused three management levels to explain its relationship with favourable outcomes like promoting line manager voice behaviour and work engagement.

The role of higher-level ethical leadership has often been left out in research despite its role-modelling claims. The current study findings showed that higher-level ethical leadership do not always directly influence line manager voice behaviour (Hypothesis 1) and work engagement (Hypothesis 3a/b/c) and indirectly via middle-level manager ethical leadership (Hypothesis 5). At the same time, middle-level manager ethical leadership appears to exert the most influence on frontline manager voice behaviour (Hypothesis 2) and work engagement (Hypothesis 4). Further analysis also found that middle-level manager ethical leadership will strongly influence line manager vigour (H4a) and dedication (H4b), but not absorption (H4c). For this reason, the finding suggested that social learning and role modelling after leader requires proximation (Weaver et al., 2005) and supported Katz and Kahn (1966) argument which stated that higher-level leadership are often distant. This can made it difficult for lower-level employees to develop an emotional tie. Besides, higher-level leaders may not always be available to supervise lower-level management. It is thus difficult for higher-level leaders to influence both middle-level and lower-level management behaviour.

Katz and Kahn (1966) also argued that the view of higher-level leaders is somewhat “simplified” most of the time (p. 318). Because higher-level ethical leadership can be rather difficult to grasp as they are not always available and visible in the organisation (Brown & Treviño, 2014). Therefore, although seminal ethical leadership theory has argued that ethical value must come from the very top of an organisation, which make their behaviour a representation of the entire organisation (Treviño et al., 2000). The effects of higher-level ethical leadership may be embedded

through other mechanisms, such as the overall organisation's ethical culture (see Schaubroeck et al., 2012). Weaver, Treviño and Cochran (1999) have also suggested that the view of ethical leadership by higher-level leaders may be very different from those perceived by lower-level employees and those outside of the board room. Their argument on the disparity about ethical perception was later supported in follow-up research, showing that leaders up the hierarchy tend to have a rosier view about the organisational ethics in comparison to those down below the organisation (Treviño, Weaver, & Brown, 2008).

However, research that proliferated the trickle-down model through a social learning perspective often based on the assumption that seeing higher-level management as an ethical leader will affect the willingness to develop ethical leadership. Many respondents in the survey have rated their higher-level leadership as an ethical leader ($M = 4.25$; $SD = .49$, Section 4.1, p. 117), but the result found no support for the notion that seeing higher-level as an ethical leader will affect middle-level manager ethical leadership and line manager voice behaviour or work engagement. In addition to this non-significant finding, the preliminary analysis showed a negative correlation between higher-level ethical leadership and middle-level manager ethical leadership (see *Table 4.1*). The insignificant findings of the aforementioned hypotheses may very well suggest that developing ethical leadership behaviour from higher-level ethical leadership is not an isolated phenomenon. Instead, the physical environment where both middle-level manager and lower-level line manager operate is important for them to observe the behaviour of their direct report ethical behaviour. For example, spatial distance research suggest that contrasting behaviour can emerge down the organisation depending on the relational-independent self-construal (van Houwelingen, van Dijke, & De Cremer, 2017).

Although most trickle-down effect research implies that higher-level behaviour will be assimilated at the lower levels, for example, abusive supervisor trickle (see Aryee et al., 2007; Mawritz et al., 2012). Research that focuses on the role of higher-level leadership have often connected their behaviour with the outcome at the organisational level. As an example, predicting the organisation's performance, organisational ethical culture, and optimising top management team members (De Hoogh, & Den Hartog, 2008; Eisenbeiss et al., 2015; Shin et al., 2015; Wang, Feng, & Lawton, 2017). According to De Hoogh and Den Hartog (2008), ethical leadership of chief executives is positively related to top management team and optimisation among the top executive. Building on this theoretical perspective in the ethical leadership literature, it is presumed that higher-level ethical leadership would only affect behaviour at their respective level and infrequently influence those outside of this enclave. Although a core challenge of emerging managerial agenda is related to the ethical initiative, for example, if ethical requirements are met, higher-level leaders may only actively pursue ethical agenda only when the ethical initiative does not impede their operation (Shin et al., 2015). Findings of the current study imply that manager further down the management may not always develop similar behaviour from top level leader through social learning. Therefore, more scholarly attention is needed to understand the organisational processes, such as ethical climate (see Demirtas & Akdogan, 2015; Kim & Vandenberghe, 2020; Shin, 2012) or the conditions that would shape lower-level manager responses to higher-level management behaviour.

Earlier research has found ethical officer that directly reports to higher-level management to be rarely involved in decision making. Often, these officers can only assume that their ethical message will be heard by lower-level employees (Treviño et

al., 2003). Given the cynicism of ethics in the workplace, ethical behaviour, in reality, may not always be institutionalised by the decision making the process of higher-level leadership. In other words, higher-level leadership can adopt a loose ethical practice despite being conscious of the ethical demands of the organisation (De Cremer & Moore, 2020). It is also possible that middle-level manager may resort to alternative support when developing ethical leadership behaviour, for example, co-worker's ethical behaviour was found to support the willingness to report unethical conduct in an organisation (Mayer et al., 2013). In addition to co-worker's ethical behaviour, Brown and Treviño (2014) found that managers are more likely to be seen as an ethical leader when they have a career role model. Nevertheless, the counter-intuitive finding of this study shows that ethics is not always a top-down phenomenon in a large multinational organisation, and such could be further explained by argument in system theory.

Furthermore, research that has examined the upper echelon approach of the corporate narrative has found higher-level leader capable of deterring aggressive reporting practices in an organisation, when communication is comprehensible and transparent (Patelli & Pdrini, 2015). However, the management influence of higher-level leadership may only be confined through regulating best practices based on the intended moral standards, rather than influencing organisational behaviour at the lower level through role modelling, as well as punishing non-compliance behaviour (DeChurch et al., 2010). This is also not to suggest that higher-level ethical leader does not matter in a large multinational organisation. Instead, a higher-level ethical leader is a symbol of an organisation and their ethical identity can strengthen the ethical climate and culture to influence internally driven extra-role behaviour (Shin, 2012; Shin et al., 2015). Nevertheless, higher-level ethical leaders are important when

an organisation aims to set the ethical tone on top and project the organisational ethical image outwards to stakeholder and investor. For this reason, providing role modelling to lower-level line manager would lean towards middle-level managers as they are much more in tune with the management of the organisation (Yang et al., 2010).

Second, this study highlights the importance of middle-level managers ethical leadership within an organisation. Specifically, when influencing lower-level line manager voice behaviour (Hypothesis 2) and work engagement (Hypothesis 4). According to Wang et al (2018), perceiving middle-level manager as ethical leadership can influence lower-level manager ethical leadership development through their cognitive expectations about their efficacy (Wang et al., 2018). This would then instil them with the willingness to speak up, demonstrating a greater engagement at work. Middle-level manager ethical leadership is an important antecedent to encourage lower-level line manager development in an organisation (De Cremer & Moore, 2020). The current study findings also echoed research in the field of strategic management, which highlighted middle-level leadership is an important social actor when it comes to appropriating the transfer of ethical value within the organisation due to their relative connectedness with lower-level leaders and employees (Heyden et al., 2017). The findings of hypothesis 2 and 4, therefore, support this argument and show that middle-level manager has more capacity to influence line manager voice and work engagement.

The findings of hypothesis 5 shows that middle-level manager ethical leadership will embed the moral standards in an organisation, despite not role-modelling from higher-level ethical leader. This then informs line managers' behaviour, enforcing the expectation to conduct their behaviour ethical manner and defining their

success with an ethical implication. It makes sense to approach middle-level manager ethical leadership as the transmitter (see *Section 2.4.*, p. 46), as the result has underlined their importance in translating higher-level leader (or management) priorities into operational realities, as well as influencing the forefront of organisation management (Floyd & Wooldridge, 1997). Their behaviour is hence an important implication, in particular, shaping the line manager's patterned leadership behaviour in an organisation through shared value (Yang et al., 2010).

Overall, the findings of the trickle-down model complement earlier findings in the military organisation (Schaubroeck et al., 2012), and found middle-level ethical leader to weight more if lower-level line managers development is the major focus. This study is also amongst the limited few studies that draw its connection between the higher-level leader and middle-level manager ethical leadership to underline the foundation of seminal ethical leadership theory (Brown & Mitchell, 2010). While higher-level ethical leader will influence outcomes at its respective level, middle-level manager ethical leadership can exert influence downwards as well as trickling the process upwards to affect respective unit outcome via lower-level line manager (Mozumder, 2018). For this reason, the pathway that connected the development of line manager voice behaviour and works engagement under higher-level leadership and indirectly through middle-level manager, extents a grey area in the trickle-down literature by underlining the importance of middle-level manager ethical leadership. Thus, it pays to focus on middle-level management ethical leadership in a large multinational organisation, particularly when trying to instil extra-role behaviour and work engagement at lower-level management. The next section will extend the discussion of the model by examining how ethical leaders at the top will inform ethical leader role in the organisation.

5.3. Theoretical implication of line manager ethical leader role

This study adopted a role theory perspective on the overall research model. In doing so, the current study replicated research that has adopted a role theory perspective with the novel mediator of ethical leader role perception. The results (see *Section 4.9, Table 4.6.*) found support that line manager ethical leader role will predict their voice behaviour (Hypothesis 6a) and mediate the relationship with middle-level manager ethical leadership (Hypothesis 7a). However, the result did not find a support that line manager ethical leader role will affect their work engagement (Hypothesis 6b). The result also did not find support that higher-level ethical leadership will influence line managers ethical leader role (Hypothesis 8a and 8b). Nonetheless, this study presents several theoretical implications for both the ethical leadership literature and to a larger extent, the trickle-down model.

First, the current study argues and showed that line managers ethical leader role will inform their voice behaviour (Hypothesis 6a). This study demonstrates the effect of role theory by examining line managers ethical leader role, and the findings supported the view that line managers personal disposition will help determine the role they play in the organisation. Line manager that develops an ethical leader role will emphasise their ethical duty by demonstrating challenge-oriented behaviour through voicing. This made them more willing to anticipate changes and strive to improve the work environment, which is not explicitly associated with the formal role description of the organisational reward system (Morrison, 2011; Schmitt et al., 2016). The role expectation process also supports primary prediction that line manager ethical role expectation will serve as a means for facilitating certain behaviour. More importantly, Matta et al (2015) argues that role theory can explain the exchanging relationship between leader and member.

Indeed, scholars argued that being in a position of power can affect interpersonal consequences and the willingness to risk other behaviour (van Dijke, De Cremer, Langendijk, & Anderson, 2018). From this point of view, line manager ethical leader role and their voice are examined to understand the willingness to challenge counter normative behaviour and procedure to direct change orientation (Paterson & Huang, 2019), and transcending its implication up multiple levels of the organisation (Bashshur & Oc, 2015). Therefore, line managers that voice because of their ethical leader role would solidify their accountability and commitment towards the organisation (Stryker & Burke, 2000). Line managers are also in the best position to exert influence up the organisation, despite not having full control of the relevant resources (Detert et al., 2013). For example, Mead (1934) stressed that role occupant will try to maintain social order in a continuously changing social environment. In turn, allowing them to particularise the role-relationship that is expected by the organisation (Katz & Kahn, 1966).

Second, my findings show that line managers will take on an ethical leader role from middle-level manager ethical leadership (Hypothesis 7a). Incorporating role theory provides a stronger explanation about the impact middle-level manager had in defining line manager ethical leader role. Because social learning alone will not account for every social dynamic influence (Paterson & Huang, 2019). This study shows that middle-level manager will affect line manager ethical leader role and, in turn, their voice behaviour. In contrast to social learning theory (see Mayer et al., 2009) – where the observer is expected to learn the behaviour (Bandura, 1977) – role theory extends this theoretical perspective by showing that line manager will develop ethical role definition through assuming a set of patterned behaviour from middle-level manager. Therefore, role theory helps explain why line managers view ethical

behaviour as part of their work role. For example, middle-level manager ethical leadership will communicate to line managers by providing them with an explicit definition of their role expectation (Kahn et al., 1964). This then helps institutionalise the pressure to conform and demonstrating behaviour such as voice to improve by challenging the existing process.

As the current study measures line manager voice instead of ethical voice (see Huang & Paterson, 2017), it is possible that line manager voice behaviour can be counter normative by challenging existing process that might already be normatively appropriate. For example, research in the military organisation suggested that voice must be ethical to reflect the non-normative appropriate challenging nature of the practices (Kim & Vandenberghe, 2020). Moreover, the discourse about the counter-normative efforts of voice may obscure the improvement of the group. As such, managers must ensure that voice behaviour aims to improve the overall process, while adhering to the ethical standards of the group. This is particularly important for line manager that response to an ethical leader. For these reasons, line manager that develops ethical leader role would demonstrate and provide voice because it is the “right thing to do” (Brown et al., 2005; Liu et al., 2013).

Third, this study formally provides evidence to describe the impact of a proximal ethical leader on role definition. In doing so, this study adds on to literature on a mediator between middle-level manager ethical leadership and line manager voice behaviour. Line managers that understood the implication of their behaviour and view middle-level manager’s ethical leader behaviour as part of their role expectation are more likely to provide or demonstrate voice behaviour. Because line manager voice behaviour is directed towards those that are in a higher position of power (Desai & Kouchaki, 2017). It shows their understanding and commitment to upholding the

prescribed moral standards. Speaking up to improve the organisation's process also provide evidence to higher-level management about their ethical commitment. Hence, when line managers fail to speak up to higher management about the issue faced at the lower level, bottom-line employees may see them as a hypocritical leader which is the counter opposite of ethical leadership. Moreover, line manager that is unwilling to speak up can silence the issue faced by bottom-line employees, confining relevant problems and nullify the effect of an ethical leader role.

The findings of line manager work engagement - which emphasises the affective state of motivation (Parker, Bindl, & Strauss, 2010) – was not shown to be affected by their ethical leader role perception. Work engagement stressed line managers' cognitive resource for self-starting behaviour (Salanova & Schaufeli, 2008). This affective state of motivation further signifies line managers' vigour, dedication, and absorption, covering the aspects of cognitive vigilant (Schaufeli et al., 2006). Nonetheless, the current study also did not find evidence that ethical leader role will affect vigour and dedication respectively, despite Salanova et al (2003) suggested that absorption might be a consequence of vigour and dedication. Moreover, supplementary analysis only found line manager ethical leader role to marginally predict dedication, but not vigour (*see Section 4.8, footnote 11*).

Work engagement which is a form of self-regulatory focus attitude would only mechanise ethical leadership to improve cognitive motivation (Lam et al., 2016). It is proposed that line managers who understood own “self and role in some dynamic, negotiable relation” will translating own role expectation through increase engagement (Kahn, 1990, p. 700). As engaged workers that is psychologically present and will invest more energy at work (Rich, Lepine, & Crawford, 2010; Rothbard, 2001), work engagement is also categorised through simultaneous employment and expression of

the individual in connection to work and others (Kahn, 1990). Accordingly, drawing upon ego depletion theory, Lin, Ma, and Johnson (2016) suggested that leader resources can deplete due to other performance that requires self-control. This hence made it difficult to keep up with ethical leader behaviour. Besides, research that examined ethical leadership and work engagement daily did not find it to negatively affect counterproductive work behaviour across the day (Bormann, 2017). The non-significant finding between line manager ethical leader role and work engagement may thus be related to the demands of their role expectation, which made it difficult to demonstrate vigour. However, the supplementary analysis does offer some promising avenue that ethical leader role perception may predict line manager dedication. As a result, future research should investigate ethical leader role by considering a longer entity, exceeding a single day experience.

The findings support the premise that organisation is a system of interdependent behaviour that will conjunct and affect line manager behaviour (see Biddle, 1979; Katz & Kahn, 1978). Although role theory is useful for explaining why line manager will develop better coherence and mastery in a social organisation (see Clegg, Kornberger, & Rhodes, 2005), only a handful of ethical leadership research has underlined the role perspective within ethical leadership literature (see Liu et al., 2020; Paterson & Huang, 2019). The findings of hypothesis 7a shows that that line manager ethical leader role is associated with middle-level manager ethical leadership, incorporating its role expectation as part of their behaviour. Attention must be paid to understand line manager's ethical leader role as line manager has by far received the most attention when discussing the impact of ethical leadership (Ng & Feldman, 2015; Peng & Kim, 2020).

Furthermore, while this study argues that having define ethical leader role will increase work engagement. Kahn (1990) stated that the value of work must be meaningful before it can foster work engagement as it represents individual willingness invest himself in role. Therefore, line manager with a sense of moral values and normative appropriate conduct, such as honesty and fairness will value their work and more likely to feel a sense of fulfilment that give the role an even better meaning (Brown et al., 2005). For this reason, perhaps line manager work engagement is an antecedent of line manager ethical leader role and will mediate the relationship between middle-level ethical leadership. As such, this relationship would warrant further investigation to understand if engagement theory will increase line manager willingness to develop ethical leader role. Nevertheless, understanding the role expectation will serve as a framework that explains an individual's willingness to demonstrate extra-role as well as in-role behaviour pertaining to ethics (Tepper, Lockhart, & Hoobler, 2001).

5.4. Theoretical implication of moral identification

This study contributes to the literature by examining a new moral identification moderator through a role theory perspective to explain the relationship between line managers' ethical leader role and their voice behaviour. The finding of hypothesis 8a supported the core premise of role theory (Katz & Kahn, 1978), which shows that moral identification will moderate the relationship between line manager ethical leader role and their voice behaviour. This effect is stronger when line managers' moral identification is higher versus weaker. Line manager moral identification also positively predicted with their voice behaviour and work engagement. This further shows that line managers' moral identification is capable of influencing their willingness to provide

extra-role behaviour and work engagement. In short, the findings supported the view of role theory that individual identification mechanism can influence the ethical role expectation in a social setting (Sluss et al., 2011).

First, this study addresses the call to examine moral identification in concert with ethical leadership (May et al., 2015). The primary contribution of this novel mechanism explains the relationship between line managers' ethical leader role and their voice in the organisation. Just as a growing body of research has shown that high moral identity individual will specify the boundary condition of ethical leadership (Moore et al., 2019), and uses their moral identity to define themselves (Aquino & Reed, 2002; Mayer et al., 2012). A morality-based identification triggers line manager desire to improve ethical leader role and pursue extra-role behaviour such as voice. As moral sensitive individual is concern about the moral attribute displayed in the organisation (May et al., 2015; Reed & Aquino, 2003). This mechanism also directly predicts line manager work engagement, suggesting that line managers with a degree of moral identification will better engage at work. Such implication stresses the important of morality-based identification and its influence towards line manager ethical leader role and their voice behaviour.

A role theoretical perspective stresses how line managers will generalize their sense of moral identification to inform their role-relationship by seeing themselves as part of this social collective (i.e., organisation, occupation) (Sluss et al., 2011). The current study (see *Table 4.5.*) shows that moral identification of line manager will enhance the indirect relationship of middle-level manager ethical leadership. It also augments past research argument about the bottleneck of organisational identification mechanism that leads to unnecessary unethical pro-organisational motives when faced with ethical dilemmas (Chen, Chen, & Sheldon, 2016). For this reason, the

current study shows that line manager moral identification is connected to a defined self-schema that circles around the sensitivity of moral standards, particularly, how moral attribute will inform similarity (Burke, 2003). Hence, moral identification will accentuate line managers' ethical leader role as a result of their perceived value and characteristic, becoming ever salient and distinct from other organisations (May et al., 2015).

Second, there has been less research that examined the condition in which the ethical leader role of line manager can be embedded in an organisation (Brown & Treviño, 2006; Eisenbeiss & Giessner, 2012). Although many mechanisms have been tested, most has mainly focused on explaining the social learning perspective and the specific conditions that accentuate ethical leadership. Often, these mechanisms are also captured by the independent variable itself (Antonakis, 2017). This may risk circularising the theory and affect our understanding, especially when explaining why lower-level line managers will develop ethical leader role from leaders up the hierarchy. In contrast, moral identification aims to capture the importance of line manager association with moral value (May et al., 2015). In this regard, line manager ethical leader role emerges as a result of answering to an ethical leader in the organisation, while moral identification emphasis on individual's importance of moral values within their identification domain. Thus, testing moral identification represents an extension to ethics literature by offering a new insight about line manager's response in a moral relevant context when answering to middle-level manager ethical leadership (May et al., 2015).

