RELATIONSHIP BETWEEN WORKPLACE ENVIRONMENT, TEAMWORK AND TRANSFORMATIONAL LEADERSHIP ON ORGANISATION PERFORMANCE OF ELECTRICAL AND ELECTRONIC MANUFACTURING COMPANIES IN SELANGOR

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DOCTOR OF BUSINESS ADMINISTRATION
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ABSTRACT

High-technology organisations such as the electrical and electronic manufacturing companies must compete in a challenging business world. To sustain growth, the organisations have to learn, explore and create new strategies to face the competitive pressures. The exploration of new strategies will enable electrical and electronic manufacturing organisations to produce high quality products for export. However, little is known of the internal practices in manufacturing companies and the dearth of research in this field also limits the understanding of employees' appropriate behavior that could enhance their organisations' performance. Therefore, this study attempted to assess the relationship between workplace environment, teamwork, and transformational leadership on organisation performance through the quantitative approach. To achieve the objective, the current study employed the Learning Organisation Theory to examine the factors that contribute to organisation performance. 134 employees from five electrical and electronic manufacturing companies in Selangor participated in this study. The sample group consisted of executives, managers and higher level management. The Statistical Package for the Social Sciences (SPSS) and the Partial Least Squares-Structural Equation Modelling (PLS-SEM) were used to analyse the data. The results of the analysis reveal that workplace environment and teamwork factor have significant positive relationships with organisation performance. Meanwhile, transformational leadership has a positive effect on organisation performance but the influence is not significant. Thus, it expands the current theory as well as the literature, specifically in the context of the manufacturing industry in Malaysia and contributes to the practical implications on how the organisation's performance can be improved through effective strategy implementation.

Keywords: Organisation performance, workplace environment, teamwork, transformational leadership, learning organisation theory

ABSTRAK

Organisasi yang menggunakan teknologi tinggi seperti syarikat pembuatan produk elektrik dan elektronik perlu bersaing dalam menghadapi cabaran dunia perniagaan. Dalam usaha untuk mengekalkan perkembangan positif, organisasi perlu mendapatkan input terkini dan memahaminya serta mewujudkan strategi baharu supaya lebih berdaya saing. Adanya strategi baharu membolehkan organisasi pembuatan produk elektrik dan elektronik menghasilkan produk berkualiti tinggi untuk dieksport. Namun begitu, maklumat berkenaan amalan dalaman yang dilaksanakan dalam syarikat pembuatan adalah terhad, serta kurangnya jurnal dalam bidang ini telah membataskan pemahaman berkenaan gelagat pekerja yang bersesuaian yang boleh meningkatkan prestasi organisasi. Oleh itu, kajian ini bertujuan untuk menilai hubungan antara persekitaran tempat kerja, kerja berpasukan dan transformasi kepimpinan ke atas prestasi organisasi dengan menggunakan kaedah kuantitatif. Untuk mencapai objektif tersebut, kajian ini menggunakan Teori Pembelajaran Organisasi untuk menyelidik faktor-faktor yang menyumbang kepada prestasi organisasi. 134 orang pekerja dari lima buah syarikat pembuatan produk elektrik dan elektronik di Selangor terlibat dalam kajian ini. Kumpulan sasaran kajian terdiri daripada para eksekutif, pengurus dan pengurusan peringkat atasan. Data yang diperoleh dianalisis menggunakan perisian Pakej Statistik Sains Sosial *(SPSS)* dan Pemodelan Kuasa Dua Terkecil Berstruktur Separa (*PLS-SEM*). Hasil kajian menunjukkan bahawa faktor persekitaran tempat kerja dan kerja berpasukan mempunyai hubungan positif yang signifikan terhadap prestasi organisasi. Manakala faktor transformasi kepimpinan mempunyai kesan positif kepada prestasi organisasi tetapi pengaruhnya tidak signifikan. Oleh itu, hal ini telah mengembangkan teori asal dan literatur khususnya dalam konteks industri pembuatan di Malaysia serta menyumbang kepada implikasi praktik tentang bagaimana strategi berkesan yang dilaksanakan boleh meningkatkan prestasi organisasi.

Kata kunci: Prestasi organisasi, persekitaran tempat kerja, kerja berpasukan, transformasi kepimpinan, Teori Pembelajaran Organisasi

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For my beloved wife Aminatulsima, children (Akmal, Danish and Hariz), and my mother thanks for your continuous support and understanding. Hence, enable me to explore my potential and pursue my dreams.

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LIST OF ABBREVIATIONS

GDP	Gross Domestic Product
NKEA	National Key Economic Area
MNCs	Multinational Manufacturing Companies
MITI	Malaysia International Trade and Industry
FDI	Foreign Direct Investment
MIDA	Malaysian Investment Development Authority
E&E	Electrical and Electronic
MIDF	Malaysian Industrial Development Finance
FTZs	Free Trade Zones
DLOQ	Dimensions of the Learning Organization Questionnaire
R&D	Research and Development
WE	Workplace Environment
TW	Teamwork
TL	Transformational Leadership
OP	Organisation Performance
MLQ	Multifactor Leadership Questionnaire
SPSS	Statistical Package for Social Sciences
PLS-SEM	Partial Least Square - Structural Equation Modeling
VIF	Variation Inflation Factor
NLOT	New Learning Organisation Theory

CHAPTER ONE

RESEARCH OVERVIEW

1.0 Introduction

This chapter begins with the background and as well as the issues of the study. Next, it discusses the problem statement, research questions, objectives, scope, and significance of the study. Finally, it presents key terms and organisation of the chapters.

1.1 Background of the Study

Manufacturing industry is an important sector that is contributing vibrantly to the development of world economy. Today, numerous activities and other endeavors of life would have been difficult to come by without the technological revolutions in the manufacturing sector and which has brought about production of cars, washing machines, computers, smartphones, 3D printers and so on (UNIDO, 2018). However, in the recent time, the sector has been arguably experiencing deindustrialization especially in developing and many of emerging nations thereby making it difficult to articulate specific economic contribution of this sector to the fortunes of the aforesaid nations (Haraguchi, Cheng, & Smeet, 2017; Rodrik, 2016)

One of the arms of the manufacturing industry is Electrical and Electronic Sector (EE). The EE anchors production of electrical and electronic gadgets and other equipment for both consumer and industrial users (MITI, 2017). The subsector's impact has equally been globally recognized in terms of

contribution to GDP, employment generation, and facilitation of Foreign Direct Investment (FDI) (Bloomberg, 2016; Deloitte, 2018; KPMG, 2018). It is estimated that the consumer global sales revenue from this subsector will reach USD 528, 559m by 2023 (Statista, 2019)

In developing nations, the EE subsector importantly accounts for high percentage of export especially in emerging economy of South East Asia countries such as Thailand, Philippine, Vietnam, and Malaysia thereby attracting foreign investors with the purpose of executing their business interest (Kaul & Chowdhury, 2018). Malaysia has 14 States and has been adjudged as the biggest hub of EE in South East Asia. Presently, the country houses over 122 EE multinational companies (MNCs) out of which 22 are currently operating in Selangor (MIDA, 2016). The EE subsector now occupies one of the cardinal points in the National Key Economic Area (NKEA) of the country (see Table 1.1).

Table 1.1
Malaysia National Key Economic Area (NKEA)

Oil, Gas and Energy	Wholesale and Retail
Palm Oil	Education
Financial Services	Health
Tourism	Information and Communication
Business Services	Agriculture
Electrical and Electronics	Greater Kuala Lumpur

Source: Government of Malaysia

According to Central Bank of Malaysia (2016), five types of economic activities contribute to the Malaysian GDP. These include manufacturing,

services, construction, agriculture, and mining and quarrying. Importantly, the service sector contributes the largest portion to the country's GDP while followed by manufacturing, mining and quarrying, agriculture, and construction (Central Bank of Malaysia, 2019) (see Table 1.2). Notably, in the manufacturing sector, the export-oriented industries are mainly driven by the EE segment.

Table 1.2
GDP by kind of economic activity for year 2015 to 2018

Type	**2015**	**2016**	**2017**	**2018**
Services	53.5	54.2	54.4	55.5
Manufacturing	23.0	23.0	23.0	23.0
Mining and Quarrying	8.9	8.8	8.4	7.9
Agriculture	8.8	8.1	8.2	7.8
Construction	4.4	4.5	4.6	4.5

Source: *Department of Statistics, Malaysia*

Despite the pivotal roles being played by the EE sector, evidence has however shown that this sector is recently lagging behind in performance when compared with other sectors in the global scene (Central Bank of Malaysia, 2017; Haraguchi *et al*., 2017). This weakness in performance has been initially reiterated by Teoh and Abu (2012) who affirmed that Malaysian EE sector is confronted with huge challenge in sustaining growth as Raj-Reichert (2019) argued that Malaysian EE sector has stagnated in almost last two decades.

Being one of the branches of the manufacturing industry, the EE sector is not totally immune from the deindustrialization syndrome as the growth of the manufacturing sector moderated. The moderation is essentially triggered by many other factors among which the slowdown in the EE and other primary related clusters are of major concerns (Central Bank of Malaysia, 2019). The deterioration in this sector has a multiplier negative effect on the Malaysian economy as the export of the sector drops from 8.5% in 2015 to 3.5% in 2016. Gartner Inc. (2019) also predicted that the sales turnover with respect to semi-conductor of this sector would significantly decline from $475 billion USD in 2018 to $429 billion in 2019. This deterioration in performance is making the sector not to contribute significantly to GDP growth of the country (Central bank of Malaysia, 2017). Figure 1 shows the EE export growth rate between 2014 and 2019 while figure 2 depicts the GDP growth of Malaysia vis-à-vis the contribution of the dominant sectors.

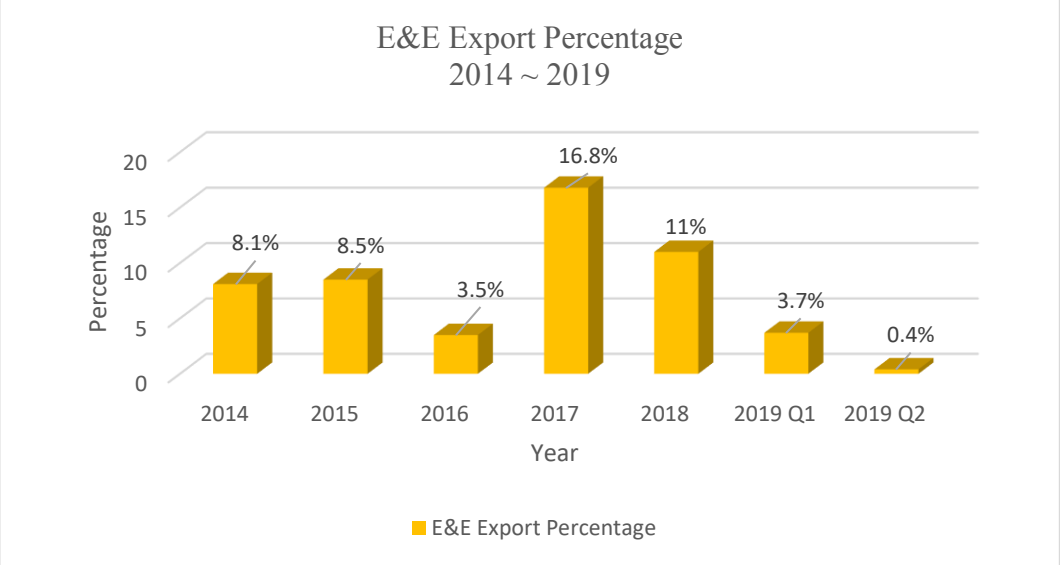

Figure 1.1: Electrical and Electronic export from 2014 to 2019
Source: Central Bank of Malaysia (2014, 2015, 2016, 2017, 2018 &2019)

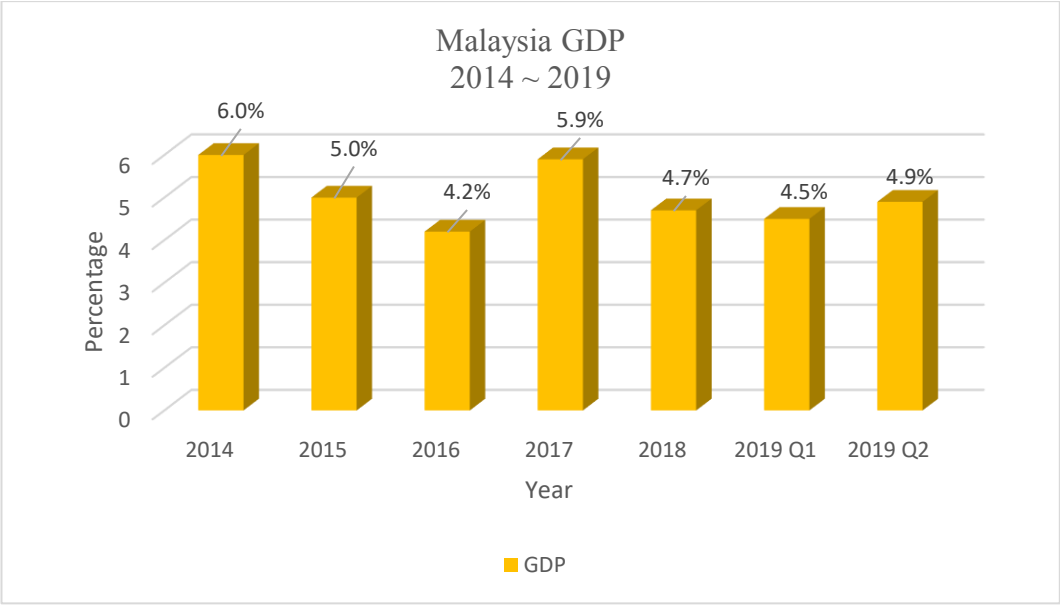

Figure 1.2: Malaysian GDP growth rate from 2014 to 2019
Source: Central Bank of Malaysia (2014, 2015, 2016, 2017, 2018 & 2019)

Importantly, arguments about why the performance of organization generally and the EE sector in particular, is deteriorating are diverse and inconclusive. For instance, on one hand, the Central Bank of Malaysia (2019), and Gartner Inc. (2019) positioned that the slowdown in the EE performance is caused by a drastic drop in the world demand for semiconductors, the stricter implementation of vehicle emission policies in the European Union and expiring tax rebates for cars in republic of China. On the other hand, however, and given the nature of organizational performance generally, and the EE manufacturing sector in particular, various critical factors from academic perspectives from developed and developing countries have been identified.

For instance, while scholars such as Martin-Rojas, Garcia-Morales, and Bolivar-Ramos (2019) argued for top management support, technology skills, and technology acquisition, others seem to have differed by positioning that organizational performance could be viewed from other factors.

Raj-Reichert (2019), in this regard, argued for excessive reliance on foreign investment, and influx of foreign workers. Chong *et al*. (2018) as supported by others identified management commitment, government regulation, safety training, safety communication, safety champion, and internal control (Fernández-Muñiz *et al*., 2012; Gunningham, 2011). Additionally, the study of Andreeva and Garanina (2016) indicates intellectual capital, relational capital, human capital and structural capital as factors influencing organizational performance while working environment, teamwork, transformational leadership, and lack of employee involvement are identified by other scholars (e.g. Broke *et al*., 2017; Ebrahimi *et al*., 2016; Kathuria, Partovi, & Greenhaus, 2010). Moreover, other scholars support service quality, service users' satisfaction, suppliers' satisfaction, voluntarily activities, and the general efficiency of organization's programs (e.g., Mahmoud & Yusif, 2012).

Considering these diverse factors being used to predict organizational performance, evidence in literature suggests that work environment, transformation leadership and team work are significant in organizational creativity (Broke *et al*., 2017; Ebrahimi *et al*., 2016; Kathuria, Partovi, & Greenhaus, 2010; Ogbonnaya, Tillman, & Gonzalez, 2018). However, little attention has been paid to how these factors can be used simultaneously to predict organizational performance especially in Malaysia and within the context of EE subsector (Ahadi, 2011; Ramayah, Sulaiman, Jantan, & Ching, 2009). The parochial attention to these factors among academic scholars in Malaysia, and in developing countries generally indicates a gap to be filled in literature.

Given the gap in the literature, and based on the recommendation of previous studies (e.g., Para-González, Jiménez-Jiménez, & Jiménez-Jiméne, 2018), this study attempts to investigate the influence of work environment, transformation leadership and team work on organizational performance in the context of EE sector in Malaysia with a focus on MNCs in Selangor.

1.2 Problem Statement

In the last four decades, the EE industry has been regarded as one of the strong pillars of successful industrialization process in Malaysia (Raj-Reichert, 2019; Teoh & Abu, 2012). The industry significantly contributes to Malaysia GDP growth, employment generation, investment opportunities and export earnings (MITI, 2019). In the global scene, and being an arm of the manufacturing industry, the sector's contribution to the world economic development has been widely acknowledged as one of the vibrant movers of many countries fortunes. For instance, Deloitte (2019, p.5) reports that "US industrial manufacturing deals activity experienced a healthy 2018, recording more than $65 billion in year-to-date M & A deal values, an increase of more than 30 percent compared to the same period in 2017".

Despite the contribution of the EE sector to the economic development of many nations, particularly, developed and some other emerging countries, evidence has however shown that the sector's performance is deteriorating (Teoh & Abu, 2012). This situation is more worrisome in the context of developing countries generally, and Malaysia in Particular (Raj-Reichert, 2019). The stagnation of this sector in Malaysia is an indication of the general

economic situation and which has contributed to its middle-income trap (Raj-Reichert, 2019).

Given the poor performance of the industry therefore, series of studies have been conducted in the context of developed nations (e.g., Nakayama *et al*., 2019; O'Connor *et al*., 2016; Todd, 2018) while very limited attempts have been made in developing countries such as Malaysia (Loke *et al*., 2018). Within the context of Malaysia, for instance, Chong *et al*. (2018), argued that there is a lack of research models that can elucidate the relationship between critical success factors, and organizational performance within manufacturing industry such as the EE subsector. This argument has been further reiterated by series of other studies confirming scarcity of studies in the context of developing countries generally (Esfahbodi, Zhang, & Watson, 2016; Azar & Ciabuschi, 2017), thereby necessitating an urgent need to conduct a research in this regard.

Nevertheless, various issues including work environment, leadership, teamwork, top management support, technology skills, and technology acquisition, excessive reliance on foreign investment, influx of foreign workers, management commitment, government regulation, safety training, safety communication, safety champion, and internal control have been advanced as factors related to the performance of organization generally (e.g., Fernández-Muñiz *et al*., 2012; Gunningham, 2011; Raj-Reichert, 2019; Martin-Rojas *et al*., 2019). However, argument about specific factors causing the low performance is still ongoing and inconclusive (Ali, 2018) as scholars seem to concur that the workplace environment, transformation leadership

and team work are major underlying issues which require further investigation within the EE sector (Abdullah, Muhammad, Mohamed, & Muzammir, 2015; Anuar & Noor, 2015; Broke *et al*., 2016; Ebrahimi *et al*., 2016; Kaplan, Dollar, Melian, Van Durme, & Wong, 2016; Kathuria, Partovi & Greenhaus, 2010; Ogbonnaya *et al*., 2018).

For instance, with respect to workplace environment, the study of Anuar and Noor (2015) argued that the required skills to operate high technology that underpins the operation of the EE subsector are lacking especially in Malaysia. This is noted as Malaysia is surrounded by competitors such as China and India who offer low wages while Korea and Taiwan are well-known for strong productivity and innovation. In the same line, Abdullah *et al*. (2015) asserted that Malaysia is facing a major threat to compete internationally specifically, in production cost to produce high quality products and export to the world market.

Further, layoffs issues resulting from mergers and acquisition of the EE sector were equally reported as this has led to a large number of experience employees in the executives and managerial service's category to leave the organisations during the restructuring exercises (Ministry of Human Resources, Malaysia 2016). This therefore seems to point to the fact that the workplace environment is germane and requires further investigation with a view to determine its contribution to organisational performance of electrical and electronic manufacturing companies in Selangor, Malaysia.

Notably, the workplace environment is characterized by many elements such as goal setting, performance feedback, defined processes, commitment,

incentives and rewards system, job satisfaction and coaching with their enormous impact on employees' performance (Abdul Hamid & Yahya 2016; Piccoli, Callea, Urbini, Chirumbolo, Ingusci, & Witte 2017; Straatmann, Nolte, & Seggewiss 2018). Decrease employee turnover for instance, significantly relates to long-term shareholders return through employees' satisfaction**.** In contrast, decrease in productivity significantly relates to employees' dissatisfaction from poor workplace environment which lead to poor performance of the organisations (Chandrasekar, 2011).

Additionally, Markay, Ravenswood, and Webber (2012) argued that lower levels of stress and a feeling of being appreciated by the organisation as well as not feeling threatened at work is considered a good workplace characteristic. In other words, employees' intention to quit the job is lesser if the organization provides and practices a good working environment. Evidence from organisational behaviour as well as human resource management and psychology, and other related disciplines provide support for this assertion (e.g., Cartwright & Cooper, 2009; Kalliath, Brough, O'Driscoll, Manimala, & Siu, 2010).

Moreover, Abdul Hamid and Yahya (2016), argued that employees who perceive fit with all aspects of their work environment will remain in the organization, hence, contribute to positive financial performance and other organisational success (Welch, 2011). This is aligned with Noorizan, Afzan, and Akmar (2016) who also asserted that workplace environment statistically influences the employee's behavior in organisation in the Malaysian contexts,

thereby making the employees to apply acquired knowledge, skill and attitude to their tasks.

Likewise, Piccoli *et al*. (2017) revealed that employees' behaviours in the job contexts are driven by evaluation about the perceived belongingness to organisation. Similarly, Straatmann *et al*. (2018) asserted that organisational commitment relates to change supportive intention and mediated by change related attitudes as well as perceived behavioural control. All these evidence shows that workplace environment characteristics play a significant role in an employee's behaviour and performance of the organisations. Despite the significance of the workplace environment towards improving organizational performance as reported by the previous studies, evidence in literature especially in the context of Malaysia manufacturing industry, and among Selangor EE sector in particular, is very scarce, thereby requires further investigation (Subramaniam, Suan, & Johari, 2019).

Moreover, teamwork is one of the core elements of an organizational performance. Thus, colleagues need to work well together to accomplish any given task. According to Cooney and Sohal (2004), the development of teamwork practices supports the extension of employee responsibility for quality and facilitates the introduction of new management practices. This is in line with Bacon and Blyton (2000), Grutter, Field, and Faull (2002), and Delaru, Hootegem, Procter, and Burridge (2008) and Ogbonnaya *et al*. (2018) who equally affirmed that team work has significant influence on organizational performance. Likewise, Jaca, Viles, Tarco, Mateo, and Santos

(2013) argued that teamwork is a powerful tool for achieving different goals in any sector.

Furthermore, the study of Cha, Park, and Lee (2014) revealed that teamwork quality factor was found to be significantly related to team members' psychology. Meanwhile, Brock, McAliney, Ma, and Sen (2017) asserted that the combination of both effective listening and good communication is a key element to teamwork success. The study of Sandoff and Nilsson (2016) likewise found that teamwork as well as leadership are essential organizational prerequisites and qualities needed to solve difficulties being faced by the team members while working towards achieving organizational goal.

Despite the increased benefits connected with effective teamwork, organizations however continue to report a lack of team competencies among their employees (Lacerenza, Marlow, Tannenbaum, & Salas, 2018). In a recent study by PayScale, it is asserted that 36% of newly graduated students do not possess interpersonal and team competencies (Dishman, 2016). Relatedly, organizations have also demonstrated incapacity to effectively manage and arrange teams as only 21% of top managers believe their organization holds expertise in designing cross-functional teams (Kaplan *et al*., 2016). In Malaysia, Malaysia Productivity Corporation (2018) has equally raised a concern about the need to develop and implement practices with respect to teamwork that would lead to high quality performance at lowest cost. Given the nature and significance of teamwork and very limited attempt that explore the concept towards improving the performance of the EE sector

in Selangor Malaysia, there is a compelling need to deploy empirically tested studies in order to bridge the gap in literature (Lacerenza *et al*., 2018).

Concerning leadership, Melchar and Bosco (2010) asserted the success of an organisation in high-performance industry is significantly related to employees seeking leadership to play an essential role in the organisation. Notably, while sensitivity to a business environment may assist the organization to avoid dilemmas, poor leadership will cause a highly stressful work culture that may affect productivity negatively thereby leading to decreasing performance of the organisations. For example, a repeated behavior of a leader who violates the organisational goals and manipulates the well-being of employees may wreak havoc on the organization (Einarsen, Aasland, & Dkogstad, 2007).

Furthermore, the study of Tortorella, Fetterman, Anzanello, and Sawhney (2007) on the relationship between lean manufacturing implementation in organisation and the behaviours of multi-level leadership revealed that inconsistent leadership style exists along the lean implementation. Meanwhile, Kathuria, Partovi, and Greenhaus (2010) found that overall manufacturing performance is influenced by the effective leadership style that is implemented in an organisation. However, Kathuria *et al.* (2010) asserted that different leadership styles are needed in view of organizational diversified programs with respect to experience of the employees, training programmes and development skills.

Importantly, Yun, Cox, and Jr (2007) conducted a study and found that both transformational leadership and empowering significantly and positively

related to team organisational citizenship behaviour through job satisfaction. However, different processes might exist in the form of action taken due to the variety of interdependencies that exist in the teams. Mesterova, Prochazka, and Vaculik (2015) conducted a study regarding mediating role of transformational leadership between a leader's self-efficacy and its effectiveness. It was however found that the transformational leadership style is negatively related to the role of the mediator. Meanwhile, Gkorezis, and Bellou (2016**)** revealed that the use of self-deprecating humour by the leader positively affects his or her perceived effectiveness on the relationship with the mediator.

Choi, Kim, Ebrahim, and Kang (2016) additionally investigated the relationship between transformational leadership style and worker innovative behaviour in Korean contexts. It was found that the employee innovative behaviour as well as knowledge sharing significantly related to transformational leadership style. Furthermore, Ebrahimi, Moosavi, and Chirani (2016) asserted that the exploratory technique used by transformational leadership in the manufacturing companies is able to guide the employees to develop better products, increase profitability and improve the performance of the organisations. Meanwhile, Errighi and Bodwell (2017) found that for transformation leadership to be effective there is a need for special programs to strengthen the leadership skill specifically, for female employees in the context of Thailand to achieve high performance of the organisations.

Considering the mix findings concerning the influence of the transformation leadership on the organizational performance, it imperative to note that research in this regard is inconclusive. This is line with Ebrahimi *et al*. (2016) who recommends that additional research is required to elicit further understanding about the role of transformation leadership towards organizational performance.

Given that high-technology industry is facing increase and severe global competitions generally therefore, and with the export activities of EE manufacturing companies in the center, this study addresses the above said gaps by investigating the relationship between workplace environment, teamwork and transformational leadership and organisational performance of EE manufacturing companies in Selangor, Malaysia using organizational learning theory as an underpinning theory. Notably, while the organizational learning theory has been applied in many other fields, experience has shown that it is sparsely used in studies related to organizational performance, especially within the context of developing countries generally, and the EE sector in Selangor, Malaysia.

This study therefore provides an empirical research that would help the management in the manufacturing sector to have a better strategy to improve productivity and enhance the performance of their organisations.

1.3 Research Questions

This research proposes to investigate and find answers to the following research questions.

1. Does workplace environment influence organisational performance?
2. Does teamwork influence organisational performance?
3. Does transformational leadership play a significant role in influencing organizational performance?

1.4 Research Objective

The objectives of this research are as follows:

1. To examine the relationship between workplace environment and organisational performance.
2. To examine the relationship between teamwork and organisational performance.
3. To examine the relationship between transformational leadership and organizational performance.