Indeed, to behave in connection with their own moral identity do not always happen in a vacuum, especially in a working organisation (see Qin et al., 2018). The complex condition where moral identity would interact with the ethical leader (Moore

et al., 2019) suggested that the function of ethical leader can vary depending on the social relationship and how accountability approaches in the organisation (Resick et al., 2011). Through examining moral identification in a Malaysian multinational with a history of moral responsibility, the current study contributes to knowledge about the importance of developing a moral image to embed morality within the organisation. The findings (Hypothesis 8a) also supported the premise of role theory and argue that an organisation is a system of interdependence behaviour that would hold behaviour accountable and drive the salience role expectation (Sluss & Ashforth, 2007). This implies that line manager moral identification will influence line managers' ethical leader role and particularised the relationship by increasing the willingness to make related counter-normative changes in the organisation.

Third, the relationship between moral identification and line manager work engagement (see *Table 4.6.*) provides some indication that about line manager motivation to engage at work. The underlying effect of person-organisation ethical fit proposes that line managers that are high on moral identification are more likely to engage better in the organisation because of self-consistency. May et al (2015) have stresses that moral identification can regulate morality-related behaviour. In this case, this study shows that line manager with high moral identification and high ethical leader role perception (versus low moral identification and low ethical leader role) are more likely to voice. However, the findings also suggested that when moral identification is low, high ethical leader role will still increase line manager voice behaviour rather than vice versa. As for work engagement, work engagement is a form of intrinsic motivation connoting through high levels of personal investment at work (Kahn, 1990; Rich et al., 2010). Mayer et al. (2009) have in the past argued that individuals are attracted and selected into an organisation because of their personal

preferences and fitness, allowing them to develop similar patterned behaviour. Hence, moral identification may only improve their experience to invest personal energies at work on basis that they valued the same moral attribute.

On the basis of the attraction-selection attrition model (Schneider, 1995, 1987; Schneider, Smith & Goldstein, 2000), front line managers will have the tendencies to associate themselves with those they perceived to share the similar orientation and will remain as long as they continue to fit. In turn, explaining why line managers would willingly develop ethical leadership from a higher-level ethical leader. Furthermore, this theoretical proposition suggested that line manager with a degree of moral identification will strive for consistency between their role expected behaviour and the value as well as the moral attribute as part of their identification domain (May et al., 2015; Sluss et al., 2011). This shows that line managers' moral identification will increase their willingness to engage by providing them with a sense of belongingness (Hogg, 2006). At the same time, influence their willingness to demonstrate change-oriented behaviour by challenging the procedures and status quo in the organisation (see *Table 4.5*). Therefore, work engagement shares a unique space with job attitudes behaviour (Macey & Scheider, 2008), where they are committed to investing their full self as a consequence of morally identifying with the organisation rather than through their ethical leader role (Christian, Garza, & Slaughter, 2011).

To advance the discussion about line manager moral identification and their retention. Brown and Mitchell (2010) stated that individual who identified with the organisational value is less likely to leave. To provide further explanation through the theoretical proposition, the demographic data of the survey was examined. Specifically, attention is given to the organisational tenure of both middle-level manager and line manager. The demographic data shows that up to 68.49% of middle-

level managers and 51.24% of line manager across both subsidiaries have been with the organisation for over ten years. This finding is in line with prior research that has found a lower turnover for employees that morally identified with the organisation (May et al., 2015). The descriptive findings further suggested that perceived association may trigger a stronger sense of belongingness that leads both middle-level managers and line manager maintaining membership (Hogg & Terry, 2000). However, moral identification was not correlated to the organisational tenure. Rather, it is correlated with the organisational membership, which this study controlled for in the analysis (see *Table 4.1.*). It is also not possible to suggest that this relationship will exist outside of DeltaCo setting. Hence, it could only be stated as a probable inference rather than conclusively suggesting this as the case. Nevertheless, when line managers failed to associate themselves with the moral value of the organisation. They are more likely to leave the organisation.

In sum, this study draws on a role theory perspective to reaffirm their identity and particularised their role expected behaviour (Serpe & Stryker, 1987). The post-hoc analysis further suggested that line managers would make trade-off by leaving the organisation due to non-association. Taken altogether, organisational morality is increasingly becoming an important salient attribute to adopt as it helps employees to define, perceive and evaluate their motivation through social stratification (Aquino & Glavas, 2012). Therefore, when an organisation attitude towards ethics or moral attribute is particularly strong, it increases line manager motivation and retention above traditional variances explained by organisational identification (May et al., 2015). This made holding the right social desire characteristic and attitude a much greater value to develop engaged employees.

5.5. Empirical implication

This study examines the antecedent of line manager across three-levels of management in a large Malaysian multinational organisation. Recent reviews have shown that many leadership pieces of research have continued to follow a homogenous reporting of sample and do not explicitly underline the hierarchical level of leadership (Magalhães, Santos, & Pais, 2019). Limited research has also examined line manager antecedent through the use of a multinational organisation sample to narrow the broad spectrum of the trickling effect (see Wo et al., 2015; 2018). As multilevel management research tends to observe the model through a single-source rating (i.e., the rating of lower-level subordinates on immediate and top leadership), these ratings are subjected to bias that can affect the actual reality of social phenomenon (Hiller, DeChurch, Murase, & Doty, 2011).

Bottom-line perception of higher-level leadership may be attenuated to some bias when the scoring of ethical leadership is undertaken in a large organisation. For example, research at different organisational levels found that employee's status is positively associated with the perception of ethical leadership. At the same time, ethical leader will mediate the employee status and desirable workplace outcome (Pucic, 2016). Experimental research has also found evidence that Black leader faces larger negative impact in hypocritical and ambiguous conditions in comparison to White leader (Marquardt et al., 2018). Having certain stereotypical bias towards manager can impact their perception of ethical leadership which can contribute to false positive (or adverse) effect on the measuring outcome. In doing so, this study adopts a multisource and multilevel rating can mitigate common source bias while depicting the actual level of organising (Podsakoff et al., 2003). This study multilevel model

building process hence represented three levels of management to best demonstrate an accurate social reality in a hierarchical organisation.

The study findings may also be unique to the research organisation, DeltaCo. For example, the research organisation is a large family conglomerate, which is common in emerging markets economy. These organisations tend to have very informal structure that facilitate quick decision making at the top and exhibiting strong shared values with the founder's vision and legacy due to close family ties (Kim et al., 2004). The family characteristics and value (*i.e.*, moral commitment) tend to be institutionalised to ensure stability and to protect the mission, as well as shaping the strategic direction of the organisation (Alpay, Bodur, Yılmaz, Çetinkaya, & Arıkan, 2004). DeltaCo also heavily invested in many ethical initiatives through their development program (*i.e.*, annual leadership conference) to instill the organisation's values at their middle-level management. However, in a smaller and less hierarchical organisation, the relationship with senior management is much more attainable. This, in turn, allow lower-level line manager or bottom-line employees to provide a much accurate measurement.

The ethical source that depicts the moral standards may be more outwards focus for an organisation that has to develop a very strong reputation in corporate social responsibility (Ormiston & Wong, 2013). The current study implies that an organisation, such as DeltaCo with a strong ethical branding through its corporate responsibility program is more capable of providing a moral theme when attracting potential employees (*see Section 1.5*). However, the study theme remains to focus on understanding the relationship that will predict and enforce line manager behaviour and to embrace the indirect notion of the trickle-down model (Mayer et al., 2009; Wo et al., 2018). More importantly, the underlying method operated in this study aims to

provide systematic and rigorous testing of the trickle-down model. This allowed the current study to examine the theory to provide accurate depiction about the ethical source from the very top of the organisation, – and if such value can reside through the social condition and institutionalised the logic that is registered through organising (Thornton, Occasion, & Lounsbury, 2012).

In summary, this study takes the perspective that an organisation is a localised social order where employees will interpret the moral standards to depict own work role expectation across their respective level of management (Leavitt, Reynolds, Barnes, Schilpzand, & Hannah, 2012). This study also acknowledges the implication of line manager status and power orientation in an organisation (Schepers & Van der Borgh, 2020). For this reason, the usage of control variables allowed this research to claim a small methodological contribution through presenting a result that is partially free from status perception and the cultural effect in a diverse multinational sample. Thus, the sample of one large hierarchical Malaysian multinational organisation is used to answer the research objectives and to test the trickle-down model in a new Malaysian multinational set-up.

5.6. Practical implications

This study presented several practical implications for the organisation. First, the study stresses the need for organisations to be aware of the morality $\frac{3}{4}$ ethical leader development and impact conundrum. An organisation needs to develop a balanced approach when viewing morality or ethics and leadership development. Although ethical leaders in an organisation are important to ensure moral standards is observed, implying its sustainability and future success, their influence is very dependent on their occupied position in the hierarchy of the organisation (Mozumder,

2018). The importance of ethical leader at the top will often, rely on their manager at the middle-level to inform their strategic direction, ensuring certain process and standards are observed (Mayer et al., 2009). As highlighted in prior research, higher-level leadership influence is often confined to firm-level outcomes like the firm's organisational culture and firm financial performance (De Hoogh, & Den Hartog, 2008; Eisenbeiss et al., 2015; Shin et al., 2015; Wang et al., 2017). Thus, higher-level leadership and their ethical propensity remain an important public image for the organisation.

However, this does not mean that manager at the middle-level will always take on ethical leadership from higher-level leadership. The study result shows that middle-level managers does always not role-model after higher-level ethical leadership despite seeing them as an ethical leader, and invited discussion about their developmental role. There is an assumption that higher-level leaders will direct the behaviour of middle-level managers through the next level ethical culture, in turn, shaping their ethical leadership behaviour (Schaubroeck et al., 2012). Accordingly, Shin (2012) stated that higher-level ethical leaders will improve the overall organisational ethical climate to steer lower-level management behaviour. More recently, research has argued that middle-level managers are more likely to appropriate the translation of their role when higher-level leaders provided them with the appropriate context, for example, human and organisational resources, removing practical barriers, reducing the culture of blame, managing workload, providing training, and developing moral paradigms (Radaelli & Sitton-Kent, 2016). In return, middle-level managers will embed the expected behaviour through their pre-existing ties with the organisation (Burgess, Strauss, Currie, & Wood, 2015).

Middle-level managers may also rely heavily on the use of shared space to develop an understanding of their leadership expectation (Rouleau & Balogun, 2011). It is suggested that middle-level manager may engage in these meetings with those they could develop alias with to translate the values which contribute towards their identity and responsibility development (Reay et al., 2006). As such, it is important that higher-level management provide support to middle-level manager through regular conversation about their strategic role performance. This, in turn, may helps embed ethical behaviour as part of their ability to craft behaviour that is compelling towards their workplace (Rouleau & Balogun, 2011). This study argues that an organisation needs to enable middle-level manager, building conversation and networks that will prepare them for the future image as a partner or allies. Because many organisations do not always provide enough resources for training middle-level managers (see Beck & Plowman, 2009; Gentry et al., 2013). Mozumder (2018) thus lamented that developing ethical leadership at the middle-level may be perhaps the most single effective policy for an organisation to adopt if they intend to steer the ethical organisational behaviour.

Second, middle-level managers are the focal influence within the organisation and will provide a hands-on approach towards management (Yang et al., 2010). This then translated into an interpretation of the expectation at the lower level, increasing their support for next-level leadership development. Middle-level manager strategic position in an organisation has been widely discussed in the literature and this study finding echoed these arguments. This suggested that middle-level manager ethical leadership matters the most when shaping lower-level line-manager behaviour. The theoretical proportion also bears an important implication showing that middle-level manager will shape line managers' ethical leader role, making them more aware of the

ethical role responsibility in the organisation. When adopted the traditional view of the trickle-down from the top, higher-level ethical leader influence on lower-level line manager ethical leader role, their voice behaviour and work engagement were not supported. This seems to steer a conversation about the traditional top-down perspective, where there has been a lack of understanding about fulfilling ethical leader role of line manager as a consequence from the very top of an organisation. For this reason, middle-level managers become more obliged to enforce moral standards, doing what is strictly expected of their role (Heyden et al., 2017).

Third, the study findings suggested that middle-level manager ethical leadership will foster line manager voice behaviour and work engagement. Middle-level manager ethical leadership is necessary for line managers to demonstrating extra-role behaviour, such as voicing for the benefits of their bottom-line employees. Therefore, an organisation that intends to develop their lower-level line manager voice, benefitting from their suggestion should encourage middle-level managers to provide moral standards (Lam et al., 2016). Besides, providing ethical leadership is a form of transactional means that holds their next level accountable of their behaviour, middle-level manager ethical leadership is a mode to demonstrate the appropriate climate for supporting their voice behaviour enthusing them with the willingness to speak up. The results also imply that having middle-level manager ethical leadership will affect line manager affective state of engagement at work. Middle-level manager ethical leadership will hence affect line manager self-concept, allowing them to find meaning and becomes more intrinsically motivated and engaged at work (Den Hartog, & Belschak, 2012).

Fourth, the engagement of line managers has rarely been approached within the discussion of ethical leadership. According to Kahn (1990), line managers that are

cognitively engaged will find meaning in their work, improve psychological safety and self-efficacy. When connected with the wider discourse of the ethical leadership theory, it shows that line manager that is cognitively engaged under ethical leader will emphasise the importance of adhering to the moral standards and offer guidance to their bottom-line (Lam et al., 2016). However, being engaged at work under the guidance of middle-level manager ethical leadership can be affected even by the smallest sight of unethical behaviour. As an example, ethical leadership requires consistency across time to influence other behaviour such as work engagement (Lin et al., 2016). Often, contrasting stimuli from the top can out weight the positive effect of this leadership behaviour deteriorating the relationship that took time to develop (Bormann, 2017). Organisations that intend to reap the benefits of the moral standards down the organisation must emphasis on developmental activities that emphasis the leader's ethical commitment to their followers. It is important that follower's perception of their leader's behaviour changes accordingly or otherwise they will not react to the ethical initiative (Den Hartog, 2015). As with all leadership training, new ways of embedding ethical behaviour in the context and making it salient will made it more effective.

Fifth, in examining the study model through a role perspective, this study implies that organisations should develop and maintain an ethical system. An ethical system in organisation is importance because it can jointly impact the emergence and maintenance of ethical leadership (Eisenbeiss & Giessner, 2012). For example, an ethical system provides a standardised framework for recruitment, training, and reinforcement by considering the ethical interest of stakeholders (*i.e.*, higher-level management, co-workers, etc). However, there has been limited research that examined how multinational organisations develops ethical management practice as

well as informing the development of morality across different offices. As such, Solinger et al (2020) argued that the moral standards of an organisation are installed by ethical leadership, often through an ethical system that ensures its strategy is well embedded into the ethical management process. Accordingly, Haidt (2008) defined such a system as an “interlocking sets of values, virtues, norms, practices, identities, institutions, technologies, and evolved psychological mechanisms that work together to suppress or regulate selfishness and make social life possible” (p. 70). In developing such a systematic process, an organisation must make its management attitude towards moral standards a salient identity of the organisation.

However, ethical leaders are also the employees of the respective organisation and will be bounded by the expectation of the roles they occupied (Katz & Kahn, 1978; Mead, 1934). Therefore, an organisation needs to be aware of how moral standards is being translated to enthuse middle-level manager and line manager respective to demonstrate ethical leadership behaviour. The successful embracing and interpretation of the moral standards will inform their ethical role expectation, allowing them to take on an ethical leadership role. In other words, how leaders define themselves per their role will signal their understanding of the ethical expectation of the wider organisation (Piccolo et al., 2010). This, in turn, forms the cornerstone of an ethical system that will binds value from within, sustaining, retaining and developing employees' behaviour through a unique moralisation process (Fehr, Yam, & Dang, 2015).

Sixth, while perceiving middle-level manager ethical leadership will inform line managers ethical leader role, identifying with the moral values presented with an organisation can strengthen the role-relationship and increases extra-role behaviour. Ethical leadership literature has often decontextualised the development process

through the assumption that ethical leader will emerge when the individual is high in moral identity (Mayer et al., 2012). However, recent research has highlighted the complex process of moral identity under ethical leadership, moreover, in its effort to deters moral disengagement (Moore et al., 2019). The theoretical proportion of this study implies that line managers must have some preconception of the organisation moral attitude for them to demonstrate challenge-oriented citizenship behaviour. The results thus suggested that moral identification as a consequence of line manager synchronise values through perceiving similar moral attribute with the organisation, will choose to voice as mean of protecting the organisation (May et al., 2015).

Moral identification also informs the importance of attracting, motivating and retaining employees concerning the organisation moral attribute. The findings supported the notion that ethical dedication will pay off when trying to attract applicants who desire to work for an organisation that will treat them fairly (Rupp, Shao, Thornton, & Skarilicki, 2013). Therefore, organisations that intend to build a moral workforce, supporting its moral related activities must emphasis on stronger communication about their ethical goals within and outside of the organisation. Besides, limited research has discussed the importance of organisational motivation (Treviño et al., 2014), rarely examining the interactional role between the organisation and those who work within. In line with this study role theoretical perspective, line manager with a strong moral identification and ethical leader role will demonstrate stronger voice behaviour. Thus, it shows that organisations need to take effort to develop line manager moral based identification, specifically, incorporating the important business ethics message through corporate activities during onboarding, orientation, and socialisation.

Seventh, the organisation attitude towards moral standards can safeguard the organisation from unwanted conflict at work (Babalola et al., 2018). It is germane that

an organisation embeds values such as honesty, caring, integrity, and transparency to inform the implication of doing the right thing (Brown et al., 2005). Because ethical behaviour in organisations will not happen in a vacuum (Mayer et al., 2013), and its occurrence is often connected with the wider perception and shared believe by borrowing its support to enact normatively appropriate behaviour (Lemoine et al., 2019; Solinger et al., 2020). Therefore, line manager demonstration of voice behaviour as a consequence of own ethical leader role under middle-level manager ethical leadership is aligned towards policy and practices of the organisation that supported their opinion. Furthermore, the effectiveness of middle-level managers in providing ethical leadership can inform lower-level management optimism in the organisation (De Hoogh & Den Hartog, 2008). The willingness of line managers to speak up and discuss ethical issues with employees is a positive indication of effective ethical leadership (see Paterson & Huang, 2019). Thus, when bottom-line employees felt that line managers are voicing on their behalf, they become more willing to exercise extra-role helping behaviour (see Tu & Lu, 2016).

Eight and lastly, line manager increased dedication towards the organisation reputation can be determined by the Human Resource Management effort in recruiting morally driven employees. Besides, organisations should select and develop leader who demonstrate high moral standards, particularly for line managers as they exert the strongest influence on bottom-line employees' attitude and behaviour (Davis & Rothstein, 2006). The current study sample has underlined the high levels of organisational tenure across two management levels, providing some surface indications about DeltaCo success in communicating its ethical strategy. Accordingly, DeltaCo has been involved in many ethical and sustainable activities over the last few decades through its charitable foundation. Therefore, the commitment towards these

activities may have developed the organisation's moral reputation more outwardly than another similar counterpart. If this is indeed the case, the high organisational tenure is an indication about how multinational can develop their moral image as devoted by the organisation practices. However, the answer to this question was not possible as follow up research work with the organisation was hindered by the pandemic which made obtaining the objective evidence not possible.

Overall, organisations should develop training and development activities to drum up moral standards, and supplement informal learning along the socialisation process depicted by this study theoretical position. While this study highlights the varying importance of ethical leadership up the hierarchy in the organisation, the results also showed that middle-level managers and line managers do not always see higher-level leadership as an ethical role model, moreover, developing role expectation. Therefore, the findings supported the strategic literature argues that this leader influence is directed to a wider formal process rather than the informal component of organising (Piccolo et al., 2010). The findings of a social learning void up the hierarchy further invite questions about higher-level leader distance (*i.e.*, spatial, physical), where there can be limited information about these leadership, be it status and the infrequent contact with their followers (Antonakis & Atwater, 2002). Given that such distance in an organisation is also growing because of the increased usage of communication and information technologies (van Houwelingen et al., 2017). Organisations need to reconsider its influence on new working behaviour, in particular, through virtual space. Thus, this study highlighted the potential challenges of managing lower-level employees, and highlights the importance of middle-level manager ethical leadership in the respective offices of a large multinational.