1.5 Scope of the Study

This study focuses on the performance of EE manufacturing companies in Selangor, Malaysia. The sector is the Malaysian's largest export industry. According to the Malaysian Investment Development Authority (MIDA, 2016) there are 136 electrical and electronic MNCs in Malaysia and 22 of them operate in Selangor. In view of the concentration of the EE sector in the State of Selangor, it thus contributes the largest portion (23.7%) of Malaysian GDP in 2018.

However, considering the nature of the EE sector and its deteriorating performance, the Central Bank of Malaysia, positioned that the layoffs of the employees are among consequence which resulted from the mergers and acquisitions of firm in the EE sector. Thus, the EE manufacturing companies need to strengthen their activities because a large number of experience employees in the executives and managerial service's category leave the organisations during the restructuring exercises. Therefore, the executives, managers and higher-level management are the participants of the study. Additionally, Selangor State was chosen in this study since a huge number of EE MNCs is concentrated in the State.

1.6 Significance of the Study

This study offers a new approach to the theoretical and practical domains in the field of organisational performance specifically in internal organisation management perspectives. The following subtopics discuss both theoretical and practical contributions of the study.

1.6.1 Theoretical Contribution

Many scholars affirmed that more studies are required in identifying the organisational performance factors for a better understanding. Therefore, this study provides an empirical evidence on the influence of workplace environment, teamwork, and transformational leadership on organisational performance of the EE companies. Based on the findings of the study, it thus equally avails the academic community with a conceptual framework that can be used to effectively predict organizational performance using the Organisational Learning Theory developed by Yang *et al.* (2004). The study

thereby expands the current theory as well as literature on organisational performance especially in the context of manufacturing industry in Malaysia.

1.6.2 Practical Contribution

This study provides some insights that could assist the EE manufacturing companies to enhance their organisation performance through a proactive development plan. In other words, the empirical findings provided by this study could be used to strengthen the comprehension of how organisational performance might be improved through effective strategy implementation that concerns developing strong leadership, enhanced teamwork, and conducive workplace environment.

Therefore, the leaders, managers as well as higher management level may develop a comprehensive plan encompassing cost reduction, training programs, skill development, and supplier relations to improve the performance of their organisations in order to produce high-quality products that meet international standard. Furthermore, designing an effective program would stimulate the employees to exchange knowledge, be innovative and be highly committed in achieving organisational aims.

1.7 Definition of Key Terms

There are four key terms in this study. The terms are defined as follows:

Workplace Environment refers to a conducive workplace environment specifically in physical demand, work conditions, equipment use, ergonomic and others that can increase motivation (Morgeson & Humphrey, 2006).

Teamwork refers to positive communication, innovation, and creativity. The teamwork brings about effective collaboration, approaches and work well by teams are valued and rewarded by the organisation (Yang *et al*., 2004).

Leadership refers to the ability of transformational leaders to lead or guide other individuals, teams or entire organisations in achieving organisational goals. It involves leading by example as well as learning systematically to obtain positive business results (Yang *et al*., 2004)

Organisational Performance refers to the indicator which assesses how manufacturing organization achieves its objectives. The performance measurement can be viewed from two perspectives that is; knowledge and financial performance developed and introduced by Yang *et al*. (2004).

1.8 Organization of the Study

This study consists of five chapters and is organized as follows.

Chapter 1 introduces the background of the study, problem statement, research questions and research objectives as well as the scope of the study. Next, are the significance of the study related to theory and practical, the definition of key terms used and the organisation of this study. This chapter offers the roadmap for the study. Chapter 2 reviews and analyses related organizational performance literature. Specifically, the chapter discusses the influence of workplace environment, teamwork, and transformational leadership on organizational performance. The chapter ends with a summary. Chapter 3 is the methodology used to achieve the research objectives as it discusses research design, operationalizes the variables, presents sampling

design and population of the study, instrumentation, data collection process as well as the pilot study. The chapter also discusses the research framework and hypotheses development of the study. Chapter four presents data analysis and findings of the study. The chapter discusses technique of data analysis based on data examination, missing values, and detection of outliers. It also discusses respondents' profile, evaluation of outer and inner model including results of the hypotheses. Finally, it ends with a summary of the study. Chapter 5 discusses findings of the study; its implications with respect to the theoretical and practical contributions. It also presents chapter limitations and recommendations for future research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The discussion in this chapter is related to the literature review pertaining to the topic of the study. This includes the factors that influence the organisational performance, the underpinning theory, relationships between workplace environment, teamwork, and transformational leadership and organizational performance.

2.1 Organizational Performance

The manufacturing sector has contributed to the rapid expansion of the country's exports (Rahman, Aflah, Chowdhury, & Khan, 2014). Finished products of high quality are vital for any countries to achieve positive economic growth and prosperity. Thus, huge amount of investment is needed in the aspects of knowledge and technology to boost manufacturing activities.

Abdullah *et al*. (2015) argued that by implementing a competitive and proactive strategy in production in the form of innovation and advanced technology, more benefits would be given to customers. However, market innovation gets less attention in the global merchandising of electrical and electronic goods.

Malaysia is one of the electrical and electronic exporters in Asia and in the international market. The sector has become an essential element of the National Key Economic Area (NKEA). Anuar and Noor (2015) argued that products from electrical and electronic that are utilized by other sectors might

consist of high technology input that requires skilled worker to operate. However, Malaysia is surrounded by competitors like China and India that offer low wages rate. Besides, Korea and Taiwan are well-known for their strong productivity and innovation. This aligns with the argument of Abdullah *et al*. (2015) who asserted that Malaysia is facing a major threat to compete internationally specifically in the production cost to produce high quality of products and export to the global market.

Therefore, it seems important to assess the organisation activities that focus on the influence of workplace environment, teamwork, and leadership styles on the organisational performance of the EE manufacturing companies in Malaysia. According to Hanson, Melnyk, and Calantone (2011), any discussions on improvement must be linked to the goals to be achieved, the processes on how the goals should be achieved and overall firm performance against those goals.

Importantly, improving the performance of firms is an important concern for governments around the world. Malaysia is not an exception. To stimulate the export activity and increase the investment inflow, the Malaysian government has introduced several incentives. The establishment of Malaysian Industrial Development Finance (MIDF), the Malaysian Industrial Development Authority (MIDA), Free Trade Zones (FTZs), special tariff rates, and other incentives have ostensibly produced positive impacts on the Malaysian economy. As a result, Central Bank of Malaysia has reported that the total export of the manufacturing sector is one of the biggest contributions to Malaysia's GDP with the electrical and electronic industry contributing the

most. In 2016, the Malaysian economy grew at 4.2%, and the demand for EE products were far higher than non-electronic products (see Table 2.1).

Table 2.1
Electrical and Electronic export from 2014 to 2019

Items	2014	2015	2016	2017	2018	2019 Q1	2019 Q2
Electrical and Electronic Export	8.1%	8.5%	3.5%	16.8%	11.0%	3.7%	0.40%

Source: Central Bank of Malaysia (2014, 2015, 2016, 2017, 2018 & 2019)

Given the performance of organization generally however, it is a challenge to get information on financial and management performance of an organisation in the aspects of annual revenues, stock prices, net profit, and return on investments and others (Kaplan & Norton, 1992). Hence, many researchers are unable to clearly assess the current performance of the organisation. In the late 1980s, the financial element was used to evaluate the performance of the firms. However, financial information was found to be insufficient to evaluate the performance of the firm in the new economy era due to increasing complexity of the business environment in which companies compete (Kennerly & Neely, 2002).

Essentially, firms' performance needs to be periodically assessed with other similar organisations for improvement and control purposes by comparing the performance indicators (Martinez, 2000). Internally, an organisation decides what performance targets or measures that need to be used and embedded into the incentive and control systems to regulate individual behaviour. For

example, key performance indicators (KPIs) is as an internal management system which can boost individual or organisational performance.

The performance measurement can be viewed from two perspectives: knowledge performance (subjective) and financial performance (objective) developed by Yang *et al.* (2004). The knowledge performance measure focuses on the performance of the firm relative to its expectations or assessments, number of new products, number of new suggestions implemented, percentage of skilled worker, and others. Meanwhile, the financial performance is primarily concerned with return on investments, market share and response time for customer complaints.

2.2 Factors Influencing Organisation Performance

Many scholars affirmed that more studies are required in identifying the organisational performance factors for a better understanding of how to improve the wellbeing of the organizations generally. Ramayah *et al.* (2009) and Ahadi (2011) and Loke *et al*. 2018 however argued that there are still limited literature as well as empirical studies on manufacturing strategy and performance generally and in Malaysia in particular.

Nevertheless, besides the external factors which include discounted prices, product availability and promotion, a drastic drop in the world demand for semiconductors, the stricter implementation of vehicle emission policies in the European Union and expiring tax rebates for cars in republic of China, that influence the performance of the EE organisation in particular (Central Bank of Malaysia, 2019; Gartner Inc. 2019), review of recent literature

revealed that the internal factors such as workplace environment, teamwork, and transformational leadership are very crucial (e.g. Abdullah *et al*., 2015; Ebrahimi *et al*., 2016; Kaplan *et al*., 2016; Kathuria *et al*., 2010; Ogbonnaya *et al*., 2018) especially within the context of the EE manufacturing sector. Considering the limited attempt that have explored these factors, and the inconsistencies that trailed the findings of the previous studies in this domain (Loke *et al*., 2018), these factors are simultaneously combined in a model in this study in order to bridge identified gap in literature.

2.2.1 Workplace Environment

Workplace environment has been consistently argued to have an impact on the performance of employees. Chandrasekar (2011) states that the elements of the work consist of three important aspects namely, relationship between work and the workplace, and tools used to work. The ultimate goal of all organisations is to increase productivity and revenues so that they can maintain competitiveness in a global business environment. According to Boles, Pelletier, and Lynch (2004), when employees are desired to work, the quality of job or outcomes will increase. Therefore, it is important to develop a good workplace environment which decreases the absenteeism rate. This indirectly will boost performance of the employees, leading to increased organisation performance.

In fact, the positive concept of a workplace environment refers to the elements at work provided by the employer to employees that could support the employees to work more efficiently and effectively. A low stress level, feeling appreciated and not feeling threatened are regarded as characteristics

of a good workplace (Markay, Ravenswood, & Webber, 2012). This concept consists of the physical aspects in the form of organisational and psycho-social surrounding of work (Busck, Knudsen, & Lind, 2010; Seal & Cleal, 2011). In other words, the quality of work in a working environment is an essential aspect for both employees and employers. It has always been linked with the productivity and organisational goals.

Thus, this study attempts to assess the relationship between workplace environment and organisation performance of electrical and electronic manufacturing companies in Selangor, Malaysia. The details are discussed later in this chapter.

2.2.2 Teamwork

Good collaboration in teamwork enables ordinary people to achieve extraordinary results (Scarnati, 2001). In other words, teamwork is a core element of a business and team members need to work well together to accomplish the task given. According to Berlin (2014), shared responsibility as well as long-term approach and appreciation are the key factors in developing a team's common goal.

A three-stage system of teamwork consists of three important elements namely, utilization of resources (input), maintenance of internal processes (throughput), and production of specific products (output) (Schermerhorn, Hunt, & Osborn, 1995; Ingram, Teare, Scheuing, & Amistead, 1997). All these elements define whether a team is effective or otherwise.

Furthermore, Cooney and Sohal (2004) asserted that continuous improvement, problem-solving skills as well as the development of employee responsibility are the most important elements in a teamwork. In their study, Cooney and Sohal (2004) examined the relationship between the development of teamwork and the quality of management programs and initiatives. The researchers revealed that the development of teamwork practices support the extension of employee responsibility for quality and facilitate the introduction of new management practices. Despite the importance of teamwork, extensive of literature has shown that very few studies examine its influence on the organizational performance of the EE sector in Malaysia

As this study is therefore concerned with how teamwork influences the organisation performance, it is important to examine the teamwork practices with a view to enhance skill and work quality of the members of the organization. By doing so, the practitioners will be able to identify their strength in terms of skill, effort, communication as well as commitment to increase the performance of the firms. The relationship on how teamwork influences the organisational performance is discussed later in this chapter.

2.2.3 Transformational Leadership

According to Alharbi and Yusoff (2012), knowledge is an important asset for an organisation. A leader plays a key role in facilitating the acquisition of that knowledge. A leader should develop a comprehensive vision and mission on how to achieve the organisational goals (Naqshbandi & Jasimuddin, 2018). A

leader must be able to analyse and overcome problems to ensure the organisational performance is at the optimum level.

Furthermore, Melchar and Bosco (2010) argued that the success of an organisation in high-performance industry is significantly related to employees seeking leadership to play an essential role in the organisation. A good leader may encourage and influence employees in positive ways to perform at higher levels and align their effort and commitment to the organisational objectives (Buil, Martínez, & Matute, 2019). In contrast, a poor relationship between the leader and the employee will produce a stressful work culture that may affect employees' productivity.

More importantly, transformational leaders are always regarded as individuals who contribute to the organizational success through the creative ideas. They are inspirational and rational as well as delegate power to subordinates to perform their work and responsibility (Buil *et al*., 2019) thereby improving the performance of the organization. Considering the evidence of positive impact of transformational leadership on organizational performance, it is important to further examine its influence. This is especially important within the EE sector to understand the specific mechanisms by which the influence occurs and the particular conditions under which it improves the performance of the organization (Holten *et al*., 2018; Patiar & Wang, 2016). The relationship on how transformational leadership influences employees' in organisation is offered later in this chapter.

2.3 Underpinning Theory

Interest in organization learning theory as the primary source of the organisational success as well as competitive advantage has been a strong focus in the past decades (Gilley & Maycunich, 2000; Ellinger, Ellinger, Yang, & Howton, 2002). The seminal studies of Argyris and Schon (1978), that of Senge (1990) and the study of Watkins and Marsick in (1993) have become important references for organizational learning researchers.

For instance, Argyris and Schon (1978) stressed that collective learning and the continuous reflection process are important aspects to achieve high performance in an organisation. In other words, they emphasize on the process-oriented concept or organisational learning that could occur in all entities in the organisation. In 1990, Senge made a modification to the basic theory by proposing a fifth discipline that is; system thinking, personal mastery, mental model, shared vision, and team learning. Thus, Senge defined learning organisation as the continuous effort by the organisation to enhance its capacity to create its future.

According to Marsick and Watkins (1993), organisational capacity in the form of innovation and growth can be enhanced through learning. Hence, Marsick and Watkins proposed six sub scales to assess or gauge the achievement of the organisation namely; connect organisation to its environment, empower people towards a collective vision, establish systems to capture and share learning, encourage collaboration and team learning, promote inquiry and dialogue and create continuous learning opportunities. Furthermore, Watkins and Marsick (1993), and Yang (2004) expanded this

concept to include new element which is leadership for learning (see figure 2.1). Hence, these seven dimensions are widely used in different contexts to determine employees' perception in the form of learning culture in the organisations.

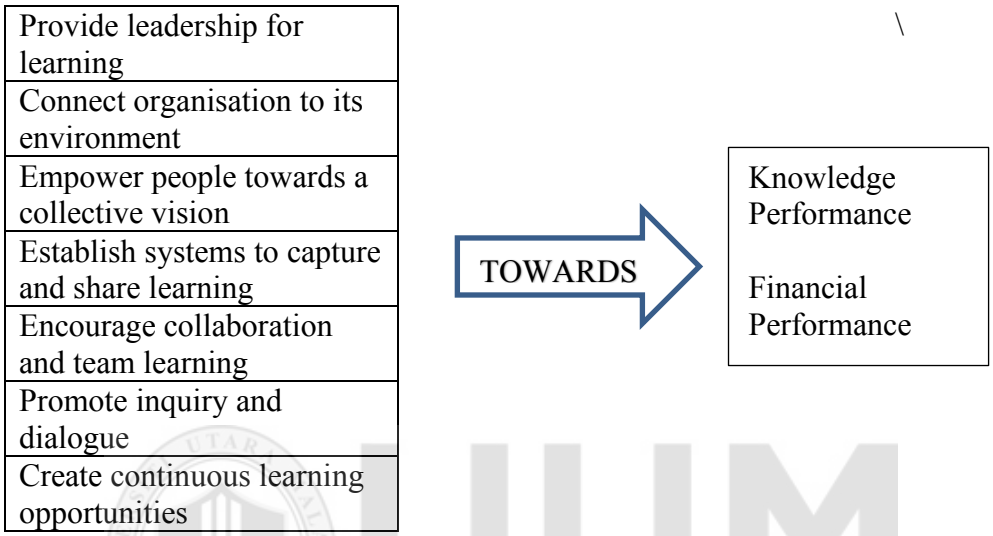

Figure 2.1
Dimensions of Learning Organisation and Performance Outcomes

Dimensions of the Learning Organisation Questionnaire (DLOQ) developed by Marsick and Watkins in 1993, and Yang (2004) is regarded as the best method to measure organisational learning orientation. DLOQ consists of seven constructs which is designed to ascertain degree to which an organisation has embraced and implemented learning imperatives.

Below is the list of researchers using DLOQ in different contexts starting from business, financial, logistic, human resource, and government to the manufacturing sectors (see table 2.2). This importantly indicates the relevance of the learning theory and concept.

Table 2.2
List of researchers using DLOQ

Author	Year	Context	Participants	Number of Responses
Watskin	1996	International	Business School Employees	389
McHargue	2003	United States	Directors of Non-Profits	264
Davis	2005	United States	HR & Marketing Employees	644
Ji Hoon Song, Back Kyoo Joo and Thomas J. Chermack	2009	Korea	Electronic, Telecommunication, Construction and Other Sector Employees	1529
Elisabeth, Thomas and Diogenes de Souza	2011	Brazil	Electrical Sector Employees.	566
M. Kenneth Daniels and Wetherington	2013	United States	Executive Director of Non-Profit Organization	603
Otilia, Cristian, Ruxandra and Aurel	2014	Romania	Pharmaceutical Companies Employees	309

2.4 Relationship between Workplace Environment and Organisation Performance

The workplace environment is defined as a place where a task is completed. It also includes the quality of air and noise level, as well as benefits of employment such as free child care and an adequate parking. Chandrasekar (2011) argued that internal factors such as performance feedback, supervisor

support, mentoring, workplace incentives and job aids, opportunity to apply, goal setting, defined process, and role congruity might also impact organisational performance.

Workplace environment issues can affect the performance of a firm in the short term as well as in the long term. There is a wealth of evidence of the influence of workplace environment on organizational performance from human resource management and psychology perspectives (Cartwright & Cooper, 2009; Kalliath, Brough, O'Driscoll, Manimala, & Siu, 2010).

Considering the importance of the workplace environment, it has been argued that not all employees are satisfied with monetary benefits. For instance, evidence in literature shows that many employees wish to have a healthy working environment where they can work peacefully with others in the organization (Raziq & Maulabakhsh, 2015). According to Grawitch, Gottschalk, and Munz (2006), the key to achieve both firm performance and employees' well-being is significantly related to a work culture in the organisation. The employees' work-life balance and engagement as well as employees' growth and development, health and safety are therefore important aspects to be looked into in an organization (Grawitch & Ballard, 2016; Hofmann & Stokburger-Sauer, 2017; Smith, Hughes, DeJoy, & Dyal, 2018). Well-being in this context refers to how a person feels about the work, he or she is doing.

Importantly, there is a broad recognition between well-being and performance of the organisation. Usually, lower levels of well-being lead to a poor performance. Conversely, higher levels of well-being lead to the achievement

of better results (Collins, 2004; Edmans, 2012; Lyubomirsky, King, & Diener, 2005; Spencer, 2013). This aligns with Markay *et al.* (2012) who argued that if employees perceived their working environment to be a good one, they are significantly less likely to quit their job.

In view of the importance of the workplace environment, Markay *et al.* (2012) recommended future studies to consider the issue of workplace environment and their impact on quitting intentions. Accordingly, Airo and Nenonen (2014), regarded workplace environment as a system of physical artefacts, cultural symbols, human behavior, and spatial dynamics which orchestrate action and interaction. This is the level of innovation and performance of an employee in a team as well as his or her effort to the job. They are determined by the immediate work environment.

Additionally, the workplace environment consists of many factors. They are goal setting and defined processes, workplace incentives, performance feedback and coaching, resource availability as well as supervisor support that come together to form the environment of an organization. When employees work in a proper working environment they are able to produce better results for the organization. For example, goal setting is very important for employees so as to know the expectations of the organisation. Therefore, it is equally important that they are involved in goals setting and performance measures.

Moreover, regular feedback on employees' performance in the form of negative and positive aspects through an informal meeting between the employee and his or her superior is considered as an important aspect for

creating a good workplace environment (Pichler, Beenen, & Wood, 2018). In other words, an employee should not be informed about his or her mistakes only but also about his or her achievements so that they feel appreciated (Tarakci, Ateş, Floyd, Ahn, & Wooldridge, 2018). This therefore points to the fact an organisation should ensure that employees are aware of the areas to be improved on, the mistakes to be rectified in the session so that the employees can improve their skills systematically. This argument aligns with Noorizan, Afzan, and Akmar (2016) who argued that workplace environment statistically and significantly influences the employees behaviour in an organisation. Thus, this therefore indicates that workplace environment requires further study with a view to assist the employees to apply acquired knowledge, skill and attitude to their tasks in order to improve organizational performance.

Additionally, the study of Piccoli, Callea, Urbini, Chirumbolo, Ingusci, and Witte (2017) about psychological processes that links with organisational commitment and change supportive intentions revealed that employees' behaviours in job contexts are driven by evaluation about the perceived belongingness to the organisation. Similarly, Straatmann, Nolte, and Seggewiss (2018) asserted that organisational commitment relates to change supportive intention and mediated through change related attitudes as well as perceived behavioural control. All these evidence shows that workplace environment is the key factor to improving organizational performance. It plays an essential role in an employee's behaviour and performance of the organisation. Hence, designing a good workplace environment to enhance employee well-being and performance must be linked with a good caring

culture as this ensures employees' commitment. Despite the importance of workplace environment on the performance of organization, very limited studies have been conducted within the EE manufacturing sector in Malaysia. This thereby necessitates further research in this regard.

2.5 Relationship between Teamwork and Organisation Performance

Tucker and Edmonson (2003) argued that work across unit or beyond functional area enables individuals or groups to more likely engage in knowledge and information sharing which in turn could enhance their skill and ability to deal with adverse events. Mc Kinney, Barker, Smith, and Davis (2004) also asserted that teams reach effectiveness by implicitly communicating norms and organisational culture. Importantly, there is a vast literature on teamwork performance and measurement (Bacon & Blyton, 2000; Grutter, Field, & Faull, 2002; Delaru, Hootegem, Procter, & Burridge, 2008). However, theoretical arguments in the form of teams' effectiveness are still insufficient.

Notably, due to rapid changes in technology and business environment, it is not uncommon for one person to become a member of several teams in different organisations. An organisation that emphasizes teamwork will therefore obtain many benefits such as higher productivity and product quality that meet the international standards, leading to increased performance of the organisation. Teamwork is the best method for multi-disciplinary groups to produce work flow effectively and efficiently (Bruce & Ricketts, 2008). Leading by example, for instance, by showing act of good discipline might influence others to do the same.

Moreover, Fiore (2008) stressed that to improve team performance, a leader in the organisation should focus on comprehensive training such as team building, cross-training and other related activities. Positive communication, innovation, and creativity have also become the core factors in achieving group aims or objectives (Kremer, Villamor, & Aguinis, 2019; Yu, Yen, Barnes, & Huang, 2019). A good understanding of effective communication helps teams become highly functional (Ceschi, Dorofeeva, & Sartori, 2012). In the same line, Bazarova and Hancock (2012) argued that previous group outcomes were influenced by the way the group continued to communicate and work together.

Jaca, Viles, Tarco, Mateo, and Santos (2013) additionally revealed that teamwork is a powerful tool in achieving different goals in any sector. However, Jaca *et al.* (2013) found that there is a significant difference between manufacturing and healthcare industry specifically in internal factors such as leadership and strategies, dissemination of the results and communication. Furthermore, Jaca *et al.* (2013) suggested a new research to examine the application of teamwork in more industries and include other factors such as number of people involved and the size of the organisation.

Previously, teamwork was viewed as the action whereby employees were brought together to achieve organisational goals by aligning the interests of each member to the objective of the group. Thus, all members have equal opportunity to enhance their skills and knowledge to the optimum level in order to complete the task given. In other words, the greater the co-operation among team members in an organisation, the greater the level of productivity

(Arfi, Hikkerova, & Sahut, 2018). Moreover, working in teams can enhance the outcome of an employee to the maximum level (Realyvásquez, Maldonado-Macías, & Avelar-Sosa, 2018). Teamwork nowadays has become an essential strategy for development of staff in many organisations in the world. Indeed, working in teams is the smartest strategy and is a tool for an employee to increase his or her performance.

Bikfalvi and Lay (2014) argued that the expenditure of research and development (R&D) activities, uniqueness of the product, supply chain position as well as innovation and strategy for international competition create significant differences between organisation opting for teamwork as workplace practice or companies neglecting it. Organisations that have clear mission statements are able to develop a culture of teamwork. However, to make the teamwork to be more efficient and effective in an organisation, there is a need to improve leadership qualities in the aspects of knowledge sharing and technology enhancement (Smits, Bourden, Falconer, & Strasser, 2014). This importantly reinforces the need to further study teamwork as an important concept to improve organizational performance.

In a related study of Cha, Park, and Lee (2014) revealed that teamwork quality was found to be significantly related to psychological proximity of the team members. Building an effective teamwork requires collaboration among multiple people to work together and achieve the organisational objective (Matthews & McLees, 2015). Moreover, Malaysia Productivity Corporation (2018) asserted that it is important for Malaysian organizations to develop

and implement best practices which will enable the organisation produce high value output at lower cost.

Furthermore, creating a team environment where members can openly communicate in the form of giving ideas and discussion builds a strong and trustworthy working relationship culture in terms of co-operation, teamwork, and productivity (Whetten & Cameron, 2016). Similarly Brock, McAliney, Ma, and Sen (2017) asserted that effective listening and good communication are key contributors to teamwork success in organisation. Considering the significance of teamwork, Brock *et al.* (2017) highly suggest that further researches are needed in other cultures and industries.

Moreover, Sandoff and Nilsson (2016) conducted a study that is related to the development of teamwork in a new organisation through the length of experiences of the members involved and found that the lack of essential organisational prerequisites for teamwork as well as leadership qualities are needed significantly in handling difficulties in teamwork. Therefore, Sandoff and Nilsson (2016) suggest that a new research about basic structure of teamwork is also needed because it is a preliminary process to determine the necessary support for team members and their work processes.

Hence, given the arguments above, it could be said that teamwork creates enormous positive impacts on organisations' performance and revenues therefore requires further research.

2.6 Relationship between Transformational Leadership and Organisation Performance

Transformational leadership has been argued as an important factor that can stimulate organizational performance. Melchar and Bosco (2010) argued that the success of an organisation in high-performance industry is significantly related to employees seeking leadership to play an important role in the entire organisation. A good leader may encourage and influence employees in positive ways to perform at higher levels and align their effort and commitment to the organisational objectives.

A good relationship between a leader and the followers is the key to enhance organisational performance. In contrast, a poor relationship will produce a stressful work culture that may affect employees' productivity. For example, a repeated behaviour of a leader that violates the organisational goals and manipulates the well-being of employees (Einarsen, Aasland, & Dkogstad, 2007) could be disastrous to the existence of the organization. In other words, this type of leader frequently places his or her goals above those of the organization and with negative consequences on productivity (Keelan, 2000), financial (Field, 2003), as well as employee morale (Olafsson & Johandottir, 2004).

The study of Tortorella, Fetterman, Anzanello, and Sawhney (2007) on the relationship between lean implementation in organisation and the behaviours of multi-level leadership revealed that inconsistent leadership style exists along the lean implementation thereby suggesting that a new research is

needed by including additional variables like systems dynamic to identify leadership styles.