5.7. Limitations and future direction

This study has several limitations. First, although strategic methods were used to collect the data such as using benchmarking, the small sample size of the data is a limitation of the current study. In the context of multilevel organisational research and the complexity of estimating statistical power is well underscored (see Scherbaum & Ferrerter, 2009), the small sample size is not always an optimal outcome. The power to detect small effect is very coherent to the sample size, which is rather small with a data of 174 lower-level line manager and 67 middle-level managers. Therefore, a small sample size can affect the statistical power when running multilevel analysis and can be plagued by non-normality, making it more prone to estimation error. According to McNeish (2018), the small sample size is very prevalence in the empirical literature. The authors also noted about the misconception regarding how small samples should accommodate statistical analysis is purely to address the statistical estimation, ensuring that the Type 1 error rates are properly controlled. However, this cannot imply that advance statistical technique will solve the traditional issue that has plagued the field. The small sample size is sometimes unavoidable, particularly when examining hard to reach groups. The researcher must thus “always take steps to ensure that the properties of their statistical model are satisfactory” (p. 1142).

Non-normality can occur as a result of small sample size (Muthén & Muthén, 2002). As the current study adopts a positivist and moral centric view about higher-level ethical leadership and line manager ethical behaviour, it is important to note that line manager’s perception of an ethical leader role and middle-level manager ethical leadership was correlated at ($r = .59$). This can raise the question about multicollinearity and its effect on the analysis. Accordingly, recent research has argued that multicollinearity may not necessarily affect research that examined the data

through multilevel analysis (Yu et al., 2015). In this case, the middle-level manager's ethical leadership is aggregated and centred, which helps alleviate concern (Hofmann & Gavin, 1998). To further address the concern about non-normal data and small sample size, the current study adopted a bootstrapping technique when examining the population from which the sample was drawn. Bootstrapping is a statistical process that resamples the characterise population through a realistic assumption to generate an empirical estimate of the sampling distribution (Mooney & Duval, 1993). Besides, the current study standardised all independent variables when running the bootstrap analysis. Hence, the bootstrapping analysis aims to mitigate the potentially profound effect on the model due to the sample size and multicollinearity when examining the boundary condition to draw an inference through the population parameter.

Second, the data may be plagued by common method bias due to its collection method. Although the data is multisource and multilevel, the data was obtained by implementing the survey as a performance measure in DeltaCo. For this reason, the scoring is subjective to the middle-level manager and line manager that are providing their response. Common method bias is a methodological concern across areas of quantitative empirical research and will exist in one form or another (Podsakoff et al., 2003). This inference has been debated for over five decades (see Siemsen, Roth, & Oliveira, 2010), with little consensus among scholars, presenting an inconclusive argument about when and how common method bias will inflate the observed relationship (Cote & Buckley, 1988; Spector & Brannick, 1995). The lack of consensus has also created some confusion as to how the result should be interpreted. Therefore, earlier process on the data investigation aims to present a much-detailed understanding of common method bias.

However, the tradition of using the same respondent to score multiple items in a survey is not uncommon. The advancement of statistical packages has allowed research study to examine the model fitness through common factor analysis (CFA), understanding if a common method is a concern for the research study (Williams, Edwards, & Vandenberg, 2003). In addition to examining the data using CFA, the way the survey is phrased added some control to ensure that the items are scored with good faith. The term “methods” has a very broad definition in the literature (Spector & Brannick, 2009), and the definition of the methodology is dependent on the researcher view and as to how the survey is administered. In this case, the survey administered as part of this study took place across four waves. After conveying their support for the research to the target population, middle-level managers in the UK office are asked to provide their ratings, followed by line managers. The same procedure was adopted when collecting data in the Malaysia office. Therefore, the researcher has attempted to mitigate the common method bias and aligned with the argument that the method used will trigger the respondent attitude towards the question (Siemsen et al., 2010).

Third, this study is cross-sectional in design. The purpose of this study is to evaluate the trickle-down model and to provide a description of the sample population, finding a prevalence of interest towards the outcome. A cross-sectional study is often used to investigate associations and relationship. However, it is limited by the fact that it is carried out at a one-time point without subsequent indication of the sequential events. As an example, research has shown that minor unethical behaviour of ethical leader can affect ethical leadership influence on work engagement (Bormann, 2017). Besides, some scholars have argued that the inclusion of appropriate control can address endogeneity and established causal claim in non-experimental design (Antonakis et al., 2014). Thus, the decision to exercise specific control variables goes

forth with recommendations from methodologist to prevent nontheoretically variances on the analysis model and will not improve causal claim (Becker et al., 2016; Bernerth et al., 2017; Carlson & Wu, 2011).

The controlling for company, power distance and status were meant to account for line managers culture and perception of position during the analysis, which might exert unnecessary variances on the model. The field setting of this study only seeks to observe the phenomenon and could not explain causality because the condition cannot be artificially manipulated, moreover, the process and practices can be unique to the research organisation. It is hence possible that the findings cannot be generalised beyond the organisational settings of DeltaCo. Besides, the use of cross-sectional design is also highly efficient for the participating organisation and the researcher. The cross-sectional design is useful as a starting point for research to address a complex question with a simple design (Spector, 2019). However, cross-sectional and self-reported data requires participants to provide an appropriate and honest rating. For this reason, observations such as moral identification and ethical leader role are much more valid than others because line managers may not have full knowledge of other participants attitudes and intentions.

In highlighting the aforementioned limitations, the study also presents opportunities for future research to advance the literature on understanding ethical leadership theory in a multilevel organisation. First, work engagement was only predicted by moral identification and middle-level manager ethical leadership. Work engagement represents a cognitive affect state of motivation. As such, demonstrating pro-social behaviour, such as voice does not always equate to higher cognitive engagement at work (Schmitt et al., 2016). In this instance, the analysis only found middle-level manager ethical leadership and moral identification as an antecedent of

work engagement. Perhaps future work could adopt the methodology of diary research (see Breevaart, Bakker, Demerouti, & Derks, 2016; Ouweneel, Le Blanc, Schaufeli, & van Wijhe, 2012; Venz, Pundt, & Sonnentag, 2018) when measuring work engagement. This could provide a much-detailed understanding about the fluctuation of work engagement across time concerning own ethical leader role (See Bormann, 2017). Nevertheless, this study focuses on work engagement to underline the role theory perspective towards line manager work behaviour instead of investigating the personal resources of line managers.

Fourth, scholars (see Antonakis et al., 2014; Wo et al., 2015) has suggested the use of control to underline the multiple mechanisms that will inform the trickle-down model. The current study only accounts for both line manager's status and power orientation, underlining the cultural influence and status to test the role theory perspective (Bernerth & Aguinis, 2016; Pucic, 2015; Schepers & Van der Borgh, 2020). Therefore, a future study could control for an alternative mechanism, such as social identity or social exchange as accounting for different mediating mechanism would provide a better explanation about the ethical transferring process (Wo et al., 2015). The method may further determine if a role theory perspective would account for stronger variances on the ethical cascading and transferring process. Besides, while this study addresses three levels of management, it did not adopt a three-level analysis, which would be much useful in examining if the value does flow down from the very top of the organisation. Future research could also try to replicate the trickle-down model through an experimental yoked design (see De Cremer et al., 2018). More importantly, future research that intends to examine three levels trickle-down model should take into consideration the percentage of return and through incorporating the line manager's direct report as undertaken by Schaubroeck et al (2012).

Fifth, Fehr et al (2015) stated that ethical leadership research has often taken a narrow approach towards conceptualising ethical leadership through the assumption that employees' behaviours are shaped by the leader. Therefore, most have left out understanding the moral standards in concert with other organisational facets. To illustrate, experimental research suggested that moral standards can go both ways, for example, employees can influence the leader's attitude through a trickle-up process (Desai & Kouchaki, 2017). However, attention is often paid to trickle-down process because it reflects actual organisational conditions where downwards influence is more prevalent in organisational setting than upwards influence. While the perspective has indeed invited question in the trickle-down literature (see Wo et al., 2018), and scholar has found evidence that middle-level manager could trickle-up and influence the group-level behaviour (Mozumder, 2018). The contextual factors, such as organisational size, structure, climate, as well as culture of the organisation may either impede (or foster) the trickle-up effect (Wo et al., 2018). Nonetheless, a much thorough testing of the trickle-down model by measuring the recipient moral trait (or character) to provide understanding if exerting moral standards can be a two ways process. In testing these mechanisms, it may inform our understanding about both middle-level manager and lower-level line manager role along the trickle-down process and if they are promoted into a management position to embed the moral standards.

Sixth, the research on moralised leadership and its development argued that a broader perspective is needed to determine if an ethical leader is role-modelled by employees (Fehr et al., 2015; Solinger et al., 2020). As an example, research in the field of unethical behaviour has found line manager to hold higher-level leaders accountable for their behaviour (Liu, Liao, & Loi, 2012). Accordingly, research has

found line managers to break the chain of abusive supervision, acting as a proxy that prevents such behaviour from trickling-down (Tepper, Simon, & Park, 2017). While this perspective has emerged in other leadership fields, ethical leadership research continues to maintain the traditional upper-echelon view, narrowing its perspective and creating a rift between its impact and development (Hoch et al., 2018; Kleshinski, Wilson, Steven-Street & Scott, 2020; Lemoine et al., 2019). For this reason, an alternative approach towards understanding how moral standards in an organisation could inform ethical behaviour should be considered (see Solinger et al., 2020). This helps present a different narrative and knowledge about ethical leadership development.

Seventh and lastly, Lin et al (2016) found that ethical leader behaviour can vary across day and time when their cognitive resource could not support its fair enactment. This, in turn, causes an ethical leader to demonstrate abusive tendency. As it stands, we know very little about successful ethical intervention, moreover, the use of longitudinal data in the field of ethical leadership. Because the use of a cross-sectional has been predominately been adopted to appropriate the understanding of this leadership behaviour, scholars have argued about its potential ethical bias when depicting what an ethical leader is (Tenbrunsel et al., 2010). Hence, recent research that addressed the ethical bias argument through the use of polynomial regression shows that leader may have an inflated ethical image, failing to present an accurate depiction of the moral manager and moral person argument (Kuenzi et al., 2019). Given the potential of this methodology, future research should thus adopt a much complex procedure to examine line managers cognitive changes and their approach towards ethical leadership.

5.8. Summary of discussion chapter

This chapter presented a discussion of the current study findings and highlighted its theoretical implication. The use of two levels of management data in a large Malaysian multinational organisation supported this study theoretical proposition, showing support and extending social learning through a role perspective. The result is synonymous with an argument in strategic literature that highlighted the importance of middle-level manager in steering the strategic direction of the organisation (DeChurch et al., 2010). The current study supported the notion that middle-level manager would act as a proxy of higher-level management, influencing lower-level management behaviour (Yang et al., 2010). Accordingly, Cumberland et al. (2018) have stressed that higher-level leadership will shape the organisation Human Resource practice and social capital, developing a linkage that enhances voice at the lower-level of an organisation. In other words, higher-level management leadership will indirectly influence lower-level management behaviour through an internal social network that serves as an artefact to reinforce the moral expectation below the organisation. Therefore, how higher-level management ethical leadership, which often been seen as the source of ethical value will trickle-down requires future research to examine if other organisational processes will exist to help steer the moral standards downwards.

The study further extends our knowledge about the pivotal role of middle-level manager ethical leadership, connecting its influence with line manager voice and work engagement. The process of speaking up by those who are in a position of power towards those up the hierarchy is affected by layers of bureaucracy that can hinder the upwards flow of information (Galuser, 1984). Because the organisational context is linked to employee's willingness to speak up (Walumbwa & Schaubroeck, 2009),

there is the need for a greater understanding about higher-level management influence in facilitating vertical communication and engagement (Kahn & Heaphy, 2014). Therefore, attention is paid to line manager voice behaviour as speaking up - “to change an objectionable state of affairs and to improve the current functions of the organisation, group, or individual” (Bashshur & Oc, 2015, p. 1531) – is associated with a positive association with the leader and the organisation. The risk of speaking up from a line manager standpoint is also much higher than employees due to their role position in the organisation (Paterson & Huang, 2018). As such, disconnecting line manager voice behaviour with leader up the hierarchy can have a negative implication for the organisation (Chen, Treviño, & Hambrick, 2009), as illustrated in many prominent scandals (see Edwards et al., 2018).

Line managers are indeed an important social actor when enforcing the moral standards and deterring unethical behaviour at the bottom-level (Peng & Kim, 2020). As many ethical scandals of large multinationals tend to occur at the lowest level, for example, the British Petroleum Deepwater Horizon disaster has shown the inconsistency of its safety culture across the operating level (see Amernic & Craig, 2017), highlighting the important role of line manager. The long-held belief that line managers will appropriate ethical behaviour from ethical leader up the hierarchy through a trickle-down model has only in so far touches the surface of what we know about ethical value transfer. This study hence illuminated the issue, providing a new theoretical lens to extend the role modelling perspective (see Brown et al., 2005) and suggest that line manager will take on ethical leader role on the basis of their role expectation. In doing so, the current study extended knowledge about line manager ethical leader development by contextualising their ethical role-taking in concert with their organisational life (Day et al., 2014). This perspective has long warranted

attention, despite scholars in the past has suggested that employees will develop role expectation in an organisation, informing their attitude and behaviour (Sluss et al., 2011).

In extending the argument through a role theoretical perspective, this study specifies the condition of ethical leader role through moral identification and build on line manager understanding of their role expectation (Sluss et al., 2010). The current study shows and argues that line managers will increase the tendency to protect the organisation from harm when they perceive similarity with the moral attribute of the organisation (May et al., 2015). It hence shows that line managers and their willingness to voice become more obvious under middle-level manager ethical leadership. This relationship also enhances when they morally identified with the organisation attribute. The results thus extended our knowledge about the ethical leader role-taking in an ethical organisation. Furthermore, a discussion is provided to underline line manager work engagement. Although the current study only found support that middle-level manager ethical leadership and line manager moral identification to predict their work engagement, rather than through their defined role in the organisation (Blakely, Martinec, & Lane, 1994). The current study argues that being cognitively engaged at work may not always occur through their occupied role. Instead, a strong identification-related motivation along the ethical leader process will affect their self-expression, increasing line manager motivation to engage (Den Hartog & Belschak, 2012). In other words, line manager motivational state of cognitive engagement is a response to an ethical leader, rather than own ethical role expectation.

Taken altogether, this chapter provided a discussion about the current study results through the basis of its theoretical implication. Ethical leadership literature has

largely circled around the theoretical perspective of social learning (Brown et al., 2005). In exploring the theory's limitation, the current study extended the social learning perspective through a role theory lens, providing a stronger understanding of the antecedent of line manager voice behaviour. In line with the role theory perspective, this study shows that line managers will take on ethical leader role from middle-level manager ethical leadership. The particularised relationship becomes stronger when line managers morally identified with the value of the organisation, providing new knowledge about a morally charged identification mechanism. This study further connected the ethical leader role with the demonstration of extra-role behaviour to provide a better understanding of ethical leadership duty. To this end, this study presented systematic testing of the trickle-down model and extended the social learning perspective through a new theoretical framework. In doing so, this study addresses several theoretical and practical implication to knowledge.

5.9. Thesis conclusion

This study adopted a multilevel model to guide understanding about line manager's challenge-oriented behaviour through a social learning and role theory perspective. In addressing the seminal theory of ethical leadership, the study tested the trickle-down model to an appropriate higher-level leader and middle-level manager ethical leadership as an antecedent of line managers voice behaviour and work engagement. In doing so, the study shows that higher-level ethical leadership does not influence middle-level manager ethical leadership, lending its support to research that argued about the importance of middle-level manager. The study further showed that middle-level ethical leader would matters the most when shaping lower-level line manager's ethical leader role, contributes to limited knowledge about the process that

develops line manager ethical leadership. Hence, contributing to the lack of research that examines the antecedent of line managers ethical leadership behaviour.

As limited research has appropriated the understanding about ethical leadership, particularly, at the higher level in a large Malaysian multinational organisation, this study highlighted the complicated process and the insignificant role of higher-level ethical leadership in this organisation. It is suggested that multinational organisations would differ from traditional organisations in the way management practice is implied. As an example, the higher-level management team can be distributed geographically, often leaving the strategic management to the respective middle-level manager. The increased use of computer-mediated technology is also starting to play a major part in its operation, allowing those at the top to manage the organisation across virtual space and time. Accordingly, higher-level ethical leadership was not found to affect the line manager's ethical leader role, their voice behaviour and work engagement. This highlight the concerns about the traditional top-down view that is often depicted through the flow of ethical value. Thus, in highlighting the development of new technological practices, further attention is needed to understand how ethical leader behaviour at the top is embedded in these organisations.

Gaining access to research a multinational organisation tends to be difficult as access is often granted either through pre-existing relationship or relying on publicly available information to score its higher-level management behaviour. The researcher thus acknowledges his fortunate position and opportunity to conduct research in a large Malaysian multinational and to observe the trickle-down model across three levels of management using independent ratings. The results, to a larger extend, confirmed this study prediction that line managers will perceive ethical leader role as a result of middle-level manager ethical leadership. In adopting a role theory

perspective to extend the social learning model. It provided a stronger explanation about the role of line managers, as well as their ethical leadership development. The theoretical perspective further supports the prediction between line manager ethical duty and their extra-role behaviour. The study further extended this role theory perspective through a new morally driven boundary condition that accentuates line managers ethical leader role perception. Thus, explaining how moral standards embed in the organisation.

This study also highlighted the implication of developing moral standards in an organisation. More often, the moral association that line manager develops in concert with their preoccupied role will accelerate their ability to carry out and provide ethical leadership. Although a similar argument was unable to observe for middle-level manager ethical leadership, this study examination of line manager moral identification is an important endeavour and knowledge about the moral individual at work. The demographic of the population sample thus added another layer to our theorising, showing that most line manager and middle-level managers have been with the research organisation for over ten years. However, this could only provide a surface-level argument about moral belongingness of line manager, but it provides a unique representation about the research organisation, DeltaCo. Nevertheless, higher-level leaders still play an important part, presenting themselves as the symbol and image of the organisation. For this reason, future work should continue to account for these leaders influence in connection with the wider organisational process by examining the social and organisational artefacts that would trickle their ethical value downwards.

To summarise, this piece of study has narrated the antecedent of line manager voice behaviour and work engagement. In paying attention to the theory of ethical leadership, this study highlighted their importance when enacted by management up

the hierarchy to inform lower-level line manager's ethical leader role. As such, complementing research has taken an outward focus on business ethics. This study also shows the importance of developing moral organisation, connecting its effect with lower-level line manager ethical leader role and their ability to voice. Furthermore, researching a larger emerging economy multinational is warranted due to its increasing substantial foreign direct investment in developed economies. Often, these organisations are heavily scrutinised by global financial, regulator and society, questioning its governance (Tashman et al., 2019). However, as this study was conducted in a large Malaysian multinational, interpretation and generalisation about corporate ethics should be made with caution (Arnold, Bernardi, Neidermeyer, & Schmee, 2007). Overall, this study extended the theory about the antecedent of line managers voice behaviour and engagement at work through a role theory perspective to illuminate the influence of line manager's ethical leader role. This thus provides valuable insight into the role of higher-level leader and middle-level managers ethical leadership in a multinational organisation.

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EMAIL COMMUNICATION FOR SURVEY INVITATION

Dear Manager,

DeltaCo has identified you as a manager to participate in leadership research, conducted by Aston University Business School. We would greatly appreciate it if you would participate in the research by completing this survey. The research will utilise a secure survey platform, Qualtrics to ensure your anonymity and the confidentiality of your responses.

Please click here to access the survey:

`#{1://SurveyLink?d=Take the Survey}`

The results of this research may be published in scientific research journals or be presented at professional conferences. However, your identity will be omitted from any records and your responses will remain completely anonymous.

If you have questions about this research project, in particular to your rights as a research participant, please feel free to contact me through the provided contact details.

Yours sincerely,

Sin Mun, Chang
Doctoral Researcher | Yeoh Tiong Lay (YTL) Fellow



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Confidentiality

Aston University and Aston Business School (ABS) has a rigorous research ethics policy that require all its research projects to adhere to. As such, all raw data will be kept confidential and under password and/or lock protection throughout the project. All data will be destroyed five years after the conclusion of the project. Collected and analysed data may be published in case studies, academic journals and presented at conferences, but any information contained within these publications will be entirely anonymous, including the participating organisation. We will, of course, also adhere to any additional research ethics principles that may be held by your organisation, above and beyond any expectations of our own ethical procedures.

Consent Form – Front

Thank you for participating in this research study. Please take a few minutes to go through the research information before proceeding with the survey.