Additionally, Kathuria, Partovi, and Greenhaus (2010) found that overall manufacturing performance is influenced by the effective leadership style implementation in organisation. Thus, Kathuria *et al.* (2010) asserted that further researches are needed on different leadership styles which is related to different factors that exist in the organisation such as experience of the employees, training programs, and skills development.

Transactional leadership emphasises collaboration and communication between team members and team leaders in relation to tasks that need to be completed in a certain period of time. Employees are postulated to work at their best after understanding the requirements of the leader (Yildiz, Basturk, & Boz, 2014). Transactional leadership consists of three important elements:

- Rewards based on role and requirement of the task.
- Active management which refers to leadership style in which the leader carries out full supervision of performance to avoid mistakes done by employees.
- Passive management which refers to the leadership style in which a leader participates only after the appearance of mistakes against the requirements (Si & Wei, 2012).

Nevertheless, transformational leadership is referred to a proactive process that realises missions and organisation goals by making some changes in the attitude of the members (Yildiz *et al.,* 2014). Leadership and change

management are closely interrelated where transformational leaders focus on dramatic changes in the existing procedure or processes and transactional leader restore stability by introducing the needed systems and procedures in line with the transformed entity (Kotter, 2012). The characteristics of transformational leadership style are as follows:

- Leader enhances the employees understanding on the impact of their work to organisation.
- Leader focuses more on organisation target rather than employees' targets.
- Assesses or evaluates employees' needs in line with the organisation goals.

Importantly, the arguments of Yildiz *et al*. (2014), Yun, Cox, and Jr (2007) have initially revealed that both transformational leadership qualities and empowering positively engender team organisational citizenship behaviour through job satisfaction. In this regard, Yun *et al.* (2007) equally recommended that future researches need to focus on team level because variety of processes might exist due to variety of interdependencies that exist in teams. Meanwhile, Alharbi and Yusof (2012) asserted that transformational leadership style positively affects the quality of management practices. This stimulates the organisation performance while transactional leadership style has a negative association with quality management practices. This conforms with Bass (1990) who initially argued that transformational leadership increases employee's self-confidence or self-efficacy in reaching organisational objectives.

Furthermore, Choi, Kim, Ebrahim, and Kang (2016) investigate the relationship between transformational leadership style and worker innovative behaviour in Korean contexts and found that the employee innovative behaviour as well as knowledge sharing significantly related to transformational leadership style. Meanwhile, Errighi and Bodwell (2017) conducted study in the context of Thailand electrical and electronic industry and revealed that to achieve high performance of the organisation there is a need for special programs to strengthen the leadership skill specifically, for female employees.

Additionally, Kao (2017) asserted that transformational leadership style as well as organisation climate influence the outcome of individual performances. Hence, based on the prior results, transformational leadership emphasises a leadership style that brings a positive approach in terms of strong beliefs as well as changes in the value of judgments of employees in the organisation. Despite the significance effect of transformational leadership on organizational performance, evidence in literature especially within the context of the EE sector in Malaysia is seriously lacking thereby suggesting further research.

2.7 Summary

Based on the preceding discussion, it is concluded that workplace environment, teamwork and transformational leadership are paramount important in aligning employees' effort to organisation performance. As business world is more challenging, it is essential for companies to continuously provide a conducive workplace environment, strong teamwork and good leadership as these provide a strong foundation for greater performance of the firms. In addition, when employees feel convenient in the organisation they will work in positive ways in achieving organisational aims.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter explains the methodology of the study. Methodological issues such as research framework, the development of hypotheses and research design of the study are presented in this chapter. Besides, operational definition of the variables, sampling design and population, instrumentation, data collection method and pilot test are discussed in detail.

3.1 Research Framework of the Study

Many scholars affirmed that more studies are required in identifying the organisation performance factors for a better understanding of what stimulates the organizational performance. Findings from studies on organisational performance by Rousseau (1991), Kotter and Heskett (1992), Marcoulides and Heck (1993), as well as Ogbonna and Harris (2000) revealed that not much research has been conducted in developing countries. The study of Ramayah *et al*. (2009) revealed that there are still limited literatures on manufacturing strategy and performance. Similarly, Ahadi (2011) asserted that the empirical studies on organisational learning in Malaysia are still limited compared to other western countries.

Importantly, organisational learning theory focuses on employees' capabilities and firm resources. It is the foundation for greater performance of the firms. Thus, the expansion of the previous theory is developed to close the gap and is predicted as the best to evaluate the organisational activities. It

is therefore expected to be accurate in explaining the relationship between independent variables and the organisation performance.

The current research framework is a modification from the organisational learning theory developed by Yang *et al.* (2004). The predictors or independent variables include workplace environment, teamwork and transformational leadership while dependent variable is organisational performance. Figure 3.1 shows the relationship between the independent variables and dependent variable.

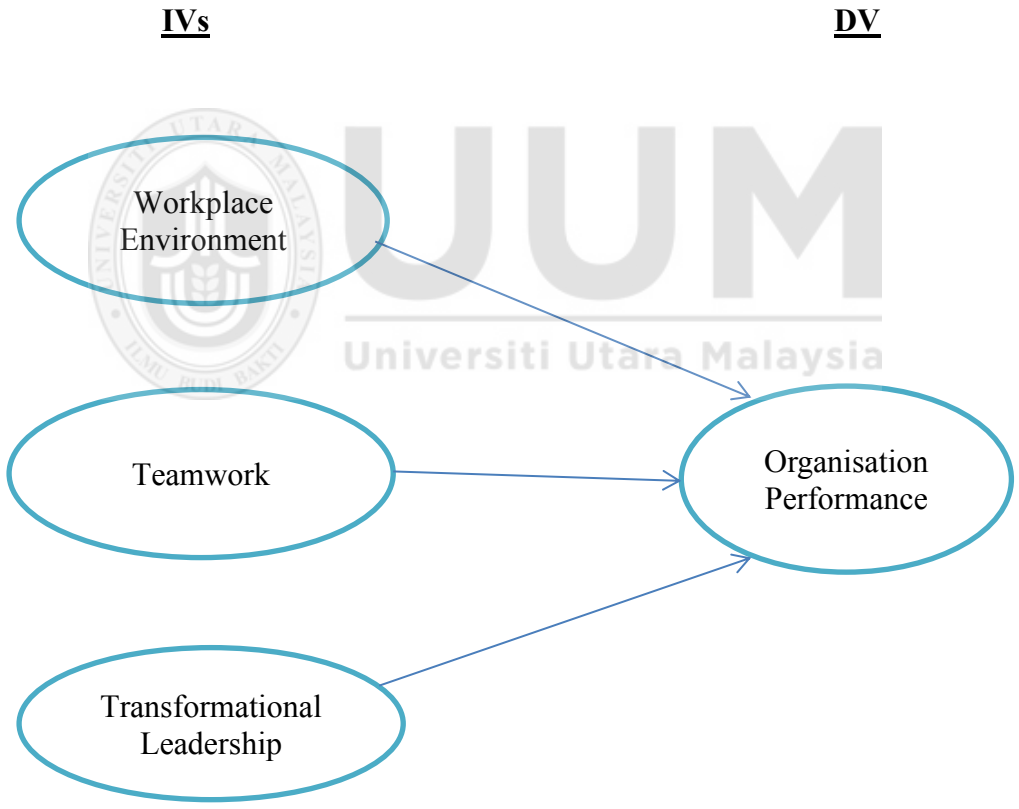

Figure 3.1: Conceptual Framework

3.2 Hypotheses Development

The development of hypotheses is presented in this section. In accordance to the research questions as well as the objectives stated in Chapter 1, the discussion that follows is focused on previous empirical findings. In this regard, three hypotheses were formulated to investigate the influence of the independent variables on organisation performance of the electrical and electronic manufacturing companies in Selangor, Malaysia.

3.2.1 Workplace Environment and Organisation Performance

Decrease employee turnover significantly relates to long-term shareholders return through employee's satisfaction**.** In contrast, decrease in productivity significantly relates to employees' dissatisfaction from poor workplace environment which lead to poor performance of the organisation (Chandrasekar, 2011).

Furthermore, not feeling threatened at work, lower levels of stress as well as employees feeling appreciated by the organisation are considered as characteristics of good workplace (Markay, Ravenswood, & Webber, 2012). In other words, employees' intention to quit the job is lesser if the organisation provides a good working environment.

Similarly, Abdul Hamid and Yahya (2016) argued that employees who feel fit in all aspects of their work environment will remain in the organisation. Hence, a good working environment contributes positively to financial revenues and other organisational success (Welch, 2011). Thus, the following hypotheses is formulated:

H1: There is a significant relationship between Workplace Environment (WE) and Organisation Performance (OP).

3.2.2 Teamwork and Organisation Performance

Teamwork is very important as it assists any organization to improve their performance. In this regard, the study of Cha, Park, and Lee (2014) revealed that the team members' psychological factor is significantly related to teamwork quality. According to Brock, McAliney, Ma, and Sen (2017), the combination of both good communication and effective listening is a key element to teamwork success, leading to high performance of the firms. Similarly, Lacerenza, Marlow, Tannenbaum, and Salas (2018) state that successful teams produce positive outcomes for organisation such as better financial performance from export activities.

Furthermore, Sandoff and Nilsson (2016) conducted a study that is related to the development of teamwork in new organisations using the length of experiences of the members. The study found that lack of essential organisational prerequisites for teamwork as well as leadership qualities is significantly related to difficulties in working in a team which leads to poor organisation performance. Therefore, the above discussions lead to the hypotheses below.

H2: There is a significant relationship between Teamwork (TW) and Organisation Performance (OP).

3.2.3 Transformational Leadership and Organisation Performance

Transformational leadership is very crucial in the life of any organization. Mesterova, Prochazka, and Vaculik (2015) conducted a study regarding the mediating role of transformational leadership between a leader's self-efficacy and their effectiveness. The study found that the transformational leadership style is negatively related to the role of the mediator. Meanwhile, Gkorezis and Bellou (2016) revealed that the use of self-deprecating humour by the leader positively affects his or her perceived effectiveness and this relationship is mediated through the trust of a leader.

Likewise, Choi, Kim, Ebrahim, and Kang (2016) investigated the relationship between transformational leadership style and worker innovative behaviour in Korean contexts and found that the employees' innovative behaviour as well as knowledge sharing significantly related to transformational leadership. Ebrahimi, Moosavi, and Chirani (2016) also asserted that the exploratory techniques used by transformational leadership in the manufacturing companies are able to guide employees to develop better products that increase profitability and improve the performance of the organisations. Based on these facts, the following hypotheses is formulated.

H3: There is a significant relationship between Transformational Leadership (TL) and Organisation Performance (OP).

3.3 Research Design

This research employed a quantitative survey that involved the use of a set of questionnaire to collect data. This method is selected because it is inexpensive, easy to develop and efficient while data can be obtained quickly. Participants were given hardcopy of the questionnaires so that they can respond at their convenience. The researcher used probability sampling technique namely, systematic random sampling to select the participants.

3.4 Operational Definition of Variables

Based on the literature review the following operational definitions are used in this study. The operational definition is based on the four variables of the study namely, workplace environment, teamwork, transformational leadership and organisation performance. Additionally, a five-point Likert scale is used ranging from '1' "strongly disagree" to '5' "strongly agree"

- Workplace environment refers to a conducive workplace environment specifically in physical demand, work conditions, equipment use and ergonomic that can increase motivation (Morgeson & Humphrey, 2006). This includes work planning and flexibility, personal inititiative, feedback, appreciation, and work atmosphere. The variables in a workplace environment is measured with the Workplace Characteristics Questionnaire developed by Morgeson and Humphrey (2006).
- Teamwork refers to positive communication, innovation, and creativity. It also involves collaboration approaches, working together by teams and the feeling of being appreciated and rewarded by the

organisation (Yang *et al.,* 2004). The teamwork also includes the freedom to adapt goals as needed, ability to focus both on the team's task and how well the team is working, treat members as equals, and revise thinking if necessary in order to propose to the organisation. The variable of teamwork is measured with the DLOQ instruments developed and introduced by Yang *et al.* (2004).

- Leadership refers to the ability of transformational leader to lead or guide other individuals, teams or entire organisations in achieving organisational goals. It also involves the ability of the leader to lead by example as well as the use of learning systematically to obtain positive business results (Yang *et al.,* 2004). This includes mentoring and coaching, expression of satisfaction, re-examination of critical assumption whether they are appropriate, value differing perspectives and focus about what needs to be accomplished. The variable of leadership was measured with the MLQ developed by Ang, Van Dyne, and Koh (2006) and Bass and Avolio (2010).
- Organisation performance refers to DLOQ outcomes measures called knowledge and financial performance (Yang *et al.,* 2004). The outcome measurement is an individual assessment which is a focus in this study. The measurement was used to assess the performance of the organisations.

3.5 Sampling Design and Population

The target population of interest is electrical and electronic manufacturing companies in Selangor, Malaysia because this state has good infrastructure such as airport, roadways, and railways that attract investors. Among the 13 states, Selangor is the biggest city in Malaysia and it is growing rapidly specifically in Klang Valley. In 2018, Selangor contributes the largest portion (23.7 percent) of Malaysian Gross Domestic Product (GDP) against 23.0 percent of 2017.

For this study, the electrical and electronic MNCs were chosen because of their fluctuated performance since year 2016 as reported by Central Bank of Malaysia. Hence, mergers and acquisitions of firm took place leading to a large number of experienced employees in the executives and managerial level to leave the organisations during the restructuring exercises.

The replacement process also affected performance of the firms because long period of time was needed for newcomers to learn all the process as well as procedures starting from the initial stage. Therefore, the unit analysis of this study is executives and managerials level because they play key role in developing and leading the activities as well as align the employees' effort to organisational aims.

According to the Malaysian Investment Development Authority (MIDA), there are 136 electrical and electronic MNCs in Malaysia and 22 of them operate in Selangor. Therefore, the respondents of this study were selected from six foreign electrical and electronic manufacturing companies in Selangor based on their willingness to participate and on the assumption that

the percentage of executive and managerial officials in these companies is 10 percent of the total number of employees (see table 3.1). Thus, the predicted population size is N = 1200 and the sample size is S = 291 (Krejcie & Morgan, 1970).