Research Information

This is a study about ethical leadership and its development within Malaysian-owned business organisation.

The study is designed to investigate the process that contributes to the development of ethical leadership behaviour in the business environment.

Data Protection and Management

Aston University Business School takes its obligations under data and privacy law seriously and complied with the General Data Protection Regulation (“GDPR”) and the Data Protection Act 2018 (“DPA”). The data we collected from you will be stored anonymously once submitted. No identifying personal information will be associated with your responses. You may withdraw your consent to share responses with the researcher. The data will be stored for a maximum of five years after the study is completed. The data will be stored in a secure private server at Aston University Business School and data will not be processed outside of the United Kingdom (UK). The data will only be process for statistical research purposes (GDPR Article 9(2)). A report of the findings may be submitted for academic publication.

By providing your consent, you acknowledge that you have read the following research information.

I consent to proceed

Consent Form – End

By clicking submit, you consent to share your data with the principal researcher of this study.

I consent to proceed and submit

Debriefing

Thank you very much for participating in the research study. Please take a few more minutes to read the following information, which will explain the aims and purpose of this study. If you have any questions, please feel free to contact the principle researcher, chang@aston.ac.uk.

This study is about investigating the development of ethical leadership and its importance within the business environment. Specifically, we aim to examine its implication within a Malaysian-owned business organisation.

If you have any concerns about the conduct of this study, please inform the Chair of the Work and Organisation Psychology (WOP) Group Research Ethics Committee (via the WOP Departmental Office, at Aston Business School, Aston University) in writing, providing a detailed account of your concern.

Work & Organizational Psychology Group
South Wing, Room 8002
Aston Business School, Aston University
Birmingham, B4 7ET



Confidentiality Statement

Aston University and Aston Business School (ABS) has a rigorous research ethics policy that require all its research projects to adhere to. As such, all raw data will be kept confidential and under password and/or lock protection throughout the project. All data will be destroyed five years after the conclusion of the project. Collected and analysed data may be published in case studies, academic journals and presented at conferences, but any information contained within these publications will be entirely anonymous, including the participating organisation. We will, of course, also adhere to any additional research ethics principles that may be held by you and your organisation, above and beyond any expectations of our own ethical procedures.

ETHICAL LEADERSHIP SURVEY QUESTIONNAIRE

(Line manager)

To help us provide the understanding of how behaviours are transferred across the organisation, please complete the following survey. It should take approximately 12 minutes.

Ethical Leadership	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
<i>Please rate your personal agreement with the following statements.</i>					
<i>My direct reporting manager,</i>					
Listens to what the departmental employees have to say.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Disciplines employees who violate ethical standards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conducts his/her personal life in an ethical manner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the best interests of employees in mind.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Makes fair and balanced decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Can be trusted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discusses business ethics or values with employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sets an example of how to do things the right way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Defines success not just by results, but also by the way they are obtained.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asks "what is the right thing to do?" when making decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Moral Organisational Identification	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
<i>Characteristics, including caring, compassionate, fair, friendly, generous, helpful, hardworking, honest, and kind, may describe a person. The person with these characteristics could be you or someone else.</i>					
<i>For a moment visualise in your mind the kind of person who has these characteristics. Imagine how that person would think, feel, and act. When you have a clear image of what this person would be like, answer the following questions.</i>					
Being a member of an organisation whose members have these characteristics is an important part of who I am.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I strongly desire to be a member of an organisation whose members have these characteristics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I regard myself as an organisational member who has these characteristics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would feel bad if I am a member of an organisation whose members have these characteristics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When thinking of an organisations to which others belong, I would be proud of my association with an organisation whose members have these characteristics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Prototype	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
<i>My direct reporting manager</i>					
Is a good example of the kind of people in my team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has a lot in common with the members of my team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Represents what is characteristic about my team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is very similar to what the members of my team value.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Represents what my team stands for.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ethical Leader Role	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
<i>In My Role, I</i>					
Conduct my personal life in an ethical manner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Define success not just by results, but also the way they're obtained.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discuss business ethics or values with employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Set an example on how to do things the right way they are obtained.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asks "what is the right thing to do?" when making decision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Line Manager Prototype	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
<i>I,</i>					
Am a good example of the kind of people in my team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have a lot in common with the members of my team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Represents what is characteristic about my team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Am very similar to what the members of my team value.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Represents what my team stands for.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Power distance Orientation	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
<i>Please rate your personal agreement with the following statements.</i>					
In most situations, managers should make decisions without consulting their staff.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In work-related matters, managers have a right to expect obedience from their staff.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees who often question authority sometimes keep their managers from being effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Once a top-level executive makes a decision, people working for the company should not question it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Employees should not express disagreements with their managers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managers should be able to make the right decisions without consulting with others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managers who let their employees participate in decisions lose power.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A company's rules should not be broken - not even when the employee thinks it is in the company's best interest.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Co-workers ethical behaviour	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
<i>My co-workers who are in similar managerial position</i>					
Supports me in following my company's standards of ethical behaviour	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carefully consider moral issues when making work-related decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Set a good example of ethical business behaviour overall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Voice Behaviour	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
<i>Please rate your personal agreement with the following statements.</i>					
Develops and makes recommendations concerning issues that affect this work group.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speaks up and encourages others to get involved in issues that affect this work group.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communicates his/her opinion about work issues to others in this group even if his/her opinion is different and others in the group disagree with him/her.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is well informed about issues where his/her opinion might be useful to this work group.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speaks up with ideas for new projects or changes in procedures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gets involved in issues that affect the quality of work life in this work group.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Work engagement (UWES)	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
<i>Please rate your agreement with the following statements.</i>					
At work, I feel full of energy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my job, I feel strong and vigorous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I get up in the morning, I feel like going to work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am enthusiastic about my job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My job inspires me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am proud of the work I do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel happy when I am working intensely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am immersed in my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get carried away when I am working.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Opportunity Human Resource Practices	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
<i>Please rate your personal agreement with the following statements.</i>					
The company uses job rotation for workers to gain experience by moving them across different functional areas or divisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Members of my team are appraised on their social relationships with other co-workers outside the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My team often arranges events for knowledge exchange (e.g., seminars, visits by outside experts, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The company sponsors various social events to encourage contact and relationship building among employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The company actively encourages workers to participate in "knowledge communities" (a bunch of people who have similar interests communicate and exchange information by using Yammer boards, forums, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The company invests considerable time and resources in building and operating communities of practice (e.g. providing technical support, budgets, rewards, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Status						
<i>Please rate your status (i.e., respect and influence) within your organisation.</i>						
1-Low <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4-Middle <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7-High <input type="checkbox"/>
<i>Please rate your co-worker's status (i.e., respect and influence) within your organisation.</i>						
1-Low <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4-Middle <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7-High <input type="checkbox"/>

Demographics			
*note nationality has been removed		Ethnicity	22 Different Ethnicities
Age	11 ranges	Gender	3 Categories
Education Level	6 categories		
How long have you been with the organisation?	11 categories		
How long have you been with the department/group?	11 categories		
How long have you been reporting to your current leader?	11 categories		
How many members are there in the team including the leader?	(1-3); (4-6); (7-9); (More than 10)		

Note: For the category and range, see below

Ethnicity categories:

1. Asian-Bangladeshi
2. Asian-Chinese
3. Asian-Indigenous (Orang Asli/
Kadazan/ Iban)
4. Asian-Indian
5. Asian-Malay
6. Asian-Pakistani
7. Asian-Punjabi
8. Asian-Other
9. Black African
10. Black-Caribbean
11. Black-Other
12. Mixed White/Asian (Eurasian)
13. Mixed White/Black
14. Mixed-Other
15. White-British
16. White-Irish
17. White-Scottish
18. White-Gypsy
19. White-Other
20. Arab
21. Any Other
22. Prefer Not to Say

Gender:

1. Male
2. Female
3. Prefer Not to Say

Age:

1. Under 20
2. 21-25
3. 26-30
4. 31-35
5. 36-40
6. 41-45
7. 46-50
8. 51-55
9. 56-60
10. 61-65
11. Over 65

Education Level:

1. Secondary education or equivalent
2. A-levels or equivalent
3. University Degree
4. Other Qualifications
5. Post-Graduate
6. Prefer Not to Say

Tenure (Organisation; Leader; Group):

1. Less than 1 year
2. 1 to 2 years
3. 2 to 3 years
4. 3 to 4 years
5. 4 to 5 years
6. 5 to 6 years
7. 6 to 7 years
8. 7 to 8 years
9. 8 to 9 years
10. 9 to 10 years
11. More than 10 years

To help us provide an understanding of how behaviours are transferred across the organisation, please complete the following survey. It should take approximately 12 minutes.

Moral Organisational Identification	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
Characteristics, including caring, compassionate, fair, friendly, generous, helpful, hardworking, honest, and kind, may describe a person. The person with these characteristics could be you or someone else.					
For a moment visualise in your mind the kind of person who has these characteristics. Imagine how that person would think, feel, and act. When you have a clear image of what this person would be like, answer the following questions.					
Being a member of an organisation whose members have these characteristics is an important part of who I am.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I strongly desire to be a member of an organisation whose members have these characteristics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I regard myself as an organisational member who has these characteristics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would feel bad if I am a member of an organisation whose members have these characteristics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When thinking of an organisations to which others belong, I would be proud of my association with an organisation whose members have these characteristics.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Power distance Orientation	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
Please rate your personal agreement with the following statements.					
In most situations, managers should make decisions without consulting their staff.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In work-related matters, managers have a right to expect obedience from their staff.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees who often question authority sometimes keep their managers from being effective.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Once a top-level executive makes a decision, people working for the company should not question it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees should not express disagreements with their managers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managers should be able to make the right decisions without consulting with others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managers who let their employees participate in decisions lose power.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A company's rules should not be broken - not even when the employee thinks it is in the company's best interest.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Co-workers ethical behaviour	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
My co-workers who are in similar leadership positon					
Supports me in following my company's standards of ethical behaviour	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Carefully consider moral issues when making work-related decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Set a good example of ethical business behaviour overall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ethical Leadership	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
Please rate your personal agreement with the following statements.					
My direct reporting manager,					
Listens to what the departmental employees have to say.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Disciplines employees who violate ethical standards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conducts his/her personal life in an ethical manner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has the best interests of employees in mind.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Makes fair and balanced decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Can be trusted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discusses business ethics or values with employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sets an example of how to do things the right way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Defines success not just by results, but also by the way they are obtained.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asks "what is the right thing to do?" when making decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Prototype	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
My direct reporting manager					
Is a good example of the kind of people in my team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has a lot in common with the members of my team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Represents what is characteristic about my team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is very similar to what the members of my team value.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Represents what my team stands for.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Opportunity Human Resource Practices	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
Please rate your personal agreement with the following statements.					
The company uses job rotation for workers to gain experience by moving them across different functional areas or divisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Members of my team are appraised on their social relationships with other co-workers outside the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My team often arranges events for knowledge exchange (e.g., seminars, visits by outside experts, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The company sponsors various social events to encourage contact and relationship building among employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The company actively encourages workers to participate in “knowledge communities” (a bunch of people who have similar interests communicate and exchange information by using Yammer boards, forums, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The company invests considerable time and resources in building and operating communities of practice (e.g. providing technical support, budgets, rewards, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ethical Leadership	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
Please rate your personal agreement with the following statements.					
I listen to what the departmental employees have to say.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I discipline employees who violate ethical standards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I conduct my personal life in an ethical manner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have the best interests of employees in mind.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I make fair and balanced decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can be trusted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I discuss business ethics or values with employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I set an example of how to do things the right way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I define success not just by results, but also by the way they are obtained.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I ask “what is the right thing to do?” when making decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prototype	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
Please rate your personal agreement with the following statements.					
I am a good example of the kind of people in my team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have a lot in common with the members of my team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I represent what is characteristic about my team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am very similar to what the members of my team value.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I represents what my team stands for.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Status						
Please rate your status (i.e., respect and influence) within your organisation.						
1-Low <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4-Middle <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7-High <input type="checkbox"/>
Please rate your co-worker's status (i.e., respect and influence) within your organisation.						

1-Low <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4-Middle <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7-High <input type="checkbox"/>
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Demographics			
*note nationality has been removed		Ethnicity	22 Different Ethnicities
Age	11 ranges	Gender	3 Categories
Education Level	6 categories		
How long have you been with the organisation?	11 categories		
How long have you been with the department/group?	11 categories		
How long have you been reporting to your current leader?	11 categories		
How many members are there in the team including the leader?	(1-3); (4-6); (7-9); (More than 10)		

Note: For the category and range, see page 261 above.

APPENDIX C

Table 1. HL and ML ethical leadership and the trickle-down model on vigour, dedication and absorption

	Vigour			
	Est	SE	Est	SE
Intercept	-	-	2.95**	.33
Company	.06	.10	.10	.12
Perceived status	.10*	.04	.10	.04*
Power distance	.02	.06	.04	.08
HL ethical leadership			-.03	.12
ML ethical leadership			.20*	.10
via ML ethical leadership			-.03	.12
			$R^2 = .05$	

	Dedication			
	Est	SE	Est	SE
Intercept	-	-	4.04**	.24
Company	.06	.10	.18	.12
Perceived status	.10*	.04	.11	.04*
Power distance	.02	.06	.03	.08
HL ethical leadership			.01	.13
ML ethical leadership			.28**	.08
via ML ethical leadership			.01	.13
			$R^2 = .02$	

	Absorption			
	Est	SE	Est	SE
Intercept	-	-	3.47**	.30
Company	.06	.10	.18	.12
Perceived status	.10*	.04	.05*	.04
Power distance	.02	.06	.03	.08
HL ethical leadership			-.04	.10
ML ethical leadership			.03	.11
via ML ethical leadership			-.04	.10
			$R^2 = .06$	

Table 2. line-manager perception of ethical leader role on the three dimensions of work engagement and comparison between alternative multilevel path structure models

Control	LMER			Vigor		
	Path	Est	SE	Path	Est	SE
Intercept		4.19*	.03		3.12**	.034
Company	a	-.12*	.07		.14	.13
Perceived status		.06*	.03	b1a	.09*	.04
Power distance		-.06	.05		.05	.08
		$R^2 = .01$			$R^2 = .03$	

Control	LMER			Dedication		
	Path	Est	SE	Path	Est	SE
Intercept		4.19*	.03		4.14**	.27
Company	a	-.12*	.07		-.11	.10
Perceived status		.06*	.03	b1b	.09*	.04
Power distance		-.06	.05		-.03	.07
		$R^2 = .01$			$R^2 = .01$	

Control	LMER			Absorption		
	Path	Est	SE	Path	Est	SE
Intercept		4.19*	.03		3.58*	.30
Company	a	-.12*	.07		.17	.14
Perceived status		.06*	.03	b1c	.04	.04
Power distance		-.06	.05		.01	.08
		$R^2 = .01$			$R^2 = .04$	

Multilevel structural equation path coefficients				
<i>Direct effect</i>				
	Est	SE	p-value	CI (LO, HI)
LMER → line manager vigor	.30	.20	.17	(-.25, .77)
LMER → line manager dedication	.36	.19	.058	(-.13, .87)
LMER → line manager absorption	.06	.14	.69	(-.31, .42)
<i>Indirect effect (HL ethical leadership)</i>				
	Est	SE	p-value	sig
HL ethical leadership → LMER → vigour	-.00	.03	1.0	(-.07, .07)
HL ethical leadership → LMER → dedication	-.00	.03	1.0	(-.09, .09)
HL ethical leadership → LMER → absorption	.00	.01	1.0	(-.02, .02)
<i>Indirect effect (ML ethical leadership)</i>				
	Est	SE	p-value	sig
ML ethical leadership → LMER → vigour	.02	.01	.16	(-.02, .06)
ML ethical leadership → LMER → dedication	.04	.02	.07	(-.02, .10)
ML ethical leadership → LMER → absorption	.00	.01	.79	(-.02, .03)

Note: $N = 174$ (line manager); $N = 67$ (ML leader). Line manager gender, organisation tenure, status and power distance are controlled at the within level while analysis is conducted at the between level. The indirect effect was reported using the estimate obtained from the analysis. The lower and upper confidence interval are listed below. LMER = line manager ethical leader role perception.

** $p < .01$ level (2-tailed); * $p < .05$ level (2-tailed).

Confirmatory Factor Analysis - Parcelling
MODEL FIT INFORMATION

Number of Free Parameters 64

Loglikelihood

H0 Value	-1811.979
H0 Scaling Correction Factor for MLR	1.3130
H1 Value	-1716.033
H1 Scaling Correction Factor for MLR	1.1731

Information Criteria

Akaike (AIC)	3751.957
Bayesian (BIC)	3954.137
Sample-Size Adjusted BIC ($n^* = (n + 2) / 24$)	3751.473

Chi-Square Test of Model Fit

Value	180.842*
Degrees of Freedom	80
P-Value	0.0000
Scaling Correction Factor for MLR	1.0611

* The chi-square value for MLM, MLMV, MLR, ULSMV, WLSM and WLSMV cannot be used for chi-square difference testing in the regular way. MLM, MLR and WLSM chi-square difference testing is described on the Mplus website. MLMV, WLSMV, and ULSMV difference testing is done using the DIFFTEST option.

RMSEA (Root Mean Square Error Of Approximation)

Estimate	0.085
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CFI/TLI

CFI	0.934
TLI	0.912

Chi-Square Test of Model Fit for the Baseline Model

Value	1646.314
Degrees of Freedom	108
P-Value	0.0000

SRMR (Standardized Root Mean Square Residual)

Value for Within	0.064
Value for Between	0.000

MODEL RESULTS

	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
Within Level				
F2W BY				
EM1	0.619	0.058	10.633	0.000
EM2	0.563	0.068	8.317	0.000
EM3	0.510	0.061	8.394	0.000
F3W BY				
RE1	0.232	0.023	9.894	0.000
RE2	0.364	0.028	13.194	0.000
RE3	0.386	0.030	12.901	0.000
F4W BY				
VOICE1	0.385	0.034	11.392	0.000
VOICE2	0.345	0.026	13.349	0.000
VOICE3	0.393	0.035	11.120	0.000
F5W BY				
WE1	0.433	0.052	8.367	0.000
WE2	0.565	0.043	13.223	0.000
WE3	0.611	0.043	14.151	0.000
F6W BY				
MI1	0.349	0.038	9.180	0.000
MI2	0.342	0.033	10.316	0.000
MI3	0.367	0.034	10.694	0.000
F3W WITH				
F2W	0.879	0.107	8.192	0.000
F4W WITH				
F2W	0.753	0.126	5.973	0.000
F3W	0.965	0.240	4.027	0.000
F5W WITH				
F2W	0.265	0.072	3.670	0.000
F3W	0.300	0.127	2.359	0.018
F4W	0.493	0.103	4.786	0.000

F6W WITH

F2W	0.768	0.105	7.311	0.000
F3W	0.955	0.177	5.407	0.000
F4W	1.002	0.170	5.900	0.000
F5W	0.560	0.130	4.319	0.000

Intercepts

EM1	4.283	0.056	76.265	0.000
EM2	4.349	0.056	77.137	0.000
EM3	4.377	0.056	78.062	0.000
RE1	4.368	0.048	90.828	0.000
RE2	4.422	0.043	102.191	0.000
RE3	4.391	0.049	89.137	0.000
VOICE1	4.339	0.056	77.456	0.000
VOICE2	4.239	0.052	82.235	0.000
VOICE3	4.333	0.060	72.220	0.000
WE1	4.140	0.047	88.725	0.000
WE2	4.054	0.055	73.209	0.000
WE3	3.944	0.055	71.233	0.000
MI1	4.612	0.045	102.346	0.000
MI2	4.546	0.047	97.259	0.000
MI3	4.362	0.064	68.364	0.000

Variances

F2W	1.000	0.000	999.000	999.000
F3W	2.000	0.000	999.000	999.000
F4W	2.000	0.000	999.000	999.000
F5W	1.000	0.000	999.000	999.000
F6W	2.000	0.000	999.000	999.000

Residual Variances

EM1	0.076	0.023	3.332	0.001
EM2	0.090	0.018	4.958	0.000
EM3	0.136	0.022	6.121	0.000
RE1	0.234	0.042	5.561	0.000
RE2	0.030	0.014	2.106	0.035
RE3	0.089	0.019	4.578	0.000
VOICE1	0.146	0.027	5.496	0.000
VOICE2	0.140	0.025	5.508	0.000
VOICE3	0.106	0.023	4.650	0.000
WE1	0.152	0.019	7.798	0.000
WE2	0.073	0.016	4.526	0.000
WE3	0.061	0.021	2.920	0.004
MI1	0.081	0.020	4.072	0.000
MI2	0.152	0.033	4.651	0.000
MI3	0.249	0.037	6.665	0.000

Between Level

F1B BY

EH1	0.353	0.040	8.906	0.000
EH2	0.283	0.052	5.489	0.000
EH3	0.299	0.042	7.078	0.000
Intercepts				
EH1	4.160	0.072	58.013	0.000
EH2	4.264	0.069	61.359	0.000
EH3	4.358	0.066	65.544	0.000
Variances				
F1B	2.000	0.000	999.000	999.000
Residual Variances				
EH1	0.095	0.042	2.232	0.026
EH2	0.163	0.044	3.701	0.000
EH3	0.118	0.030	3.933	0.000

Direct relationship of HL and ML ethical leadership on voice and work engagement

MODEL FIT INFORMATION

Number of Free Parameters 34

Loglikelihood

H0 Value -1309.655
H0 Scaling Correction Factor 1.0929
for MLR
H1 Value -1132.322
H1 Scaling Correction Factor 0.9606
for MLR

Information Criteria

Akaike (AIC) 2687.309
Bayesian (BIC) 2794.717
Sample-Size Adjusted BIC 2687.052
($n^* = (n + 2) / 24$)

Chi-Square Test of Model Fit

Value 458.708*
Degrees of Freedom 24
P-Value 0.0000
Scaling Correction Factor 0.7732
for MLR

* The chi-square value for MLM, MLMV, MLR, ULSMV, WLSM and WLSMV cannot be used for chi-square difference testing in the regular way. MLM, MLR and WLSM chi-square difference testing is described on the Mplus website. MLMV, WLSMV, and ULSMV difference testing is done using the DIFFTEST option.