Table 3.1
Companies involved in study

Bangi	Shah Alam	Klang	Banting	Petaling Jaya
1	2	1	1	1

Notably, Cavana, Delahaye, and Sekaran (2001) asserted that the objective of sampling is to attain representativeness of the total population. Generally, a big sample size will improve the statistical power so it becomes easy to detect significant association or relation of the variables. Nevertheless, opinions differ about how big a sample should be, while Roscoe (1975) recommended a sample size of over 30 and below 500, other researchers such as Hair, Black, Babin, and Anderson (2010) argued that a sample size (S) that is more than 200 is regarded as large, less than 100 as small, and between 100 and 200 as medium.

This study used a probability sampling technique to select participants because it is easy to organize, time efficient and widely used in different contexts (Cochran, 1953). Furthermore, it was found to have the capability to provide more precise outcomes than simple random sampling (Cochran, 1953; Raj, 1972). For this study, the population was first divided into two type of category namely; executive and managerial. For each group, every 4th

name from the name list was selected. The sampling procedure with respect to electrical and electronic MNCs representatives is shown in Appendix 1.

3.6 Instrumentation

The teamwork and organisational performance variables were adapted from Dimensions of the Organizational Learning Questionnaire (DLOQ) developed by Yang, Watkins, and Marsick (2004). The estimate reliability of the entire scale of DLOQ is .95 (Yang *et al.,* 2004). In a study of a Korean conglomerate widely involved in electronic, telecommunication, construction and others, the instrument's reliability ranged from 0.74 to 0.84 (Song, Joo, & Chermack, 2009) while Davis (2005) reported a reliability coefficient of 0.79 to 0.93.

In this study the items were adopted and adapted from previous studies in order to meet the objectives of the study. A five-point Likert scale was used items ranging from '1' "strongly disagree" to '5' "strongly agree". There are 50 measurement items in all. Twenty-nine (29) items were adapted from the Workplace Characteristics Questionnaire. Meanwhile, six (6) items from the Multifactor Leadership Questionnaire (MLQ) were used to measure the leadership variable. Five items adapted from DLOQ were used to measure the teamwork variable while ten (10) items were used to measure the organizational performance. Table 3.2 shows information on the measurement items.

Table 3.2
Measurement items

Variables	Section	Number of Items
Workplace Environment	B	29
Teamwork	C	5
Transformational Leadership	D	6
Organisation Performance	E	10

Additionally, the questionnaire consists of five sections. Six items in section A focused on the respondents' demographic personal details such as gender, age, service's category, working experience, education and monthly income. Then, section B and C encompass 34 items that are related to Workplace Environment and Teamwork. Six items in section D are related to Transformational Leadership. Lastly, section E encompasses 10 items related to Organisational Performance.

3.7 Data Collection

A set of hard copy of questionnaires was delivered in stages to six companies. The questionnaires were collected in stages a few weeks after initial delivery. During this period, the contact person in the company was informed via tele-conversation if the response rate was low.

Participants were informed of their confidentiality to their responses and only the researcher could access them. The cover letter indicated the amount of time required to complete the questionnaire (10-15 minutes) and confidentiality was assured. Lastly, the participants were thanked for their participation in the study.

3.8 Pilot Test

A small scale trial was done in preparation for a major study. This is called a pilot test (Pallant, 2001). A new set of instruments was developed in this study. Thus, it was necessary to test whether the content is understood by the respondents. In other words, it is essential to conduct a pilot test to determine possible problems that may be encountered during the actual research such as difficulties in wording or the state of the instrument. Thus, 30 questionnaires were distributed to two electrical and electronic MNCs in Selangor, Malaysia. The reliability test for each instrument was calculated to assess the consistency of the items.

Table 3.3 shows that all the variables exhibit accepted reliability estimates which range from 0.741 to 0.942. Hair *et al*., (2010) recommended that if the value of Cronbach's alpha is greater than 0.60 it is considered reliable.

Table 3.3
Reliability coefficients of multiple items in pilot test (n = 30)

Variables	Cronbach's Alpha
Workplace Environment	0.942
Teamwork	0.741
Transformational Leadership	0.787
Organisation Performance	0.874

3.9 Summary

This chapter explains the method of this research. It covers topics such as research framework of the study, hypotheses development, research design, operational definition, sampling design and population. Moreover, instrumentation, method of data collection as well as pilot test and the summary. The next chapter presents the findings of this study.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.0 Introduction

This chapter discusses and explains the findings of the study in details. Firstly, it starts with the discussion of technique of data analysis, evaluating the goodness of the data through respondents response rate and followed by the discussion of demographic of the respondents. Furthermore, the model was measured for their construct validity and reliability via Smart PLS software. All the hypotheses were tested and the summary of whether the hypotheses are rejected or supported is presented in this chapter. Finally, summary of the study is presented at the end of the chapter.

4.1 Technique of Data Analysis

Sekaran and Bougie (2010) asserted that data analysis element encompasses an inspecting process, transforming the data, modeling the data and sharing the information to others. In other words, data analysis is used to generate the outcomes such as research implications and conclusions

4.1.1 Data Examination

The initial step to be performed before data can be analysed is called data examination. Data examination involves checking the data, data entry process into computer, transforming the data, and preparing database structure for multiple measurements (Myers & Well, 2003).

4.1.2 Missing Data

According to Myers and Well (2003), the missing values of data can create problem in data analysis because SPSS and PLS system require a complete set of data to perform analysis. Missing data occurs when respondents do not know the suitable answer to be provided due to limited knowledge about the subject. In view of this, the respondents may decline to answer a given question (Hair *et al.,* 2010). There are multiple ways to handle missing data, for example, by deleting the data if the missing rate is higher than 5%, or replacing the missing data with a known value such as variable mean with substitution (Hair *et al.,* 2010).

4.1.3 Detecting Outliers

Sekaran and Bougie (2010) stated that outliers are the extreme values in data set as the values are far away from the usual values. In other words, when a respondent gives the extreme values for a certain question, it may influence results of the study not to be significant (Hair *et al.,* 2010). Mahalanobis distance has been used as a multivariate outlier's examination to detect outliers in this study. The data was examined based on the alpha level of $p<0.001$.

4.2 Descriptive Statistic

The researcher in this study used SPSS to conduct descriptive analysis. First, the descriptive statistics was computed on respondents' data with respect to gender, age, service category, experience, education, and income. The descriptive statistics include among others, minimum and maximum values,

median and standard deviation, and standard error of mean and mean. In other words, SPSS software was used to develop a demographic profile of the participants and common method bias result. Second, SPSS was also used to perform correlation among the variables of Workplace Environment, Teamwork, Transformational Leadership, and Organisation Performance.

4.3 Partial Least Square - Structural Equation Modeling

PLS-SEM software is known as a best tool for data analysis that estimates and assesses theoretical relationships between latent variables (Tabachnick & Fidell, 2001). According to Hair *et al.* (2010), it also handles and assesses multiple relationships from exploratory level to confirmatory analysis. Moreover, PLS-SEM software had been widely used in various studies consisting human behaviour, and marketing (Hair *et al.,* 2014).

In other words, PLS-SEM technique is based on an iterative approach that maximizes the explained variance of endogenous constructs (Hair Jr, Sarstedt, Hopkins, & Kuppelwiser, 2014).

Additionally, PLS-SEM was used to test all the research hypotheses. PLS-SEM however has some important guidelines that must be followed as researchers are required to establish both measurement model and structural model. The guidelines are discussed below:

- Cross Loading (factor loading) - Fornell and Larcker (1981) recommended that all item loadings values must be 0.70 or more for confirmatory studies. However, the value that is in between 0.60 to 0.70 is still acceptable for explanatory studies (Hair *et al*., 2014).

- The convergent validity test is done through Cronbach's alpha and composite reliability evaluation on the reflective models. In other words, Goodness-of-Fit (GoF) is the predictive performance of the measurement model through the evaluation of both composite reliability and Cronbach's alpha.
- Cronbach's Alpha - Hair *et al.* (2010) recommended that the Cronbach's alpha equal to 0.80 or more is a good scale, 0.70 is an acceptable scale and 0.60 is for exploratory purposes.
- Internal Consistency Reliability - Gefen *et al.* (2000) recommended 0.70 or more for composite reliability as this indicates an adequate internal consistency.
- Reliability - Nunnally (1978) and Shih and Fang (2004) indicated that the minimum value reliability of Cronbach's alpha for the research's early phase must be higher than 0.6.
- Average Variance Extracted (AVE) refers to a test of both convergent and divergent validity. In other words, AVE implies the average commonality of each latent factor specifically, in reflective model. The values of AVE for constructs should be higher than 0.50 for an adequate model (Fornell & Larcker, 1981; Hair *et al.,* 2010).
- Sarstedt, Ringle, Smiths, Reams, and Hair (2014) asserted that the collinearity tests between exogenous and endogenous variable need to be done to determine the level of significant relationship among constructs. In order to evaluate the collinearity, the researcher must consider variation inflation factor (VIF) which value must not exceed 5 (Hair *et al.,* 2014).

- R square refers to endogenous latent variable value. It indicates the quantity of variance in the endogenous construct that is elucidated by the exogenous variable. According to Hair, Ringle, and Sarstedt (2011), the R square values of 0.75, 0.50, or 0.25 are classified as substantial, moderate and weak respectively.
- Path Coefficient – This refers to the values of Beta in the relationship between exogenous and endogenous latent variable.
- Cohen's f square is a measurement for predictive construct of endogenous variables. The f square describes the changes in R square if one of the exogenous variable is not linked to the model.
- Predictive relevance is measured through the assessment of cross validated redundancy (Q square). In other words, the values of Q square imply the predictive relevance for model (Chin, 2010).

4.4 Participation and Response Rate

For this study, 300 sets of questionnaires were distributed within two months (October to December 2018) to six electrical and electronic MNCs in Selangor. However, only five companies participated in the exercise as 250 questionnaires were involved eventually. Out of the 250 questionnaires, 134 sets were returned. Thus, a response rate of this study is 53.6%. Two (2) of the questionnaires were rejected or could not be used for data analysis process due to incomplete information. Hence, 132 were used for data analysis. The summary of the number of questionnaires distributed and returned is stated in Table 4.1.

Table 4.1
Summary of questionnaires distributed and returned

No	Description	Results
1	Questionnaire distributed	300
2	Questionnaire involved in this study	250
3	Questionnaire returned	134
4	Questionnaire usable for data analysis	132
	Response rate	53.6%

4.5 Outliers Examination

Outliers are the observations consisting numerical distance or value when measured up to the whole information (Byrne, 2010). Furthermore, Hair *et al*. (2010) argued that the existence of outliers is related to the extreme answer given by the respondents. For this study, Mahalanobis Distance was used to determine the outliers. Mahalanobis Distance value is obtained through regression in SPSS called D2. The basic guideline to identify the outliers is through the D2 and Chi-Square value comparison.

The value of Chi-Square is obtained from Chi-Square statistic table based on the number of items involved in the study. For this study the critical value of Chi-Square (X2 = 86.66) is referred to as df = 50 and p = 0.001. Applying these criteria, nine respondents (16, 18, 38, 44, 48, 49, 56, 95 and 122) out of 132 were deleted as their responses had some extreme values which are regarded as outliers. Considering this, 123 respondents were finally used for further analysis.

In view of the above, Cavana, Delahaye, and Sekaran (2001) asserted that the objective of sampling is to attain representativeness of the total population. Generally, a big sample size will improve the statistical power, so it becomes

easy to detect significant association or relation of the variables. According to Hair *et al.* (2010), sample size that is more than 200 is regarded as large, less than 100 as small, and between 100 and 200 as medium. Hence, 123 respondents are considered an appropriate size to test the model.

4.6 Common Method Bias

Common method bias (CMB) which is equally known as mono-method bias, is defined as the "variance that is attributable to the measurement method rather than to the construct of interest" (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003, p. 879). In general, scholars have agreed that CMB is a foremost issue that often arises when researchers use self-report surveys (Podsakoff *et al*. 2003) as the bias could extremely raise the value of the relationship which exists among the variables being measured (Conway & Lance, 2010). This fact has been initially reiterated by Organ and Ryan (1995) in a meta-analysis of 55 studies that the output of self-report surveys studies may be biased with false high correlations due to the presence of CMB.

In line with above, this research employed a number of procedural remedies to decrease the effects of CMB (Podsakoff, MacKenzie, & Podsakoff, 2012; Viswanathan & Kayande, 2012). First, to reduce the participants' hesitation while responding to the questionnaire, the researcher initially gave them confidence that their responses would be confidentially treated as there were no wrong or right answer. Secondly, the researcher also ensured that ambiguities were avoided in the survey by using precise, simple and specific language while writing the questionnaire.

In addition to the procedural remedies, the researcher equally used Harman's single factor test proposed by Podsakoff and Organ (1986) to examine the possible presence of the CMB. In doing this, the researcher is required to conduct a factor analysis using all the latent variables of the study. After this, the outcomes of the promax and non-rotated factor solution from the analysis are then examined to ascertain the quantity of factors which explain the variance of all the variables (Podsakoff & Organ, 1986). Essentially, the outcome of the factor analysis will reveal a single factor that must not beyond 50% of the entire variances of the study. In this research, the output from the factor analysis reveals that 36.377% of the entire variances of the constructs was elucidated by a single factor. This therefore indicates that CMB is not an issue in this study. Table 4.2 shows information about the CMB.

Table 4.2
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	18.189	36.377	36.377	18.189	**36.377**	36.377
2	5.270	10.540	46.918	5.270	10.540	46.918
3	2.844	5.688	52.606	2.844	5.688	52.606
4	1.951	3.903	56.509	1.951	3.903	56.509
5	1.767	3.533	60.042	1.767	3.533	60.042
6	1.678	3.356	63.398	1.678	3.356	63.398
7	1.320	2.640	66.038	1.320	2.640	66.038
8	1.239	2.478	68.516	1.239	2.478	68.516
9	1.116	2.232	70.748	1.116	2.232	70.748
10	.966	1.931	72.680			
11	.958	1.916	74.596			
12	.911	1.822	76.418			
13	.897	1.794	78.212			
14	.784	1.569	79.781			
15	.753	1.505	81.286			
16	.700	1.400	82.686			
17	.680	1.361	84.047			
18	.635	1.269	85.316			
19	.598	1.196	86.513			
20	.531	1.062	87.574			
21	.499	.999	88.573			
22	.454	.908	89.482			
23	.429	.858	90.340			
24	.414	.828	91.168			
25	.394	.789	91.957			

Table 4.2 (Continued)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
26	.375	.749	92.706			
27	.351	.703	93.409			
28	.308	.617	94.025			
29	.293	.587	94.612			
30	.262	.523	95.135			
31	.244	.489	95.624			
32	.238	.475	96.099			
33	.206	.413	96.512			
34	.193	.386	96.898			
35	.178	.356	97.253			
36	.152	.304	97.557			
37	.142	.284	97.842			
38	.131	.261	98.103			
39	.128	.257	98.360			
40	.118	.237	98.596			
41	.113	.226	98.822			
42	.111	.221	99.044			
43	.097	.195	99.238			
44	.072	.145	99.383			
45	.066	.131	99.514			
46	.064	.128	99.642			
47	.058	.116	99.758			
48	.051	.102	99.860			
49	.038	.076	99.936			
50	.032	.064	100.000			

4.7 Respondents' Profile

Table 4.3 presents summarizes profile of the respondents who participated in this study.

Table 4.3
Profile of the respondents'

No	Characteristics	N	Percentage (%)
1	Gender:		
	Male	81	65.9
	Female	42	34.1
2	Age:		
	21 to 25 years	5	4.1
	26 to 30 years	24	19.5
	31 to 35 years	35	28.5
	36 to 40 years	5	4.1
	41 to 45 years	21	17.1
	46 to 50 years	24	19.5
	51 to 55 years	9	7.3

Table 4.3 (Continued)

No	Characteristics	N	Percentage (%)
3	Service's category:		
	Managerial	40	32.5
	Executive	83	67.5
4	Length of work experience:		
	5 years and below	28	22.8
	6 to 10 years	35	28.5
	11 to 15 years	17	13.8
	16 to 20 years	19	15.4
	21 to 25 years	15	12.2
	26 to 30 years	6	4.9
	Above than 31 years	3	2.4
5	Education:		
	Secondary level	4	3.3
	Diploma	19	15.4
	Degree	93	75.6
	Master's Degree	6	4.9
	DBA	1	0.8
6	Monthly income:		
	RM2001 ~ RM3000	9	7.3
	RM3001 ~ RM4000	34	27.6
	RM4001 ~ RM5000	29	23.6
	RM5001 ~ RM6000	11	8.9
	RM6001 and Above	40	32.5

Considering the stated information in Table 4.3, the numbers of male respondents who participated in this study is larger than female (65.9% and 34.1% respectively). In terms of respondents' age, slightly half of them is in between 26 and 35 years old (48.0%). Meanwhile, in service category executive respondent's percentage is higher than managerial level (67.5% and 32.5% respectively) and both category were permanent employees in the organisations.

With respect to the organisation tenure, 22.8% of the respondents has had one to five years working experience. Almost 42.3% had between six to fifteen years, while 7.3% had 26 years and above working experience. With regards to education attainment, almost all the respondents had attended college or university (96.7%) and only 3.3% of the respondents had their secondary school certificate.

In terms of salary, almost half of the respondents earn between RM3001 and RM5000 (51.2%). The more experienced employees as well as managerial level earn between RM5000 and RM6000 and above monthly salary.

4.8 Research Model

The model of this research is developed from theoretical frameworks related to workplace environment, teamwork, transformational leadership, and organisational performance. The overview of the model is presented in figure 4.1. For this study, the construct of workplace environment consists of 29 items. Teamwork and transformational leadership variables encompass 5 and 6 items respectively as, dependent variable has 10 items.

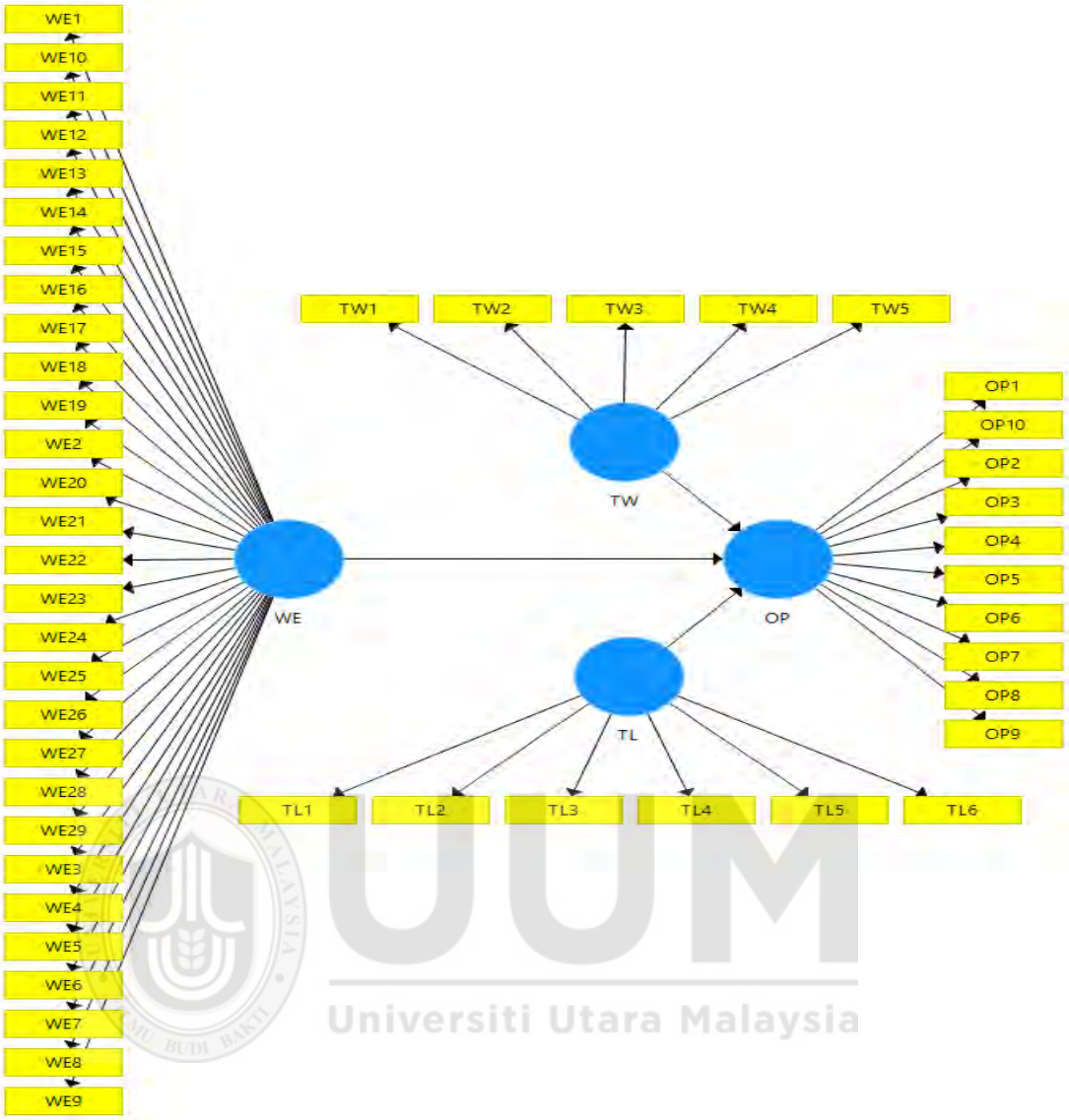

Figure 4.1
Model of the research

4.9 The Partial Least Square (PLS) Evaluation Model

The Partial Least Square evaluation model is based on the measurement of predictions that are non-parametric. Hence, the evaluation of model is performed by calculating the measurement and structural model separately.

4.9.1 The Measurement Model Evaluation (Outer Model)

The measurement model is also known as outer model. The evaluation is performed to assess the model validity and reliability. The measurement model indicators which form the latent constructs are evaluated through convergent and discriminant validity. Meanwhile, block indicators are evaluated via Cronbach's alpha and composite reliability (Chin, 1998). Convergent validity refers to redundancy analysis that utilizes formative latent variable as an exogenous latent variable to predict an endogenous latent variable (Kwong & Wong, 2013).

Discriminant validity refers to the rule of the measurement in which the constructs should not be highly correlated. Validity is examined for both convergent and discriminant validity. The convergent validity values can be obtained from the loading factor of the construct. Fornell and Larcker (1981) recommended that 0.70 or more for individual item loadings is considered adequate for confirmatory studies while factor loading value between 0.60 to 0.70 is still acceptable for explanatory studies. Importantly, the value of the Average Variance Extracted (AVE) should be higher than 0.50. Meanwhile, in order to test the discriminant validity, the researcher must compare AVE values for each construct in the model.

4.9.1.1 Evaluation of Loading Factor

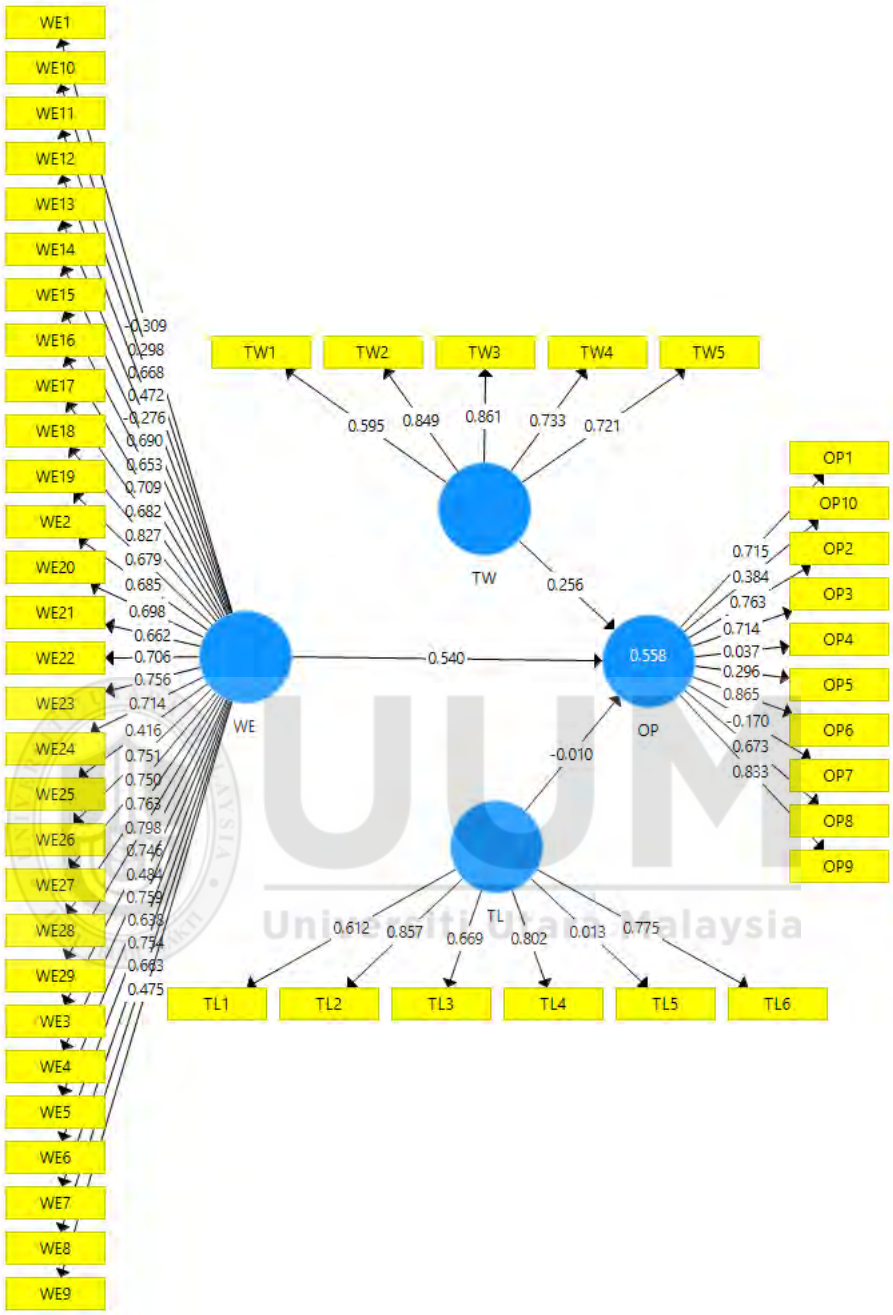

Figure 4.2
Outer measurement model for the variables and indicators with loading factor values

Table 4.4 presents the overall loading factor values of each indicator of the measurement model. It clearly shows that the model consists of loading

factors that are below 0.60 and to 0.80 and above. The loading factors values of each indicator are as depicted in Table 4.4 below.

Table 4.4
Outer loading factor of each indicator

Indicator	Organisation Performance	Transformational Leadership	Teamwork	Workplace Environment
OP1	0.715			
OP2	0.763			
OP3	0.714			
OP4	0.037			
OP5	0.296			
OP6	0.865			
OP7	-0.170			
OP8	0.673			
OP9	0.833			
OP10	0.384			
TL1		0.612		
TL2		0.857		
TL3		0.669		
TL4		0.802		
TL5		0.013		
TL6		0.775		
TW1			0.595	
TW2			0.849	
TW3			0.861	
TW4			0.733	
TW5			0.721	
WE1				-0.309
WE2				0.685
WE3				0.746
WE4				0.484
WE5				0.759
WE6				0.638
WE7				0.754
WE8				0.663
WE9				0.475
WE10				0.298
WE11				0.668
WE12				0.472
WE13				-0.276
WE14				0.690
WE15				0.653
WE16				0.709
WE17				0.682
WE18				0.827

Table 4.4 (Continued)

Indicator	Organisation Performance	Transformational Leadership	Teamwork	Workplace Environment
WE19				0.679
WE20				0.698
WE21				0.662
WE22				0.706
WE23				0.756
WE24				0.714
WE25				0.416
WE26				0.751
WE27				0.750
WE28				0.763
WE29				0.798

The recommended value of the loading factor must be higher than 0.70 for confirmatory studies. Meanwhile, the value ranging from 0.60 to 0.70 is acceptable for explanatory studies. Hair *et al.* (2014) argued that if the value of loading factor is lower than 0.70 and the value of AVE is equal to 0.50 and above the indicator should not be removed from the model. Based on this recommendation, the new model of this study fulfils the recommended threshold as shown in figure 4.3.