RMSEA (Root Mean Square Error Of Approximation)

Estimate	0.323
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CFI/TLI

CFI	0.108
TLI	0.000

Chi-Square Test of Model Fit for the Baseline Model

Value	523.341
Degrees of Freedom	36
P-Value	0.0000

SRMR (Standardized Root Mean Square Residual)

Value for Within	0.203
Value for Between	0.374

MODEL RESULTS

	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
Within Level				
VOICE ON				
PO	-0.021	0.055	-0.378	0.705
COMP	-0.333	0.074	-4.520	0.000
ISTATY	0.064	0.026	2.436	0.015
UWES ON				
PO	0.016	0.071	0.220	0.826
COMP	0.001	0.104	0.005	0.996
ISTATY	0.111	0.033	3.358	0.001
UWES WITH VOICE				
	0.100	0.038	2.619	0.009

Means				
PO	2.616	0.043	60.539	0.000
COMP	1.379	0.067	20.445	0.000
ISTATY	4.270	0.111	38.511	0.000
Variances				
DEDI	0.425	0.074	5.701	0.000
ABSORB	0.354	0.052	6.801	0.000
PO	0.382	0.041	9.255	0.000
COMP	0.235	0.016	14.457	0.000
ISTATY	1.818	0.240	7.560	0.000
Residual Variances				
VOICE	0.243	0.041	5.982	0.000
UWES	0.384	0.055	6.989	0.000
Between Level				
VOICE ON				
ELHM	0.123	0.086	1.424	0.155
ELMM	0.367	0.073	5.013	0.000
UWES ON				
ELHM	-0.013	0.114	-0.117	0.907
ELMM	0.253	0.083	3.035	0.002
UWES WITH				
VOICE	-0.002	0.019	-0.112	0.911
Means				
ELHM	0.000	0.059	0.000	1.000
ELMM	0.000	0.066	0.000	1.000
DEDI	4.299	0.052	82.421	0.000
ABSORB	3.999	0.056	70.907	0.000
Intercepts				
VOICE	4.527	0.196	23.105	0.000
UWES	3.539	0.265	13.356	0.000
Variances				
ELHM	0.235	0.033	7.170	0.000
ELMM	0.289	0.074	3.894	0.000
DEDI	0.015	0.039	0.386	0.700
ABSORB	0.065	0.028	2.322	0.020
Residual Variances				
VOICE	0.003	0.025	0.103	0.918
UWES	0.013	0.033	0.402	0.687

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix 0.524E-18
 (ratio of smallest to largest eigenvalue)

CONFIDENCE INTERVALS OF MODEL RESULTS

	Lower .5%	Lower 2.5%	Lower 5%	Estimate	Upper 5%	Upper 2.5%	Upper .5%
Within Level							
VOICE ON							
PO	-0.162	-0.128	-0.111	-0.021	0.069	0.087	0.120
COMP	-0.523	-0.478	-0.455	-0.333	-0.212	-0.189	-0.143
ISTATY	-0.004	0.012	0.021	0.064	0.106	0.115	0.131
UWES ON							
PO	-0.167	-0.124	-0.101	0.016	0.132	0.155	0.199
COMP	-0.267	-0.203	-0.170	0.001	0.171	0.204	0.268
ISTATY	0.026	0.046	0.057	0.111	0.165	0.175	0.196
UWES WITH							
VOICE	0.002	0.025	0.037	0.100	0.163	0.175	0.199
Means							
PO	2.504	2.531	2.545	2.616	2.687	2.700	2.727
COMP	1.206	1.247	1.268	1.379	1.490	1.512	1.553
ISTATY	3.985	4.053	4.088	4.270	4.453	4.487	4.556
Variances							
DEDI	0.233	0.279	0.302	0.425	0.547	0.571	0.617
ABSORB	0.220	0.252	0.268	0.354	0.439	0.456	0.488
PO	0.276	0.301	0.314	0.382	0.450	0.463	0.489
COMP	0.193	0.204	0.209	0.235	0.262	0.267	0.277
ISTATY	1.198	1.347	1.422	1.818	2.213	2.289	2.437
Residual Variances							
VOICE	0.138	0.163	0.176	0.243	0.310	0.322	0.347
UWES	0.243	0.276	0.294	0.384	0.474	0.492	0.526
Between Level							
VOICE ON							
ELHM	-0.099	-0.046	-0.019	0.123	0.264	0.291	0.344
ELMM	0.178	0.223	0.246	0.367	0.487	0.510	0.555
UWES ON							
ELHM	-0.308	-0.238	-0.202	-0.013	0.175	0.211	0.281
ELMM	0.038	0.090	0.116	0.253	0.390	0.417	0.468

UWES WITH							
VOICE	-0.052	-0.040	-0.034	-0.002	0.030	0.036	0.048
Means							
ELHM	-0.153	-0.116	-0.097	0.000	0.097	0.116	0.153
ELMM	-0.169	-0.129	-0.108	0.000	0.108	0.129	0.169
DEDI	4.165	4.197	4.213	4.299	4.385	4.401	4.434
ABSORB	3.854	3.889	3.906	3.999	4.092	4.110	4.144
Intercepts							
VOICE	4.023	4.143	4.205	4.527	4.850	4.911	5.032
UWES	2.857	3.020	3.103	3.539	3.975	4.059	4.222
Variances							
ELHM	0.151	0.171	0.181	0.235	0.289	0.299	0.319
ELMM	0.098	0.144	0.167	0.289	0.412	0.435	0.481
DEDI	-0.085	-0.061	-0.049	0.015	0.079	0.091	0.115
ABSORB	-0.007	0.010	0.019	0.065	0.112	0.120	0.138
Residual Variances							
VOICE	-0.061	-0.046	-0.038	0.003	0.043	0.051	0.066
UWES	-0.072	-0.052	-0.041	0.013	0.068	0.079	0.099

Trickle-down model of ML-HL ethical leadership

MODEL FIT INFORMATION

Number of Free Parameters 35

Loglikelihood

H0 Value	-1309.654
H0 Scaling Correction Factor for MLR	1.0813
H1 Value	-1132.322
H1 Scaling Correction Factor for MLR	0.9606

Information Criteria

Akaike (AIC)	2689.308
Bayesian (BIC)	2799.875
Sample-Size Adjusted BIC	2689.043
(n* = (n + 2) / 24)	

Chi-Square Test of Model Fit

Value	456.464*
Degrees of Freedom	23

P-Value	0.0000
Scaling Correction Factor for MLR	0.7770

* The chi-square value for MLM, MLMV, MLR, ULSMV, WLSM and WLSMV cannot be used for chi-square difference testing in the regular way. MLM, MLR and WLSM chi-square difference testing is described on the Mplus website. MLMV, WLSMV, and ULSMV difference testing is done using the DIFFTEST option.

RMSEA (Root Mean Square Error Of Approximation)

Estimate	0.329
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CFI/TLI

CFI	0.111
TLI	0.000

Chi-Square Test of Model Fit for the Baseline Model

Value	523.341
Degrees of Freedom	36
P-Value	0.0000

SRMR (Standardized Root Mean Square Residual)

Value for Within	0.203
Value for Between	0.374

MODEL RESULTS

		Two-Tailed		
	Estimate	S.E.	Est./S.E.	P-Value

Within Level

VOICE	ON				
PO		-0.021	0.055	-0.378	0.705
COMP		-0.333	0.074	-4.520	0.000
ISTATY		0.064	0.026	2.436	0.015

UWES	ON				
PO		0.016	0.071	0.220	0.826
COMP		0.001	0.104	0.005	0.996
ISTATY		0.111	0.033	3.358	0.001

UWES WITH VOICE	0.100	0.038	2.619	0.009
Means				
PO	2.616	0.043	60.539	0.000
COMP	1.379	0.067	20.445	0.000
ISTATY	4.270	0.111	38.511	0.000
Variances				
DEDI	0.425	0.074	5.701	0.000
ABSORB	0.354	0.052	6.801	0.000
PO	0.382	0.041	9.255	0.000
COMP	0.235	0.016	14.457	0.000
ISTATY	1.818	0.240	7.560	0.000
Residual Variances				
VOICE	0.243	0.041	5.982	0.000
UWES	0.384	0.055	6.989	0.000
Between Level				
ELMM ON ELHM	-0.004	0.112	-0.034	0.973
VOICE ON ELHM	0.123	0.086	1.424	0.155
ELMM	0.367	0.073	5.013	0.000
UWES ON ELHM	-0.013	0.114	-0.117	0.907
ELMM	0.253	0.083	3.035	0.002
UWES WITH VOICE	-0.002	0.019	-0.112	0.911
Means				
ELHM	0.000	0.059	0.000	1.000
DEDI	4.299	0.052	82.421	0.000
ABSORB	3.999	0.056	70.907	0.000
Intercepts				
ELMM	0.000	0.066	0.000	1.000
VOICE	4.527	0.196	23.105	0.000
UWES	3.539	0.265	13.356	0.000
Variances				
ELHM	0.235	0.033	7.170	0.000
DEDI	0.015	0.039	0.386	0.700
ABSORB	0.065	0.028	2.322	0.020

Residual Variances

ELMM	0.289	0.074	3.896	0.000
VOICE	0.003	0.025	0.103	0.918
UWES	0.013	0.033	0.402	0.687

New/Additional Parameters

A1B1	-0.001	0.041	-0.035	0.972
TOTAL1	0.121	0.094	1.290	0.197
A1B2	-0.001	0.028	-0.035	0.972
TOTAL2	-0.014	0.114	-0.125	0.900

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix 0.283E-16
(ratio of smallest to largest eigenvalue)

CONFIDENCE INTERVALS OF MODEL RESULTS

Lower .5% Lower 2.5% Lower 5% Estimate Upper 5% Upper 2.5% Upper .5%

Within Level

VOICE ON

PO	-0.162	-0.128	-0.111	-0.021	0.069	0.087	0.120
COMP	-0.523	-0.478	-0.455	-0.333	-0.212	-0.189	-0.143
ISTATY	-0.004	0.012	0.021	0.064	0.106	0.115	0.131

UWES ON

PO	-0.167	-0.124	-0.101	0.016	0.132	0.155	0.199
COMP	-0.267	-0.203	-0.170	0.001	0.171	0.204	0.268
ISTATY	0.026	0.046	0.057	0.111	0.165	0.175	0.196

UWES WITH

VOICE	0.002	0.025	0.037	0.100	0.163	0.175	0.199
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Means

PO	2.504	2.531	2.545	2.616	2.687	2.700	2.727
COMP	1.206	1.247	1.268	1.379	1.490	1.512	1.553
ISTATY	3.985	4.053	4.088	4.270	4.453	4.487	4.556

Variances

DEDI	0.233	0.279	0.302	0.425	0.547	0.571	0.617
ABSORB	0.220	0.252	0.268	0.354	0.439	0.456	0.488
PO	0.276	0.301	0.314	0.382	0.450	0.463	0.489
COMP	0.193	0.204	0.209	0.235	0.262	0.267	0.277
ISTATY	1.198	1.347	1.422	1.818	2.213	2.289	2.437

Residual Variances

VOICE	0.138	0.163	0.176	0.243	0.310	0.322	0.347
UWES	0.243	0.276	0.294	0.384	0.474	0.492	0.526

Between Level

ELMM	ON							
ELHM		-0.294	-0.224	-0.189	-0.004	0.181	0.217	0.286
VOICE	ON							
ELHM		-0.099	-0.046	-0.019	0.123	0.264	0.291	0.344
ELMM		0.178	0.223	0.246	0.367	0.487	0.510	0.555
UWES	ON							
ELHM		-0.308	-0.238	-0.202	-0.013	0.175	0.211	0.281
ELMM		0.038	0.090	0.116	0.253	0.390	0.417	0.468
UWES	WITH							
VOICE		-0.052	-0.040	-0.034	-0.002	0.030	0.036	0.048
Means								
ELHM		-0.153	-0.116	-0.097	0.000	0.097	0.116	0.153
DEDI		4.165	4.197	4.213	4.299	4.385	4.401	4.434
ABSORB		3.854	3.889	3.906	3.999	4.092	4.110	4.144
Intercepts								
ELMM		-0.169	-0.129	-0.108	0.000	0.108	0.129	0.169
VOICE		4.023	4.143	4.205	4.527	4.850	4.911	5.032
UWES		2.857	3.020	3.103	3.539	3.975	4.059	4.222
Variances								
ELHM		0.151	0.171	0.181	0.235	0.289	0.299	0.319
DEDI		-0.085	-0.061	-0.049	0.015	0.079	0.091	0.115
ABSORB		-0.007	0.010	0.019	0.065	0.112	0.120	0.138
Residual Variances								
ELMM		0.098	0.144	0.167	0.289	0.412	0.435	0.481
VOICE		-0.061	-0.046	-0.038	0.003	0.043	0.051	0.066
UWES		-0.072	-0.052	-0.041	0.013	0.068	0.079	0.099
New/Additional Parameters								
A1B1		-0.107	-0.082	-0.069	-0.001	0.066	0.079	0.105
TOTAL1		-0.121	-0.063	-0.033	0.121	0.276	0.305	0.363
A1B2		-0.074	-0.057	-0.048	-0.001	0.046	0.055	0.072
TOTAL2		-0.309	-0.239	-0.203	-0.014	0.174	0.210	0.280

Serial Mediation on line manager voice behaviour

MODEL FIT INFORMATION

Number of Free Parameters 27

Loglikelihood

H0 Value -919.540
 H0 Scaling Correction Factor 1.0760
 for MLR

Information Criteria

Akaike (AIC) 1893.080
 Bayesian (BIC) 1978.375
 Sample-Size Adjusted BIC 1892.876
 ($n^* = (n + 2) / 24$)

MODEL RESULTS

Two-Tailed
 Estimate S.E. Est./S.E. P-Value

Within Level

VOICE ON

RE	0.519	0.133	3.892	0.000
PO	.012	0.047	0.253	0.801
COMP	-0.235	0.071	-3.317	0.001
ISTATY	0.037	0.025	1.480	0.139

RE ON

GPELM	0.423	0.075	5.606	0.000
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Means

PO	2.616	0.043	60.539	0.000
COMP	1.379	0.067	20.445	0.000
ISTATY	4.270	0.111	38.511	0.000

Variances

GPELM	0.167	0.028	5.970	0.000
PO	0.382	0.041	9.255	0.000
COMP	0.235	0.016	14.457	0.000
ISTATY	1.818	0.240	7.560	0.000

Residual Variances

RE	0.129	0.023	5.614	0.000
VOICE	0.198	0.039	5.124	0.000

Between Level

GPELM	ON				
ELHM		0.000	0.001	-0.128	0.898
VOICE	ON				
ELHM		0.147	0.100	1.465	0.143
GPELM		-0.087	0.030	-2.890	0.004
RE	ON				
GPELM		0.088	0.027	3.186	0.001
ELHM		0.102	0.079	1.299	0.194
VOICE	WITH				
RE		0.045	0.015	3.025	0.002
Means					
ELHM		0.000	0.059	0.000	1.000
Intercepts					
GPELM		0.000	0.000	999.000	999.000
RE		4.426	0.039	113.100	0.000
VOICE		4.423	0.180	24.577	0.000
Variances					
ELHM		0.235	0.033	7.170	0.000
Residual Variances					
GPELM		0.000	0.006	0.029	0.977
RE		0.050	0.018	2.804	0.005
VOICE		0.043	0.030	1.448	0.148
New/Additional Parameters					
A1B1		0.000	0.000	-0.129	0.897
A2B2		-0.009	0.007	-1.209	0.227
D1B1		0.045	0.007	6.173	0.000
A1D1B2		0.000	0.000	0.123	0.902
TOTALIND		-0.009	0.007	-1.200	0.230
TOTAL		0.138	0.096	1.430	0.153

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix -0.112E-02
 (ratio of smallest to largest eigenvalue)

CONFIDENCE INTERVALS OF MODEL RESULTS

	Lower .5%	Lower 2.5%	Lower 5%	Estimate	Upper 5%	Upper 2.5%	Upper .5%
Within Level							
VOICE ON							
RE	0.175	0.258	0.299	0.519	0.738	0.780	0.862
PO	-0.109	-0.080	-0.065	0.012	0.089	0.103	0.132
COMP	-0.417	-0.374	-0.351	-0.235	-0.118	-0.096	-0.053
ISTATY	-0.028	-0.012	-0.004	0.037	0.078	0.086	0.102
RE ON							
GPELM	0.229	0.275	0.299	0.423	0.547	0.571	0.617
Means							
PO	2.504	2.531	2.545	2.616	2.687	2.700	2.727
COMP	1.206	1.247	1.268	1.379	1.490	1.512	1.553
ISTATY	3.985	4.053	4.088	4.270	4.453	4.487	4.556
Variances							
GPELM	0.095	0.112	0.121	0.167	0.212	0.221	0.238
PO	0.276	0.301	0.314	0.382	0.450	0.463	0.489
COMP	0.193	0.204	0.209	0.235	0.262	0.267	0.277
ISTATY	1.198	1.347	1.422	1.818	2.213	2.289	2.437
Residual Variances							
RE	0.070	0.084	0.091	0.129	0.167	0.174	0.189
VOICE	0.098	0.122	0.134	0.198	0.261	0.273	0.297
Between Level							
GPELM ON							
ELHM	-0.002	-0.001	-0.001	0.000	0.001	0.001	0.001
VOICE ON							
ELHM	-0.111	-0.050	-0.018	0.147	0.311	0.343	0.404
GPELM	-0.164	-0.146	-0.136	-0.087	-0.037	-0.028	-0.009
RE ON							
GPELM	0.017	0.034	0.042	0.088	0.133	0.142	0.158
ELHM	-0.100	-0.052	-0.027	0.102	0.232	0.256	0.305
VOICE WITH							
RE	0.007	0.016	0.021	0.045	0.070	0.075	0.084
Means							
ELHM	-0.153	-0.116	-0.097	0.000	0.097	0.116	0.153

Intercepts							
GPELM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RE	4.326	4.350	4.362	4.426	4.491	4.503	4.527
VOICE	3.959	4.070	4.127	4.423	4.719	4.775	4.886
Variances							
ELHM	0.151	0.171	0.181	0.235	0.289	0.299	0.319
Residual Variances							
GPELM	-0.015	-0.012	-0.010	0.000	0.010	0.012	0.016
RE	0.004	0.015	0.021	0.050	0.079	0.084	0.095
VOICE	-0.033	-0.015	-0.006	0.043	0.091	0.101	0.119
New/Additional Parameters							
A1B1	-0.001	-0.001	-0.001	0.000	0.000	0.001	0.001
A2B2	-0.028	-0.023	-0.021	-0.009	0.003	0.006	0.010
D1B1	0.026	0.031	0.033	0.045	0.058	0.060	0.064
A1D1B2	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALIND	-0.028	-0.023	-0.021	-0.009	0.003	0.006	0.010
TOTAL	-0.110	-0.051	-0.021	0.138	0.296	0.326	0.386

Serial Mediation on line manager work engagement

MODEL FIT INFORMATION

Number of Free Parameters 27

Loglikelihood

H0 Value -976.595
H0 Scaling Correction Factor 1.0542
for MLR

Information Criteria

Akaike (AIC) 2007.191
Bayesian (BIC) 2092.485
Sample-Size Adjusted BIC 2006.986
(n* = (n + 2) / 24)

MODEL RESULTS

			Two-Tailed	
Estimate	S.E.	Est./S.E.	P-Value	

Within Level

UWES	ON				
RE	0.322	0.192	1.676	0.094	
PO	0.001	0.070	0.012	0.990	

COMP	0.017	0.105	0.167	0.868
ISTATY	0.093	0.035	2.692	0.007
RE ON				
GPELM	0.423	0.075	5.606	0.000
Means				
PO	2.616	0.043	60.539	0.000
COMP	1.379	0.067	20.445	0.000
ISTATY	4.270	0.111	38.511	0.000
Variiances				
GPELM	0.167	0.028	5.960	0.000
PO	0.382	0.041	9.255	0.000
COMP	0.235	0.016	14.457	0.000
ISTATY	1.818	0.240	7.560	0.000
Residual Variiances				
RE	0.131	0.023	5.559	0.000
UWES	0.373	0.050	7.544	0.000
Between Level				
GPELM ON				
ELHM	0.000	0.001	-0.121	0.904
UWES ON				
ELHM	0.001	0.114	0.012	0.990
GPELM	0.026	0.338	0.076	0.940
RE ON				
GPELM	0.100	0.152	0.660	0.509
ELHM	0.103	0.079	1.307	0.191
UWES WITH				
RE	0.017	0.016	1.054	0.292
Means				
ELHM	0.000	0.059	0.000	1.000
Intercepts				
GPELM	0.000	0.000	999.000	999.000
RE	4.425	0.039	112.427	0.000
UWES	3.639	0.267	13.633	0.000
Variiances				
ELHM	0.235	0.033	7.170	0.000

Residual Variances

GPELM	0.000	0.007	0.024	0.981
RE	0.048	0.018	2.736	0.006
UWES	0.022	0.032	0.680	0.497

New/Additional Parameters

A1B1	0.000	0.000	-0.125	0.901
A2B2	0.003	0.035	0.076	0.939
D1B1	0.032	0.040	0.809	0.418
A1D1B2	0.000	0.000	-0.265	0.791
TOTALIND	0.003	0.035	0.075	0.940
TOTAL	0.004	0.117	0.034	0.973

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix -0.318E-02
(ratio of smallest to largest eigenvalue)

CONFIDENCE INTERVALS OF MODEL RESULTS

Lower .5% Lower 2.5% Lower 5% Estimate Upper 5% Upper 2.5% Upper .5%

Within Level

UWES ON

RE	-0.173	-0.055	0.006	0.322	0.638	0.699	0.817
PO	-0.181	-0.137	-0.115	0.001	0.117	0.139	0.182
COMP	-0.253	-0.188	-0.155	0.017	0.190	0.223	0.288
ISTATY	0.004	0.025	0.036	0.093	0.150	0.161	0.182

RE ON

GPELM	0.229	0.275	0.299	0.423	0.547	0.571	0.617
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Means

PO	2.504	2.531	2.545	2.616	2.687	2.700	2.727
COMP	1.206	1.247	1.268	1.379	1.490	1.512	1.553
ISTATY	3.985	4.053	4.088	4.270	4.453	4.487	4.556

Variances

GPELM	0.095	0.112	0.121	0.167	0.213	0.221	0.239
PO	0.276	0.301	0.314	0.382	0.450	0.463	0.489
COMP	0.193	0.204	0.209	0.235	0.262	0.267	0.277
ISTATY	1.198	1.347	1.422	1.818	2.213	2.289	2.437

Residual Variances

RE	0.070	0.085	0.092	0.131	0.169	0.177	0.191
UWES	0.246	0.276	0.292	0.373	0.455	0.470	0.501

Between Level

GPELM ON							
ELHM	-0.002	-0.001	-0.001	0.000	0.001	0.001	0.001
UWES ON							
ELHM	-0.293	-0.223	-0.187	0.001	0.190	0.226	0.296
GPELM	-0.846	-0.638	-0.531	0.026	0.582	0.689	0.897
RE ON							
GPELM	-0.291	-0.198	-0.150	0.100	0.350	0.398	0.492
ELHM	-0.100	-0.051	-0.027	0.103	0.232	0.256	0.305
UWES WITH							
RE	-0.024	-0.015	-0.009	0.017	0.043	0.048	0.058
Means							
ELHM	-0.153	-0.116	-0.097	0.000	0.097	0.116	0.153
Intercepts							
GPELM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RE	4.323	4.347	4.360	4.425	4.489	4.502	4.526
UWES	2.952	3.116	3.200	3.639	4.079	4.163	4.327
Variances							
ELHM	0.151	0.171	0.181	0.235	0.289	0.299	0.319
Residual Variances							
GPELM	-0.017	-0.013	-0.011	0.000	0.011	0.013	0.017
RE	0.003	0.014	0.019	0.048	0.077	0.083	0.094
UWES	-0.061	-0.041	-0.031	0.022	0.075	0.085	0.105
New/Additional Parameters							
A1B1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
A2B2	-0.086	-0.065	-0.054	0.003	0.059	0.070	0.091
D1B1	-0.071	-0.046	-0.033	0.032	0.098	0.111	0.135
A1D1B2	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALIND	-0.087	-0.065	-0.054	0.003	0.060	0.071	0.092
TOTAL	-0.298	-0.226	-0.189	0.004	0.197	0.234	0.306

Moderation – Moral identification x Voice behaviour

MODEL FIT INFORMATION

Number of Free Parameters	15
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Loglikelihood

H0 Value	-188.378
H1 Value	-174.711

Information Criteria

Akaike (AIC)	406.756
Bayesian (BIC)	454.142
Sample-Size Adjusted BIC ($n^* = (n + 2) / 24$)	406.642

Chi-Square Test of Model Fit

Value	27.335
Degrees of Freedom	2
P-Value	0.0000

RMSEA (Root Mean Square Error Of Approximation)

Estimate	0.270
90 Percent C.I.	0.186 0.364
Probability RMSEA \leq .05	0.000

CFI/TLI

CFI	0.837
TLI	0.000

Chi-Square Test of Model Fit for the Baseline Model

Value	168.362
Degrees of Freedom	13
P-Value	0.0000

SRMR (Standardized Root Mean Square Residual)

Value	0.090
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MODEL RESULTS

	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
VOICE ON				
GPRE	0.478	0.118	4.058	0.000
GPMI	0.142	0.086	1.651	0.015
REXMI	0.276	0.083	3.325	0.047
COMP	-0.263	0.081	-3.260	0.001
PO	-0.023	0.058	-0.408	0.684
ISTATY	0.022	0.027	0.807	0.420
GPELM	0.105	0.083	1.261	0.207
GPRE ON				
GPELM	0.419	0.078	5.362	0.000
COMP	-0.114	0.065	-1.760	0.078
PO	-0.042	0.044	-0.954	0.340
ISTATY	0.066	0.022	2.926	0.003
Intercepts				
GPRE	-0.012	0.160	-0.074	0.941
VOICE	4.643	0.189	24.581	0.000
Residual Variances				
GPRE	0.152	0.016	9.469	0.000
VOICE	0.197	0.023	8.411	0.000
New/Additional Parameters				
LOW_MI	-0.542	0.000	*****	0.000
MED_MI	0.000	0.000	0.000	1.000
HIGH_MI	0.542	0.000	*****	0.000
IND_LOWM	0.185	0.066	2.803	0.001
IND_MEDM	0.201	0.059	3.396	0.001
IND_HIMI	0.215	0.067	3.208	0.005
IMM	-0.028	0.058	-0.489	0.625
DR_LOWMI	0.514	0.135	3.811	0.000
DR_MEDMI	0.478	0.118	4.058	0.000
DR_HIMI	0.441	0.142	3.105	0.002
TOT_LOWM	0.320	0.092	3.491	0.000
TOT_MEDM	0.305	0.084	3.641	0.000
TOT_HIMI	0.290	0.087	3.330	0.001

R-SQUARE

Observed Variable	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
GPRE	0.269	0.064	4.228	0.000
VOICE	0.371	0.061	6.098	0.000

CONFIDENCE INTERVALS OF MODEL RESULTS

	Lower .5%	Lower 2.5%	Lower 5%	Estimate	Upper 5%	Upper 2.5%	Upper .5%
VOICE ON							
GPRE	0.169	0.248	0.286	0.478	0.671	0.710	0.774
GPMI	-0.015	0.083	0.102	0.142	0.315	0.352	0.426
REXMI	0.013	0.065	0.163	0.276	0.168	0.226	0.349
COMP	-0.478	-0.425	-0.401	-0.263	-0.135	-0.111	-0.069
PO	-0.174	-0.136	-0.116	-0.023	0.073	0.089	0.122
ISTATY	-0.046	-0.030	-0.022	0.022	0.066	0.075	0.094
GPELM	-0.116	-0.058	-0.029	0.105	0.243	0.267	0.321
GPRE ON							
GPELM	0.239	0.283	0.302	0.419	0.558	0.590	0.651
COMP	-0.278	-0.239	-0.218	-0.114	-0.005	0.014	0.055
PO	-0.156	-0.128	-0.113	-0.042	0.032	0.047	0.072
ISTATY	0.002	0.018	0.025	0.066	0.100	0.107	0.119
Intercepts							
GPRE	-0.426	-0.335	-0.280	-0.012	0.242	0.299	0.401
VOICE	4.159	4.273	4.335	4.643	4.952	5.008	5.143
Residual Variances							
GPRE	0.117	0.126	0.131	0.152	0.185	0.191	0.200
VOICE	0.149	0.162	0.168	0.197	0.250	0.258	0.275
New/Additional Parameters							
LOW_MI	-0.542	-0.542	-0.542	-0.542	-0.542	-0.542	-0.542
MED_MI	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HIGH_MI	0.542	0.542	0.542	0.542	0.542	0.542	0.542
IND_LOWM	0.057	0.097	0.118	0.215	0.341	0.368	0.425
IND_MEDM	0.074	0.105	0.121	0.200	0.320	0.345	0.399
IND_HIMI	0.035	0.076	0.092	0.185	0.311	0.340	0.397
IMM	-0.184	-0.135	-0.118	-0.028	0.068	0.092	0.144
DR_LOWMI	0.126	0.232	0.282	0.514	0.719	0.752	0.847
DR_MEDMI	0.169	0.248	0.286	0.478	0.671	0.710	0.774
DR_HIMI	0.061	0.158	0.206	0.441	0.671	0.718	0.803
TOT_LOWM	0.080	0.149	0.178	0.320	0.478	0.506	0.577
TOT_MEDM	0.095	0.150	0.177	0.305	0.452	0.481	0.540
TOT_HIMI	0.073	0.131	0.157	0.290	0.445	0.476	0.535

Moderation – Moral identification x Work Engagement

MODEL FIT INFORMATION

Number of Free Parameters 15

Loglikelihood

H0 Value -213.468
H1 Value -199.801

Information Criteria

Akaike (AIC) 456.937
Bayesian (BIC) 504.323
Sample-Size Adjusted BIC 456.823
($n^* = (n + 2) / 24$)

Chi-Square Test of Model Fit

Value 27.335
Degrees of Freedom 2
P-Value 0.0000

RMSEA (Root Mean Square Error Of Approximation)

Estimate 0.270
90 Percent C.I. 0.186 0.364
Probability RMSEA \leq .05 0.000

CFI/TLI

CFI 0.754
TLI 0.000

Chi-Square Test of Model Fit for the Baseline Model

Value 115.835
Degrees of Freedom 13
P-Value 0.0000

SRMR (Standardized Root Mean Square Residual)

Value 0.082

MODEL RESULTS

	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
WORK ON				
GPRE	0.053	0.108	0.489	0.625
GPMI	0.330	0.100	3.308	0.001
REXMI	-0.002	0.195	-0.009	0.992
COMP	0.167	0.090	1.859	0.063
PO	0.034	0.063	0.535	0.593
ISTATY	0.064	0.036	1.777	0.076
GPELM	0.056	0.093	0.596	0.551
GPRE ON				
GPELM	0.419	0.078	5.362	0.000
COMP	-0.114	0.065	-1.760	0.078
PO	-0.042	0.044	-0.954	0.340
ISTATY	0.066	0.022	2.926	0.003
Intercepts				
GPRE	-0.012	0.160	-0.074	0.941
WORK	3.453	0.224	15.427	0.000
Residual Variances				
GPRE	0.152	0.016	9.469	0.000
WORK	0.262	0.040	6.632	0.000
New/Additional Parameters				
LOW_MI	-0.542	0.000	*****	0.000
MED_MI	0.000	0.000	0.000	1.000
HIGH_MI	0.542	0.000	*****	0.000
IND_LOWM	0.023	0.067	0.335	0.738
IND_MEDM	0.022	0.047	0.474	0.636
IND_HIMI	0.022	0.061	0.354	0.723
IMM	-0.001	0.082	-0.009	0.993
DR_LOWMI	0.054	0.158	0.340	0.734
DR_MEDMI	0.053	0.108	0.489	0.625
DR_HIMI	0.052	0.144	0.360	0.719
TOT_LOWM	0.078	0.102	0.768	0.442
TOT_MEDM	0.078	0.089	0.879	0.379
TOT_HIMI	0.077	0.096	0.805	0.421

R-SQUARE

Observed Variable	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
GPRE	0.269	0.064	4.228	0.000
WORK	0.171	0.057	2.989	0.003

CONFIDENCE INTERVALS OF MODEL RESULTS

	Lower .5%	Lower 2.5%	Lower 5%	Estimate	Upper 5%	Upper 2.5%	Upper .5%
WORK ON							
GPRE	-0.233	-0.160	-0.120	0.053	0.231	0.261	0.323
GPMI	0.077	0.129	0.161	0.330	0.487	0.522	0.582
REXMI	-0.360	-0.283	-0.245	-0.002	0.376	0.476	0.639
COMP	-0.078	-0.020	0.011	0.167	0.308	0.332	0.383
PO	-0.140	-0.093	-0.072	0.034	0.136	0.154	0.192
ISTATY	-0.015	0.001	0.011	0.064	0.132	0.146	0.174
GPPELM	-0.172	-0.118	-0.089	0.056	0.214	0.249	0.326
GPPELM ON							
GPPELM	0.239	0.283	0.302	0.419	0.558	0.590	0.651
COMP	-0.278	-0.239	-0.218	-0.114	-0.005	0.014	0.055
PO	-0.156	-0.128	-0.113	-0.042	0.032	0.047	0.072
ISTATY	0.002	0.018	0.025	0.066	0.100	0.107	0.119
Intercepts							
GPPELM	-0.426	-0.335	-0.280	-0.012	0.242	0.299	0.401
WORK	2.885	3.024	3.090	3.453	3.824	3.894	4.047
Residual Variances							
GPPELM	0.117	0.126	0.131	0.152	0.185	0.191	0.200
WORK	0.186	0.204	0.215	0.262	0.360	0.376	0.414
New/Additional Parameters							
LOW_MI	-0.542	-0.542	-0.542	-0.542	-0.542	-0.542	-0.542
MED_MI	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HIGH_MI	0.542	0.542	0.542	0.542	0.542	0.542	0.542
IND_LOWM	-0.189	-0.121	-0.090	0.023	0.122	0.141	0.189
IND_MEDM	-0.104	-0.067	-0.049	0.022	0.103	0.120	0.153
IND_HIMI	-0.155	-0.104	-0.082	0.022	0.120	0.141	0.181
IMM	-0.168	-0.130	-0.109	-0.001	0.154	0.195	0.273
DR_LOWMI	-0.434	-0.291	-0.223	0.054	0.271	0.310	0.380
DR_MEDMI	-0.233	-0.160	-0.120	0.053	0.231	0.261	0.323
DR_HIMI	-0.326	-0.235	-0.190	0.052	0.283	0.332	0.419
TOT_LOWM	-0.177	-0.108	-0.076	0.078	0.259	0.295	0.367
TOT_MEDM	-0.141	-0.088	-0.060	0.078	0.231	0.260	0.327
TOT_HIMI	-0.167	-0.113	-0.082	0.077	0.233	0.265	0.329

Post Hoc – HL, ML, Trickle-down Model, and LMER on the three Dimension of work engagement (vigor, dedication, absorption)

MODEL FIT INFORMATION

Number of Free Parameters	41
Loglikelihood	
H0 Value	-1139.073
H0 Scaling Correction Factor for MLR	1.0826
H1 Value	-1138.798
Information Criteria	
Akaike (AIC)	2360.146
Bayesian (BIC)	2489.667
Sample-Size Adjusted BIC ($n^* = (n + 2) / 24$)	2359.835

Chi-Square Test of Model Fit

Value	0.550*
Degrees of Freedom	3
P-Value	0.9078
Scaling Correction Factor for MLR	Undefined

* The chi-square value for MLM, MLMV, MLR, ULSMV, WLSM and WLSMV cannot be used for chi-square difference testing in the regular way. MLM, MLR and WLSM chi-square difference testing is described on the Mplus website. MLMV, WLSMV, and ULSMV difference testing is done using the DIFFTEST option.

RMSEA (Root Mean Square Error Of Approximation)

Estimate	0.000
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CFI/TLI

CFI	1.000
TLI	1.000

Chi-Square Test of Model Fit for the Baseline Model

Value	222.951
Degrees of Freedom	25
P-Value	0.0000

SRMR (Standardized Root Mean Square Residual)

Value for Within	0.010
Value for Between	0.011

MODEL RESULTS

		Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
Within Level					
VIGOR	ON				
PO		0.037	0.082	0.454	0.650
COMP		0.098	0.119	0.822	0.411
ISTATY		0.105	0.037	2.857	0.004
DEDI	ON				
PO		-0.018	0.067	-0.267	0.789
COMP		-0.130	0.099	-1.311	0.190
ISTATY		0.110	0.036	3.043	0.002
ABSORB	ON				
PO		0.029	0.081	0.363	0.716
COMP		0.178	0.120	1.480	0.139
ISTATY		0.048	0.035	1.358	0.174
DEDI	WITH VIGOR	0.297	0.058	5.147	0.000
ABSORB	WITH VIGOR	0.114	0.031	3.703	0.000
	DEDI	0.119	0.034	3.504	0.000
Means					
PO		2.616	0.043	60.539	0.000
COMP		1.379	0.067	20.445	0.000
ISTATY		4.270	0.111	38.511	0.000
Variances					
PO		0.382	0.041	9.255	0.000
COMP		0.235	0.016	14.457	0.000
ISTATY		1.818	0.240	7.560	0.000
Residual Variances					
VIGOR		0.512	0.068	7.579	0.000
DEDI		0.369	0.071	5.198	0.000
ABSORB		0.349	0.051	6.893	0.000
Between Level					
ELMM	ON				
ELHM		-0.004	0.112	-0.034	0.973

VIGOR	ON				
ELHM		-0.027	0.119	-0.224	0.822
ELMM		0.200	0.103	1.941	0.052
DEDI	ON				
ELHM		0.014	0.127	0.108	0.914
ELMM		0.281	0.085	3.299	0.001
ABSORB	ON				
ELHM		-0.038	0.097	-0.394	0.694
ELMM		0.034	0.108	0.314	0.753
DEDI	WITH				
VIGOR		0.025	0.054	0.461	0.645
ABSORB	WITH				
VIGOR		0.049	0.034	1.428	0.153
DEDI		0.030	0.027	1.111	0.267
Means					
ELHM		0.000	0.059	0.000	1.000
Intercepts					
ELMM		0.000	0.066	0.000	1.000
VIGOR		3.138	0.325	9.664	0.000
DEDI		4.044	0.240	16.830	0.000
ABSORB		3.469	0.304	11.394	0.000
Variances					
ELHM		0.235	0.033	7.170	0.000
Residual Variances					
ELMM		0.289	0.074	3.896	0.000
VIGOR		0.049	0.063	0.778	0.437
DEDI		0.019	0.060	0.310	0.756
ABSORB		0.057	0.029	1.956	0.050
New/Additional Parameters					
A1B1		-0.001	0.022	-0.035	0.972
TOTAL1		-0.027	0.119	-0.230	0.818
A1B2		-0.001	0.032	-0.035	0.972
TOTAL2		0.013	0.126	0.100	0.920
A1B3		0.000	0.004	-0.034	0.973
TOTAL3		-0.039	0.098	-0.394	0.693

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix 0.814E-17
 (ratio of smallest to largest eigenvalue)

CONFIDENCE INTERVALS OF MODEL RESULTS

	Lower .5%	Lower 2.5%	Lower 5%	Estimate	Upper 5%	Upper 2.5%	Upper .5%
Within Level							
VIGOR ON							
PO	-0.175	-0.124	-0.098	0.037	0.173	0.199	0.250
COMP	-0.209	-0.136	-0.098	0.098	0.294	0.332	0.405
ISTATY	0.010	0.033	0.044	0.105	0.165	0.177	0.199
DEDI ON							
PO	-0.192	-0.150	-0.129	-0.018	0.093	0.114	0.156
COMP	-0.386	-0.325	-0.293	-0.130	0.033	0.064	0.126
ISTATY	0.017	0.039	0.051	0.110	0.169	0.181	0.203
ABSORB ON							
PO	-0.178	-0.129	-0.103	0.029	0.162	0.187	0.237
COMP	-0.132	-0.058	-0.020	0.178	0.376	0.414	0.489
ISTATY	-0.043	-0.021	-0.010	0.048	0.106	0.118	0.139
DEDI WITH							
VIGOR	0.148	0.184	0.202	0.297	0.392	0.410	0.446
ABSORB WITH							
VIGOR	0.035	0.054	0.064	0.114	0.165	0.175	0.194
DEDI	0.032	0.052	0.063	0.119	0.175	0.186	0.207
Means							
PO	2.504	2.531	2.545	2.616	2.687	2.700	2.727
COMP	1.206	1.247	1.268	1.379	1.490	1.512	1.553
ISTATY	3.985	4.053	4.088	4.270	4.453	4.487	4.556
Variances							
PO	0.276	0.301	0.314	0.382	0.450	0.463	0.489
COMP	0.193	0.204	0.209	0.235	0.262	0.267	0.277
ISTATY	1.198	1.347	1.422	1.818	2.213	2.289	2.437
Residual Variances							
VIGOR	0.338	0.379	0.401	0.512	0.623	0.644	0.686
DEDI	0.186	0.230	0.252	0.369	0.485	0.508	0.551
ABSORB	0.218	0.250	0.265	0.349	0.432	0.448	0.479

Between Level

ELMM ON							
ELHM	-0.294	-0.224	-0.189	-0.004	0.181	0.217	0.286
VIGOR ON							
ELHM	-0.333	-0.260	-0.223	-0.027	0.169	0.207	0.280
ELMM	-0.065	-0.002	0.030	0.200	0.369	0.402	0.465
DEDI ON							
ELHM	-0.313	-0.235	-0.195	0.014	0.222	0.262	0.340
ELMM	0.062	0.114	0.141	0.281	0.421	0.448	0.500
ABSORB ON							
ELHM	-0.289	-0.229	-0.199	-0.038	0.122	0.153	0.213
ELMM	-0.243	-0.177	-0.143	0.034	0.211	0.245	0.311
DEDI WITH							
VIGOR	-0.113	-0.080	-0.064	0.025	0.113	0.130	0.163
ABSORB WITH							
VIGOR	-0.039	-0.018	-0.007	0.049	0.105	0.116	0.137
DEDI	-0.039	-0.023	-0.014	0.030	0.074	0.083	0.099
Means							
ELHM	-0.153	-0.116	-0.097	0.000	0.097	0.116	0.153
Intercepts							
ELMM	-0.169	-0.129	-0.108	0.000	0.108	0.129	0.169
VIGOR	2.301	2.501	2.603	3.138	3.672	3.774	3.974
DEDI	3.425	3.573	3.649	4.044	4.439	4.515	4.663
ABSORB	2.685	2.872	2.968	3.469	3.970	4.066	4.253
Variances							
ELHM	0.151	0.171	0.181	0.235	0.289	0.299	0.319
Residual Variances							
ELMM	0.098	0.144	0.167	0.289	0.412	0.435	0.481
VIGOR	-0.113	-0.074	-0.054	0.049	0.152	0.172	0.211
DEDI	-0.136	-0.099	-0.080	0.019	0.117	0.136	0.173
ABSORB	-0.018	0.000	0.009	0.057	0.106	0.115	0.133
New/Additional Parameters							
A1B1	-0.059	-0.045	-0.038	-0.001	0.036	0.043	0.057
TOTAL1	-0.335	-0.262	-0.224	-0.027	0.169	0.207	0.280
A1B2	-0.082	-0.063	-0.053	-0.001	0.051	0.061	0.080
TOTAL2	-0.311	-0.233	-0.194	0.013	0.219	0.259	0.336
A1B3	-0.010	-0.008	-0.007	0.000	0.006	0.007	0.010
TOTAL3	-0.290	-0.230	-0.199	-0.039	0.122	0.153	0.213

HL and ML ethical leadership trickle down on Vigour

MODEL FIT INFORMATION

Number of Free Parameters 26

Loglikelihood

H0 Value -966.032
 H0 Scaling Correction Factor 1.1251
 for MLR
 H1 Value -960.404
 H1 Scaling Correction Factor 0.9590
 for MLR

Information Criteria

Akaike (AIC) 1984.064
 Bayesian (BIC) 2066.199
 Sample-Size Adjusted BIC 1983.867
 ($n^* = (n + 2) / 24$)

Chi-Square Test of Model Fit

Value 47.034*
 Degrees of Freedom 6
 P-Value 0.0000
 Scaling Correction Factor 0.2393
 for MLR

* The chi-square value for MLM, MLMV, MLR, ULSMV, WLSM and WLSMV cannot be used for chi-square difference testing in the regular way. MLM, MLR and WLSM chi-square difference testing is described on the Mplus website. MLMV, WLSMV, and ULSMV difference testing is done using the DIFFTEST option.

RMSEA (Root Mean Square Error Of Approximation)

Estimate 0.198

CFI/TLI

CFI 0.482
 TLI 0.000

Chi-Square Test of Model Fit for the Baseline Model

Value 95.242
 Degrees of Freedom 16
 P-Value 0.0000

SRMR (Standardized Root Mean Square Residual)

Value for Within	0.063
Value for Between	0.133

MODEL RESULTS

	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
Within Level				
VIGOR ON				
RE	0.259	0.199	1.300	0.193
PO	0.047	0.085	0.554	0.580
COMP	0.140	0.129	1.082	0.279
ISTATY	0.090	0.038	2.385	0.017
Means				
PO	2.616	0.043	60.539	0.000
COMP	1.379	0.067	20.445	0.000
ISTATY	4.270	0.111	38.511	0.000
Variances				
RE	0.161	0.025	6.465	0.000
PO	0.382	0.041	9.255	0.000
COMP	0.235	0.016	14.457	0.000
ISTATY	1.818	0.240	7.560	0.000
Residual Variances				
VIGOR	0.519	0.067	7.713	0.000
Between Level				
ELMM ON				
ELHM	-0.004	0.112	-0.034	0.973
VIGOR ON				
ELHM	-0.026	0.115	-0.222	0.824
ELMM	0.230	0.103	2.248	0.025
RE ON				
ELMM	0.484	0.073	6.657	0.000
ELHM	0.089	0.057	1.567	0.117
VIGOR WITH				
RE	-0.001	0.017	-0.044	0.965
Means				
ELHM	0.000	0.059	0.000	1.000

Intercepts				
ELMM	0.000	0.066	0.000	1.000
RE	4.418	0.028	160.398	0.000
VIGOR	3.120	0.331	9.427	0.000

Variances				
ELHM	0.235	0.033	7.170	0.000

Residual Variances				
ELMM	0.289	0.074	3.896	0.000
RE	0.001	0.037	0.017	0.987
VIGOR	0.032	0.047	0.683	0.495

New/Additional Parameters				
A1B1	-0.001	0.029	-0.034	0.973
A2B2	0.021	0.015	1.405	0.160
D1B1	0.126	0.097	1.290	0.197
A1D1B2	0.000	0.013	-0.035	0.972
TOTALIND	0.019	0.046	0.419	0.675
TOTAL	-0.006	0.120	-0.054	0.957

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix 0.136E-16
(ratio of smallest to largest eigenvalue)

CONFIDENCE INTERVALS OF MODEL RESULTS

Lower .5% Lower 2.5% Lower 5% Estimate Upper 5% Upper 2.5% Upper .5%

Within Level

VIGOR ON							
RE	-0.254	-0.132	-0.069	0.259	0.587	0.650	0.773
PO	-0.171	-0.119	-0.092	0.047	0.186	0.212	0.264
COMP	-0.193	-0.113	-0.073	0.140	0.352	0.393	0.472
ISTATY	-0.007	0.016	0.028	0.090	0.153	0.165	0.188

Means							
PO	2.504	2.531	2.545	2.616	2.687	2.700	2.727
COMP	1.206	1.247	1.268	1.379	1.490	1.512	1.553
ISTATY	3.985	4.053	4.088	4.270	4.453	4.487	4.556

Variances							
RE	0.097	0.112	0.120	0.161	0.202	0.209	0.225
PO	0.276	0.301	0.314	0.382	0.450	0.463	0.489
COMP	0.193	0.204	0.209	0.235	0.262	0.267	0.277
ISTATY	1.198	1.347	1.422	1.818	2.213	2.289	2.437

Residual Variances

VIGOR	0.345	0.387	0.408	0.519	0.629	0.650	0.692
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Between Level

ELMM ON

ELHM	-0.294	-0.224	-0.189	-0.004	0.181	0.217	0.286
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VIGOR ON

ELHM	-0.321	-0.251	-0.215	-0.026	0.163	0.200	0.270
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ELMM	-0.034	0.030	0.062	0.230	0.399	0.431	0.495
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RE ON

ELMM	0.297	0.342	0.364	0.484	0.604	0.627	0.671
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ELHM	-0.057	-0.022	-0.004	0.089	0.183	0.201	0.236
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VIGOR WITH

RE	-0.045	-0.035	-0.029	-0.001	0.028	0.033	0.044
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Means

ELHM	-0.153	-0.116	-0.097	0.000	0.097	0.116	0.153
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Intercepts

ELMM	-0.169	-0.129	-0.108	0.000	0.108	0.129	0.169
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RE	4.347	4.364	4.372	4.418	4.463	4.472	4.489
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VIGOR	2.268	2.471	2.576	3.120	3.665	3.769	3.973
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Variances

ELHM	0.151	0.171	0.181	0.235	0.289	0.299	0.319
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Residual Variances

ELMM	0.098	0.144	0.167	0.289	0.412	0.435	0.481
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RE	-0.095	-0.072	-0.061	0.001	0.062	0.074	0.097
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VIGOR	-0.088	-0.060	-0.045	0.032	0.109	0.123	0.152
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New/Additional Parameters

A1B1	-0.076	-0.058	-0.049	-0.001	0.047	0.056	0.074
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A2B2	-0.017	-0.008	-0.004	0.021	0.045	0.049	0.058
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D1B1	-0.017	-0.003	0.004	0.040	0.076	0.083	0.097
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A1D1B2	-0.033	-0.025	-0.021	0.000	0.020	0.024	0.032
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TOTALIND	-0.098	-0.070	-0.056	0.019	0.094	0.109	0.137
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TOTAL	-0.315	-0.241	-0.204	-0.006	0.191	0.228	0.302
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HL and ML ethical leadership trickle down on Dedication

MODEL FIT INFORMATION

Number of Free Parameters	26
Loglikelihood	
H0 Value	-932.760
H0 Scaling Correction Factor for MLR	1.2425
H1 Value	-927.064

Information Criteria

Akaike (AIC)	1917.520
Bayesian (BIC)	1999.655
Sample-Size Adjusted BIC ($n^* = (n + 2) / 24$)	1917.323

Chi-Square Test of Model Fit

Value	11.391*
Degrees of Freedom	6
P-Value	0.0770
Scaling Correction Factor	Undefined for MLR

* The chi-square value for MLM, MLMV, MLR, ULSMV, WLSM and WLSMV cannot be used for chi-square difference testing in the regular way. MLM, MLR and WLSM chi-square difference testing is described on the Mplus website. MLMV, WLSMV, and ULSMV difference testing is done using the DIFFTEST option.

RMSEA (Root Mean Square Error Of Approximation)

Estimate	0.072
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CFI/TLI

CFI	0.936
TLI	0.829

Chi-Square Test of Model Fit for the Baseline Model

Value	99.948
Degrees of Freedom	16
P-Value	0.0000

SRMR (Standardized Root Mean Square Residual)

Value for Within	0.064
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Value for Between 0.145
MODEL RESULTS

		Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
Within Level					
DEDI	ON				
RE		0.368	0.194	1.892	0.058
PO		-0.026	0.070	-0.372	0.710
COMP		-0.109	0.099	-1.101	0.271
ISTATY		0.086	0.038	2.282	0.022
Means					
PO		2.616	0.043	60.539	0.000
COMP		1.379	0.067	20.445	0.000
ISTATY		4.270	0.111	38.511	0.000
Variances					
RE		0.160	0.024	6.553	0.000
PO		0.382	0.041	9.255	0.000
COMP		0.235	0.016	14.457	0.000
ISTATY		1.818	0.240	7.560	0.000
Residual Variances					
DEDI		0.364	0.061	5.965	0.000
Between Level					
ELMM	ON				
ELHM		-0.004	0.112	-0.034	0.973
DEDI	ON				
ELHM		0.021	0.131	0.157	0.875
ELMM		0.307	0.086	3.566	0.000
RE	ON				
ELMM		0.483	0.074	6.516	0.000
ELHM		0.089	0.059	1.506	0.132
DEDI	WITH				
RE		-0.002	0.039	-0.044	0.965
Means					
ELHM		0.000	0.059	0.000	1.000
Intercepts					
ELMM		0.000	0.066	0.000	1.000
RE		4.418	0.028	157.258	0.000

DEDI	4.143	0.237	17.458	0.000
Variances				
ELHM	0.235	0.033	7.170	0.000
Residual Variances				
ELMM	0.289	0.074	3.896	0.000
RE	0.001	0.040	0.033	0.973
DEDI	0.010	0.053	0.188	0.851
New/Additional Parameters				
A1B1	-0.001	0.034	-0.034	0.973
A2B2	0.027	0.019	1.427	0.154
D1B1	0.040	0.022	1.815	0.069
A1D1B2	-0.001	0.017	-0.035	0.972
TOTALIND	0.026	0.057	0.452	0.651
TOTAL	0.046	0.136	0.339	0.735

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix 0.160E-16
(ratio of smallest to largest eigenvalue)

CONFIDENCE INTERVALS OF MODEL RESULTS

	Lower .5%	Lower 2.5%	Lower 5%	Estimate	Upper 5%	Upper 2.5%	Upper .5%
Within Level							
DEDI	ON						
RE	-0.133	-0.013	-0.048	0.368	0.687	0.749	0.868
PO	-0.207	-0.164	-0.142	-0.026	0.090	0.112	0.155
COMP	-0.364	-0.303	-0.272	-0.109	0.054	0.085	0.146
ISTATY	-0.011	0.012	0.024	0.086	0.148	0.160	0.183
Means							
PO	2.504	2.531	2.545	2.616	2.687	2.700	2.727
COMP	1.206	1.247	1.268	1.379	1.490	1.512	1.553
ISTATY	3.985	4.053	4.088	4.270	4.453	4.487	4.556
Variances							
RE	0.097	0.112	0.120	0.160	0.200	0.208	0.223
PO	0.276	0.301	0.314	0.382	0.450	0.463	0.489
COMP	0.193	0.204	0.209	0.235	0.262	0.267	0.277
ISTATY	1.198	1.347	1.422	1.818	2.213	2.289	2.437
Residual Variances							
DEDI	0.207	0.244	0.264	0.364	0.464	0.483	0.521

Between Level

ELMM	ON							
ELHM		-0.294	-0.224	-0.189	-0.004	0.181	0.217	0.286
DEDI	ON							
ELHM		-0.317	-0.236	-0.195	0.021	0.236	0.278	0.358
ELMM		0.085	0.138	0.165	0.307	0.449	0.476	0.529
RE	ON							
ELMM		0.292	0.338	0.361	0.483	0.605	0.628	0.674
ELHM		-0.063	-0.027	-0.008	0.089	0.186	0.205	0.241
DEDI	WITH							
RE		-0.102	-0.078	-0.066	-0.002	0.062	0.074	0.098
Means								
ELHM		-0.153	-0.116	-0.097	0.000	0.097	0.116	0.153
Intercepts								
ELMM		-0.169	-0.129	-0.108	0.000	0.108	0.129	0.169
RE		4.346	4.363	4.372	4.418	4.464	4.473	4.490
DEDI		3.532	3.678	3.753	4.143	4.534	4.608	4.754
Variances								
ELHM		0.151	0.171	0.181	0.235	0.289	0.299	0.319
Residual Variances								
ELMM		0.098	0.144	0.167	0.289	0.412	0.435	0.481
RE		-0.101	-0.077	-0.064	0.001	0.067	0.079	0.104
DEDI		-0.125	-0.093	-0.077	0.010	0.096	0.113	0.145
New/Additional Parameters								
A1B1		-0.089	-0.068	-0.058	-0.001	0.055	0.066	0.087
A2B2		-0.022	-0.010	-0.004	0.027	0.059	0.065	0.077
D1B1		-0.126	-0.061	-0.027	0.147	0.322	0.355	0.420
A1D1B2		-0.043	-0.033	-0.028	-0.001	0.027	0.032	0.042
TOTALIND		-0.120	-0.085	-0.067	0.026	0.119	0.136	0.171
TOTAL		-0.304	-0.220	-0.178	0.046	0.270	0.313	0.396

HL and ML ethical leadership trickle down on Absorption

MODEL FIT INFORMATION

Number of Free Parameters 26

Loglikelihood

H0 Value -938.080
 H0 Scaling Correction Factor 1.1546
 for MLR
 H1 Value -932.408
 H1 Scaling Correction Factor 0.9651
 for MLR

Information Criteria

Akaike (AIC) 1928.160
 Bayesian (BIC) 2010.295
 Sample-Size Adjusted BIC 1927.963
 ($n^* = (n + 2) / 24$)

Chi-Square Test of Model Fit

Value 78.852*
 Degrees of Freedom 6
 P-Value 0.0000
 Scaling Correction Factor 0.1439
 for MLR

* The chi-square value for MLM, MLMV, MLR, ULSMV, WLSM and WLSMV cannot be used for chi-square difference testing in the regular way. MLM, MLR and WLSM chi-square difference testing is described on the Mplus website. MLMV, WLSMV, and ULSMV difference testing is done using the DIFFTEST option.

RMSEA (Root Mean Square Error Of Approximation)

Estimate 0.264

CFI/TLI

CFI 0.000
 TLI 0.000

Chi-Square Test of Model Fit for the Baseline Model

Value 75.638
 Degrees of Freedom 16
 P-Value 0.0000

SRMR (Standardized Root Mean Square Residual)

Value for Within	0.062
Value for Between	0.136

MODEL RESULTS

	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
Within Level				
ABSORB	ON			
RE	0.056	0.142	0.399	0.690
PO	0.009	0.079	0.119	0.905
COMP	0.171	0.139	1.228	0.220
ISTATY	0.038	0.038	1.005	0.315
Means				
PO	2.616	0.043	60.539	0.000
COMP	1.379	0.067	20.445	0.000
ISTATY	4.270	0.111	38.511	0.000
Variances				
RE	0.160	0.027	5.940	0.000
PO	0.382	0.041	9.255	0.000
COMP	0.235	0.016	14.457	0.000
ISTATY	1.818	0.240	7.560	0.000
Residual Variances				
ABSORB	0.350	0.054	6.461	0.000
Between Level				
ELMM	ON			
ELHM	-0.004	0.112	-0.034	0.973
ABSORB	ON			
ELHM	-0.031	0.098	-0.315	0.753
ELMM	0.035	0.108	0.322	0.747
RE	ON			
ELMM	0.483	0.074	6.551	0.000
ELHM	0.090	0.057	1.589	0.112
ABSORB	WITH			
RE	0.005	0.019	0.248	0.804
Means				
ELHM	0.000	0.059	0.000	1.000

Intercepts

ELMM	0.000	0.066	0.000	1.000
RE	4.412	0.029	151.743	0.000
ABSORB	3.577	0.302	11.837	0.000

Variances

ELHM	0.235	0.033	7.170	0.000
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Residual Variances

ELMM	0.289	0.074	3.896	0.000
RE	0.001	0.045	0.028	0.978
ABSORB	0.056	0.032	1.763	0.078

New/Additional Parameters

A1B1	0.000	0.006	-0.034	0.973
A2B2	0.003	0.010	0.320	0.749
D1B1	0.027	0.068	0.399	0.690
A1D1B2	0.000	0.002	-0.034	0.973
TOTALIND	0.003	0.012	0.245	0.807
TOTAL	-0.028	0.099	-0.283	0.777

QUALITY OF NUMERICAL RESULTS

Condition Number for the Information Matrix 0.212E-16
(ratio of smallest to largest eigenvalue)

CONFIDENCE INTERVALS OF MODEL RESULTS

Lower .5% Lower 2.5% Lower 5% Estimate Upper 5% Upper 2.5% Upper .5%

Within Level

ABSORB ON

RE	-0.308	-0.221	-0.176	0.056	0.289	0.334	0.421
PO	-0.195	-0.146	-0.121	0.009	0.140	0.165	0.214
COMP	-0.187	-0.102	-0.058	0.171	0.400	0.443	0.529
ISTATY	-0.060	-0.036	-0.024	0.038	0.101	0.112	0.136

Means

PO	2.504	2.531	2.545	2.616	2.687	2.700	2.727
COMP	1.206	1.247	1.268	1.379	1.490	1.512	1.553
ISTATY	3.985	4.053	4.088	4.270	4.453	4.487	4.556

Variances

RE	0.091	0.107	0.116	0.160	0.204	0.213	0.230
PO	0.276	0.301	0.314	0.382	0.450	0.463	0.489
COMP	0.193	0.204	0.209	0.235	0.262	0.267	0.277
ISTATY	1.198	1.347	1.422	1.818	2.213	2.289	2.437

Residual Variances							
ABSORB	0.211	0.244	0.261	0.350	0.440	0.457	0.490
Between Level							
ELMM ON							
ELHM	-0.294	-0.224	-0.189	-0.004	0.181	0.217	0.286
ABSORB ON							
ELHM	-0.283	-0.222	-0.192	-0.031	0.130	0.161	0.221
ELMM	-0.244	-0.178	-0.143	0.035	0.213	0.247	0.314
RE ON							
ELMM	0.293	0.339	0.362	0.483	0.605	0.628	0.674
ELHM	-0.056	-0.021	-0.003	0.090	0.184	0.202	0.237
ABSORB WITH							
RE	-0.044	-0.032	-0.026	0.005	0.036	0.041	0.053
Means							
ELHM	-0.153	-0.116	-0.097	0.000	0.097	0.116	0.153
Intercepts							
ELMM	-0.169	-0.129	-0.108	0.000	0.108	0.129	0.169
RE	4.337	4.355	4.364	4.412	4.460	4.469	4.487
ABSORB	2.799	2.985	3.080	3.577	4.074	4.170	4.356
Variances							
ELHM	0.151	0.171	0.181	0.235	0.289	0.299	0.319
Residual Variances							
ELMM	0.098	0.144	0.167	0.289	0.412	0.435	0.481
RE	-0.114	-0.086	-0.072	0.001	0.075	0.089	0.116
ABSORB	-0.026	-0.006	0.004	0.056	0.108	0.118	0.137
New/Additional Parameters							
A1B1	-0.017	-0.013	-0.011	0.000	0.010	0.012	0.016
A2B2	-0.022	-0.016	-0.013	0.003	0.019	0.023	0.029
D1B1	-0.149	-0.107	-0.085	0.027	0.140	0.161	0.203
A1D1B2	-0.005	-0.004	-0.003	0.000	0.003	0.004	0.005
TOTALIND	-0.027	-0.020	-0.016	0.003	0.022	0.026	0.033
TOTAL	-0.282	-0.221	-0.190	-0.028	0.134	0.165	0.226

Moderation MI x Vigor

MODEL FIT INFORMATION

Number of Free Parameters	15
Loglikelihood	
H0 Value	-276.344
H1 Value	59.311

Information Criteria

Akaike (AIC)	582.688
Bayesian (BIC)	630.074
Sample-Size Adjusted BIC	582.574
(n* = (n + 2) / 24)	

Chi-Square Test of Model Fit

Value	671.310
Degrees of Freedom	2
P-Value	0.0000

RMSEA (Root Mean Square Error Of Approximation)

Estimate	1.387
90 Percent C.I.	1.300 1.476
Probability RMSEA <= .05	0.000

CFI/TLI

CFI	0.086
TLI	0.000

Chi-Square Test of Model Fit for the Baseline Model

Value	745.417
Degrees of Freedom	13
P-Value	0.0000

SRMR (Standardized Root Mean Square Residual)

Value	0.242
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MODEL RESULTS

	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
VIGOR ON				
RE	-0.622	1.085	-0.573	0.567
MI	-0.268	1.020	-0.263	0.793
MIXRE	0.153	0.236	0.649	0.516
COMP	0.232	0.118	1.971	0.049
PO	0.078	0.092	0.845	0.398
ISTATY	0.085	0.047	1.828	0.068
GPELM	0.082	0.142	0.576	0.564
RE ON				
GPELM	0.384	0.084	4.593	0.000
COMP	-0.148	0.064	-2.306	0.021
PO	-0.073	0.043	-1.691	0.091
ISTATY	0.082	0.020	4.135	0.000
Intercepts				
RE	4.481	0.153	29.350	0.000
VIGOR	3.817	4.649	0.821	0.412
Residual Variances				
RE	0.159	0.018	8.860	0.000
VIGOR	0.518	0.068	7.658	0.000
New/Additional Parameters				
LOW_MI	-0.542	0.000	*****	0.000
MED_MI	0.000	0.000	0.000	1.000
HIGH_MI	0.542	0.000	*****	0.000
IND_LOWM	-0.270	0.453	-0.596	0.551
IND_MEDM	-0.239	0.406	-0.588	0.557
IND_HIMI	-0.207	0.359	-0.577	0.564
IMM	0.059	0.088	0.666	0.505
DR_LOWMI	-0.705	1.211	-0.582	0.561
DR_MEDMI	-0.622	1.085	-0.573	0.567
DR_HIMI	-0.539	0.958	-0.562	0.574
TOT_LOWM	-0.188	0.474	-0.398	0.691
TOT_MEDM	-0.157	0.429	-0.365	0.715
TOT_HIMI	-0.125	0.384	-0.325	0.745

R-SQUARE

Observed Variable	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
RE	0.237	0.063	3.761	0.000
VIGOR	0.331	0.228	1.452	0.146

CONFIDENCE INTERVALS OF MODEL RESULTS

	Lower .5%	Lower 2.5%	Lower 5%	Estimate	Upper 5%	Upper 2.5%	Upper .5%
VIGOR ON							
RE	-4.059	-3.068	-2.591	-0.622	0.831	1.062	1.581
MI	-3.423	-2.567	-2.167	-0.268	1.125	1.347	1.805
MIXRE	-0.331	-0.219	-0.166	0.153	0.580	0.679	0.879
COMP	-0.071	0.003	0.041	0.232	0.429	0.464	0.537
PO	-0.157	-0.100	-0.072	0.078	0.230	0.261	0.311
ISTATY	-0.020	0.003	0.016	0.085	0.169	0.187	0.222
GPELM	-0.286	-0.190	-0.141	0.082	0.318	0.361	0.444
RE ON							
GPELM	0.154	0.212	0.240	0.384	0.514	0.540	0.583
COMP	-0.316	-0.273	-0.255	-0.148	-0.043	-0.023	0.015
PO	-0.186	-0.158	-0.144	-0.073	-0.002	0.012	0.038
ISTATY	0.030	0.043	0.050	0.082	0.115	0.121	0.135
Intercepts							
RE	4.075	4.165	4.222	4.481	4.723	4.775	4.867
VIGOR	-5.694	-3.444	-2.464	3.817	12.465	14.328	18.308
Residual Variances							
RE	0.119	0.129	0.134	0.159	0.194	0.200	0.213
VIGOR	0.378	0.414	0.434	0.518	0.668	0.695	0.750
New/Additional Parameters							
LOW_MI	-0.542	-0.542	-0.542	-0.542	-0.542	-0.542	-0.542
MED_MI	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HIGH_MI	0.542	0.542	0.542	0.542	0.542	0.542	0.542
IND_LOWM	-1.811	-1.304	-1.090	-0.270	0.354	0.471	0.749
IND_MEDM	-1.613	-1.160	-0.972	-0.239	0.321	0.426	0.678
IND_HIMI	-1.416	-1.018	-0.850	-0.207	0.290	0.380	0.599
IMM	-0.135	-0.088	-0.064	0.059	0.216	0.257	0.355
DR_LOWMI	-4.527	-3.437	-2.913	-0.705	0.915	1.169	1.749
DR_MEDMI	-4.059	-3.068	-2.591	-0.622	0.831	1.062	1.581
DR_HIMI	-3.585	-2.716	-2.295	-0.539	0.745	0.939	1.391
TOT_LOWM	-1.791	-1.282	-1.053	-0.188	0.433	0.544	0.782
TOT_MEDM	-1.592	-1.146	-0.938	-0.157	0.402	0.508	0.719
TOT_HIMI	-1.410	-1.010	-0.823	-0.125	0.375	0.464	0.657

Moderation MI x Dedication

MODEL FIT INFORMATION

Number of Free Parameters	15
Loglikelihood	
H0 Value	-237.322
H1 Value	98.333

Information Criteria

Akaike (AIC)	504.644
Bayesian (BIC)	552.030
Sample-Size Adjusted BIC ($n^* = (n + 2) / 24$)	504.530

Chi-Square Test of Model Fit

Value	671.310
Degrees of Freedom	2
P-Value	0.0000

RMSEA (Root Mean Square Error Of Approximation)

Estimate	1.387
90 Percent C.I.	1.300 1.476
Probability RMSEA \leq .05	0.000

CFI/TLI

CFI	0.113
TLI	0.000

Chi-Square Test of Model Fit for the Baseline Model

Value	767.819
Degrees of Freedom	13
P-Value	0.0000

SRMR (Standardized Root Mean Square Residual)

Value	0.161
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MODEL RESULTS

	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
DEDI ON				
RE	0.174	1.379	0.126	0.900
MI	0.542	1.296	0.419	0.676
MIXRE	-0.018	0.298	-0.060	0.952
COMP	0.000	0.098	0.001	0.999
PO	-0.012	0.073	-0.171	0.864
ISTATY	0.078	0.040	1.954	0.051
GPELM	0.054	0.131	0.413	0.679
RE ON				
GPELM	0.384	0.084	4.593	0.000
COMP	-0.148	0.064	-2.306	0.021
PO	-0.073	0.043	-1.691	0.091
ISTATY	0.082	0.020	4.135	0.000
Intercepts				
RE	4.481	0.153	29.350	0.000
DEDI	1.132	5.950	0.190	0.849
Residual Variances				
RE	0.159	0.018	8.860	0.000
DEDI	0.331	0.044	7.590	0.000
New/Additional Parameters				
LOW_MI	-0.542	0.000	*****	0.000
MED_MI	0.000	0.000	0.000	1.000
HIGH_MI	0.542	0.000	*****	0.000
IND_LOWM	0.070	0.593	0.119	0.906
IND_MEDM	0.067	0.531	0.126	0.900
IND_HIMI	0.063	0.469	0.134	0.893
IMM	-0.007	0.114	-0.060	0.952
DR_LOWMI	0.183	1.540	0.119	0.905
DR_MEDMI	0.174	1.379	0.126	0.900
DR_HIMI	0.164	1.219	0.135	0.893
TOT_LOWM	0.125	0.652	0.191	0.848
TOT_MEDM	0.121	0.591	0.205	0.838
TOT_HIMI	0.117	0.531	0.221	0.825

R-SQUARE

Observed Variable	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
RE	0.237	0.063	3.761	0.000
DEDI	0.235	0.214	1.101	0.271

CONFIDENCE INTERVALS OF MODEL RESULTS

	Lower .5%	Lower 2.5%	Lower 5%	Estimate	Upper 5%	Upper 2.5%	Upper .5%
DEDI ON							
RE	-3.992	-2.992	-2.449	0.174	1.853	2.076	2.521
MI	-3.234	-2.355	-1.873	0.542	2.191	2.409	2.873
MIXRE	-0.534	-0.433	-0.386	-0.018	0.543	0.655	0.863
COMP	-0.271	-0.204	-0.167	0.000	0.152	0.181	0.241
PO	-0.206	-0.161	-0.133	-0.012	0.103	0.127	0.178
ISTATY	-0.013	0.006	0.018	0.078	0.151	0.164	0.193
GPELM	-0.269	-0.182	-0.136	0.054	0.285	0.324	0.393
RE ON							
GPELM	0.154	0.212	0.240	0.384	0.514	0.540	0.583
COMP	-0.316	-0.273	-0.255	-0.148	-0.043	-0.023	0.015
PO	-0.186	-0.158	-0.144	-0.073	-0.002	0.012	0.038
ISTATY	0.030	0.043	0.050	0.082	0.115	0.121	0.135
Intercepts							
RE	4.075	4.165	4.222	4.481	4.723	4.775	4.867
DEDI	-9.098	-7.194	-6.252	1.132	12.284	14.671	18.770
Residual Variances							
RE	0.119	0.129	0.134	0.159	0.194	0.200	0.213
DEDI	0.246	0.268	0.280	0.331	0.438	0.457	0.482
New/Additional Parameters							
LOW_MI	-0.542	-0.542	-0.542	-0.542	-0.542	-0.542	-0.542
MED_MI	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HIGH_MI	0.542	0.542	0.542	0.542	0.542	0.542	0.542
IND_LOWM	-1.735	-1.219	-0.954	0.070	0.898	1.019	1.311
IND_MEDM	-1.553	-1.088	-0.850	0.067	0.809	0.916	1.178
IND_HIMI	-1.372	-0.957	-0.749	0.063	0.722	0.813	1.050
IMM	-0.252	-0.192	-0.166	-0.007	0.191	0.241	0.341
DR_LOWMI	-4.465	-3.354	-2.740	0.183	2.061	2.307	2.789
DR_MEDMI	-3.992	-2.992	-2.449	0.174	1.853	2.076	2.521
DR_HIMI	-3.508	-2.627	-2.150	0.164	1.652	1.844	2.232
TOT_LOWM	-1.849	-1.290	-1.027	0.125	0.996	1.124	1.408
TOT_MEDM	-1.670	-1.156	-0.926	0.121	0.914	1.024	1.290
TOT_HIMI	-1.484	-1.028	-0.818	0.117	0.831	0.921	1.164

Moderation MI x Absorption

MODEL FIT INFORMATION

Number of Free Parameters	15
Loglikelihood	
H0 Value	-253.803
H1 Value	81.852

Information Criteria

Akaike (AIC)	537.605
Bayesian (BIC)	584.991
Sample-Size Adjusted BIC	537.492
(n* = (n + 2) / 24)	

Chi-Square Test of Model Fit

Value	671.310
Degrees of Freedom	2
P-Value	0.0000

RMSEA (Root Mean Square Error Of Approximation)

Estimate	1.387
90 Percent C.I.	1.300 1.476
Probability RMSEA <= .05	0.000

CFI/TLI

CFI	0.063
TLI	0.000

Chi-Square Test of Model Fit for the Baseline Model

Value	727.059
Degrees of Freedom	13
P-Value	0.0000

SRMR (Standardized Root Mean Square Residual)

Value	0.228
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MODEL RESULTS

	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
ABSORB ON				
RE	0.571	0.966	0.591	0.555
MI	0.680	0.926	0.734	0.463
MIXRE	-0.122	0.214	-0.569	0.569
COMP	0.240	0.107	2.234	0.025
PO	0.011	0.076	0.145	0.885
ISTATY	0.032	0.043	0.749	0.454
GPELM	-0.051	0.140	-0.368	0.713
RE ON				
GPELM	0.384	0.084	4.593	0.000
COMP	-0.148	0.064	-2.306	0.021
PO	-0.073	0.043	-1.691	0.091
ISTATY	0.082	0.020	4.135	0.000
Intercepts				
RE	4.481	0.153	29.350	0.000
ABSORB	0.353	4.178	0.084	0.933
Residual Variances				
RE	0.159	0.018	8.860	0.000
ABSORB	0.400	0.048	8.246	0.000
New/Additional Parameters				
LOW_MI	-0.542	0.000	*****	0.000
MED_MI	0.000	0.000	0.000	1.000
HIGH_MI	0.542	0.000	*****	0.000
IND_LOWM	0.244	0.411	0.595	0.552
IND_MEDM	0.219	0.367	0.597	0.551
IND_HIMI	0.194	0.324	0.599	0.549
IMM	-0.047	0.081	-0.574	0.566
DR_LOWMI	0.637	1.081	0.589	0.556
DR_MEDMI	0.571	0.966	0.591	0.555
DR_HIMI	0.505	0.852	0.593	0.553
TOT_LOWM	0.193	0.430	0.449	0.654
TOT_MEDM	0.168	0.389	0.431	0.666
TOT_HIMI	0.142	0.348	0.409	0.683

R-SQUARE

Observed Variable	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value
RE	0.237	0.063	3.761	0.000
ABSORB	0.210	0.241	0.871	0.384

CONFIDENCE INTERVALS OF MODEL RESULTS

	Lower .5%	Lower 2.5%	Lower 5%	Estimate	Upper 5%	Upper 2.5%	Upper .5%
ABSORB ON							
RE	-2.251	-1.293	-0.961	0.571	2.169	2.531	3.181
MI	-1.927	-1.106	-0.769	0.680	2.217	2.562	3.218
MIXRE	-0.707	-0.560	-0.477	-0.122	0.214	0.289	0.484
COMP	-0.048	0.029	0.062	0.240	0.414	0.444	0.506
PO	-0.181	-0.136	-0.113	0.011	0.138	0.162	0.217
ISTATY	-0.072	-0.046	-0.034	0.032	0.106	0.121	0.149
GPELM	-0.425	-0.341	-0.294	-0.051	0.164	0.206	0.291
RE ON							
GPELM	0.154	0.212	0.240	0.384	0.514	0.540	0.583
COMP	-0.316	-0.273	-0.255	-0.148	-0.043	-0.023	0.015
PO	-0.186	-0.158	-0.144	-0.073	-0.002	0.012	0.038
ISTATY	0.030	0.043	0.050	0.082	0.115	0.121	0.135
Intercepts							
RE	4.075	4.165	4.222	4.481	4.723	4.775	4.867
ABSORB	-11.096	-8.289	-6.677	0.353	6.813	8.233	12.236
Residual Variances							
RE	0.119	0.129	0.134	0.159	0.194	0.200	0.213
ABSORB	0.299	0.326	0.341	0.400	0.510	0.529	0.558
New/Additional Parameters							
LOW_MI	-0.542	-0.542	-0.542	-0.542	-0.542	-0.542	-0.542
MED_MI	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HIGH_MI	0.542	0.542	0.542	0.542	0.542	0.542	0.542
IND_LOWM	-0.887	-0.528	-0.377	0.244	0.953	1.116	1.490
IND_MEDM	-0.790	-0.472	-0.336	0.219	0.851	0.999	1.332
IND_HIMI	-0.698	-0.413	-0.294	0.194	0.753	0.884	1.173
IMM	-0.296	-0.222	-0.188	-0.047	0.076	0.106	0.172
DR_LOWMI	-2.511	-1.444	-1.072	0.637	2.423	2.834	3.552
DR_MEDMI	-2.251	-1.293	-0.961	0.571	2.169	2.531	3.181
DR_HIMI	-1.954	-1.136	-0.841	0.505	1.918	2.224	2.800
TOT_LOWM	-0.915	-0.554	-0.419	0.193	1.000	1.176	1.525
TOT_MEDM	-0.834	-0.507	-0.385	0.168	0.897	1.059	1.358
TOT_HIMI	-0.746	-0.457	-0.349	0.142	0.800	0.945	1.202