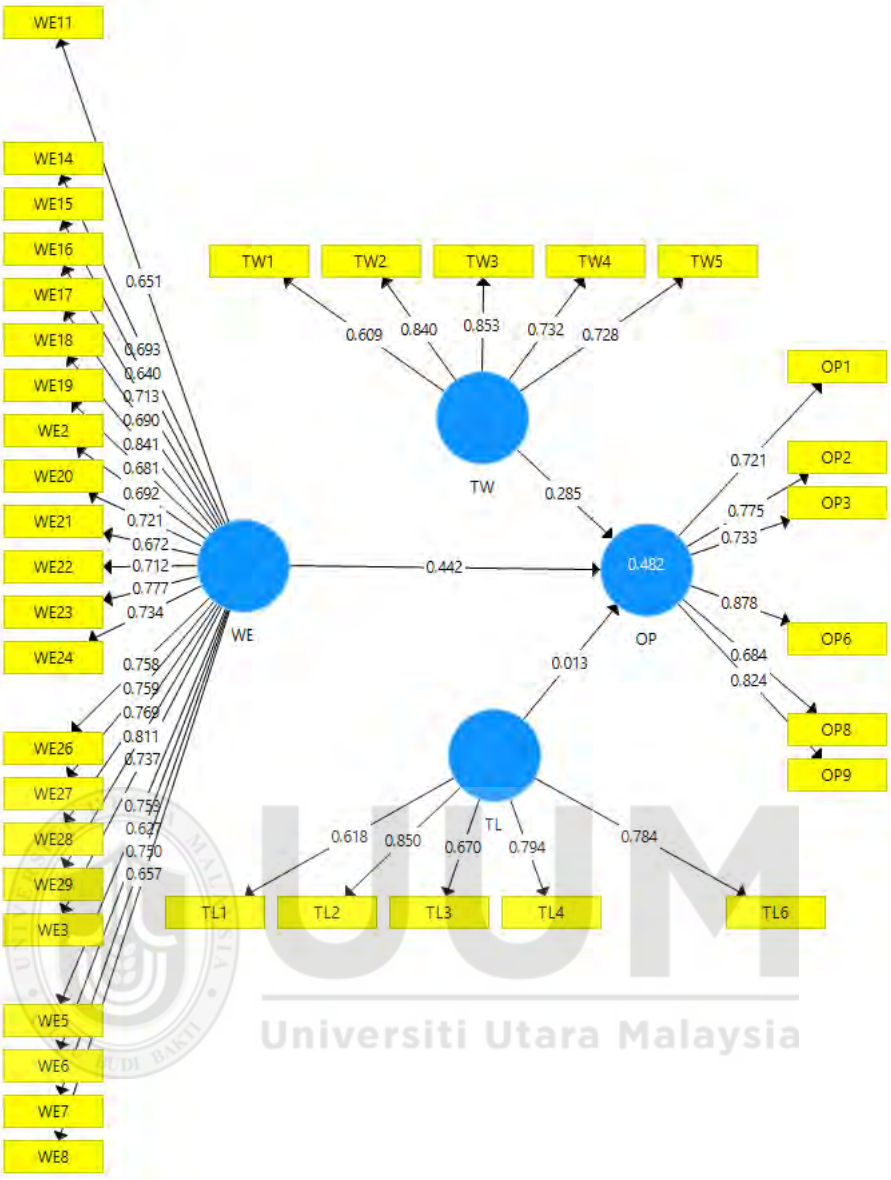

Figure 4.3
New outer measurement model for the variables and indicators with loading factor values

Table 4.5 shows the indicators that were removed from the initial outer measurement model.

Table 4.5
Removed items

Variable	Indicator Number	Total
Organisation Performance	Q4, Q5, Q7, Q10	4
Workplace Environment	Q1, Q4, Q9, Q10, Q12, Q13, Q25	7
Teamwork		0
Transformational Leadership	Q5	1

Table 4.6 presents the overall loading factor values of each indicator of the new measurement model. The loading factors values of each indicator are depicted in the following table.

Table 4.6
Outer loading factor of each indicator

Indicator	Organisation Performance	Transformational Leadership	Teamwork	Workplace Environment
OP1	0.721			
OP2	0.775			
OP3	0.733			
OP6	0.878			
OP8	0.684			
OP9	0.824			
TL1		0.618		
TL2		0.850		
TL3		0.670		
TL4		0.794		
TL6		0.784		
TW1			0.609	
TW2			0.840	
TW3			0.853	
TW4			0.732	
TW5			0.728	
WE2				0.692
WE3				0.737
WE5				0.753
WE6				0.627
WE7				0.750
WE8				0.657

Table 4.6 (Continued)

Indicator	Organisation Performance	Transformational Leadership	Teamwork	Workplace Environment
WE11				0.651
WE14				0.693
WE15				0.640
WE16				0.713
WE17				0.690
WE18				0.841
WE19				0.681
WE20				0.721
WE21				0.672
WE22				0.712
WE23				0.777
WE24				0.734
WE26				0.758
WE27				0.759
WE28				0.769
WE29				0.811

4.9.1.2 Measurement Fit for Reflective Models

Evaluation of the convergent validity is performed through the Cronbach's alpha and composite reliability on the reflective models. In other words, Goodness-of-Fit (GoF) is an index measuring the predictive performance of the measurement model through the evaluation of Cronbach's alpha and composite reliability.

The acceptable range for composite reliability is equal to Cronbach's alpha. The aim is to assess and evaluate the range of the indicators convergent validity and reliability for latent variables. Hair *et al.* (2000) stated that Cronbach's alpha equal to 0.80 or more is a good scale and 0.70 is acceptable while 0.60 is recommended for exploratory purposes. Table 4.7 shows the values of Cronbach and composite reliability for each latent construct.

Table 4.7
Cronbach's alpha and composite reliability values of each latent variable

Variable	Cronbach's Alpha	Composite Reliability
Organisation Performance	0.863	0.898
Workplace Environment	0.956	0.960
Teamwork	0.810	0.869
Transformational Leadership	0.802	0.863

Table 4.7 above shows that the values of both Cronbach's alpha and composite reliability are greater than 0.80. These values align with the recommendation given by Hair *et al*. (2014).

4.9.1.3 Average Variance Extracted (AVE)

Average Variance Extracted is used as a test of both convergent and divergent validity. In other words, AVE implies the average commonality for each latent variable specifically, in reflective model. According to Fornell and Larcker (1981) and Hair *et al.* (2010), the values of AVE for constructs must be higher than 0.50 for an adequate model as depicted in table 4.8

Table 4.8
Average Variance Extracted values of each latent variable

No	Variable	Average Variance Extracted
1	Organisation Performance	0.596
2	Workplace Environment	0.521
3	Teamwork	0.574
4	Transformational Leadership	0.560

Table 4.8 above shows that all the AVEs are above 0.50 thereby meeting the established standard.

4.9.2 The Structural Model Evaluation (Inner Model)

The structural or inner model explains the relationship between the latent variables. In other words, exogenous term is used to describe latent variable that have no any path relationship to them. Meanwhile, endogenous term describes latent variables that are explained by other construct through structural model relationship.

In order for a researcher to establish the structural model certain criteria must be taken into consideration. This included the collinearity, path coefficients, R square, f square and Q square (predictive relevance) as explained in the following paragraphs:

- The collinearity tests need to be done to determine the level of significant relationship between exogenous and endogenous variable (Sarstedt, Ringle, Smiths, Reams, & Hair, 2014). Collinearity tests need to be conducted at the initial stage to avoid incorrect results during the analysis. To evaluate collinearity, researcher is required to consider variation inflation factor (VIF) and the value must not exceed 5 (Hair *et al.,* 2014).

- Path Coefficient (Beta) range is -1 to +1. In other words, path coefficient nearly or equally to +1 implies the strong positive relationship. Conversely, path coefficient nearly or equally to -1 shows the strong negative relationship. In addition, t-statistic values that is higher than 1.96 and p values that is not more than 0.05 are significant when used two-tailed test.

- R square refers to endogenous latent variable value. According to Hair, Ringle, and Sarstedt (2011), the R square values of 0.75, 0.50, or 0.25 for endogenous latent variables can be classified as substantial, moderate and weak respectively.

- Cohen's f square is a measurement for predictive construct of endogenous variables. f square can describe the changes of R square if one of the exogenous variable is not linked to the model. According to Cohen (1988), the values of f square 0.02, 0.15, and 0.35 can be classified as small, medium and large respectively.

- Predictive relevance is measured through the assessment of cross validated redundancy (Q square). In other words, the values of Q square imply the predictive relevance for model (Chin, 2010). The Q square values of 0.02, 0.15 and 0.35 are classified as small, medium and large accordingly. If the value of Q square is zero it implies that that the model has less predictive relevance. Meanwhile, if the value of Q square is greater than zero is an indication that the model has strong predictive relevance.

4.9.2.1 Collinearity Tests

The evaluation of collinearity refers to the value of variation inflation factor (VIF). The values of VIF must not exceed 5 (Hair *et al.,* 2014). Table 4.9 shows the results obtained from the analysis for collinearity tests of the structural model. VIF values of the variables obtained in this study ranged

from 2.423 to 3.773. Thus, there was no severe collinearity issue between the independent variables of this study.

Table 4.9
Collinearity tests results (VIF)

Variable	Results
Workplace Environment	3.773
Teamwork	2.423
Transformational Leadership	2.452

4.9.2.2 Path Coefficient and Hypotheses Results

PLS-SEM bootstrapping is used to obtain path coefficient values, t statistic values as well as the p values . Figure 4.4 presents the path coefficient values for Workplace Environment (WE), Teamwork (TW), and Transformational Leadership (TL) to Organisation Performance (OP). It shows that Workplace Environment, Teamwork and Transformational Leadership are positively correlated to Organisation Performance. Based on this, the Workplace Environment path coefficient (Beta) is the largest followed by Teamwork and Transformational Leadership respectively. Table 4.10 presents the findings of each path coefficient of the relationship.

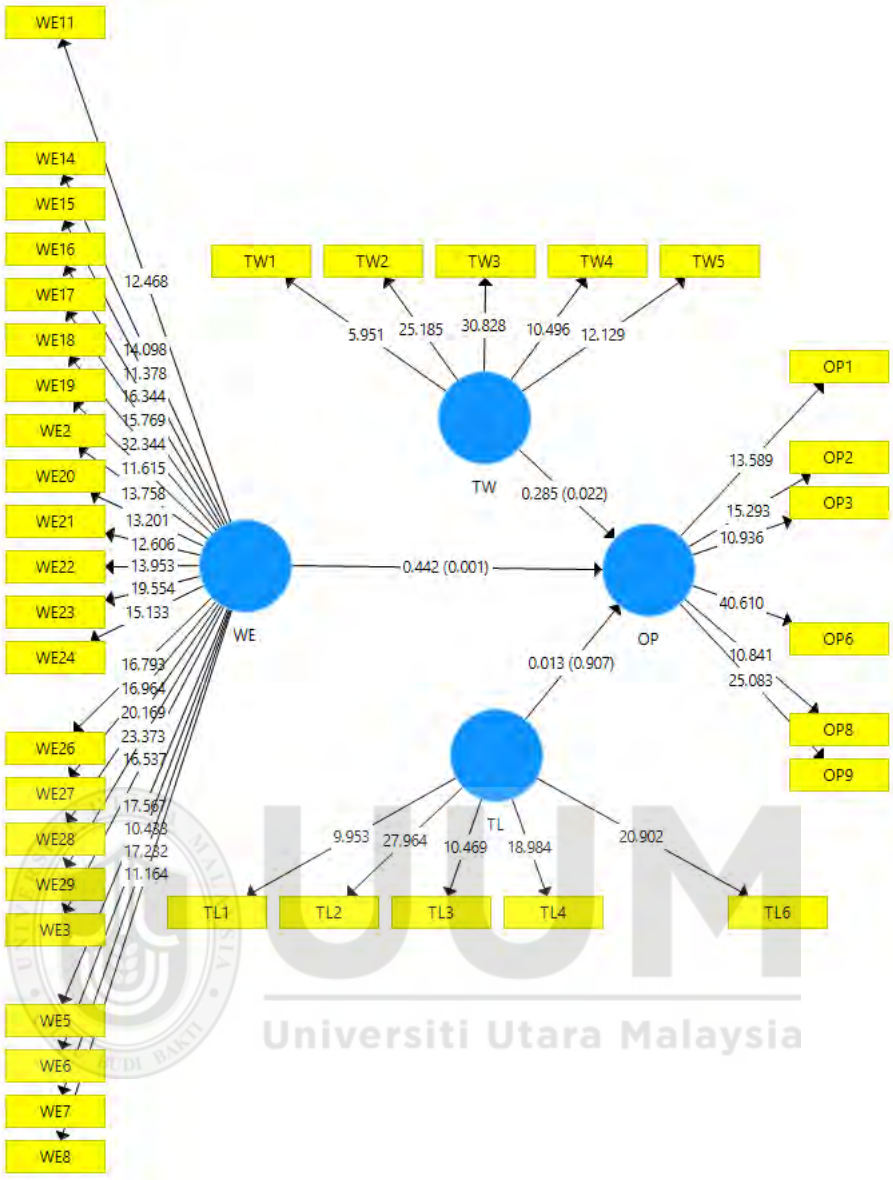

Figure 4.4
Path coefficient values of WE, TW, and TL to Organisation Performance

Table 4.10
Path coefficient relationship

Hypotheses	Exogenous Variable	Endogenous Variable	Path Coefficient	t Statistics	p Values	Result
H1	WE	OP	0.442	3.254	0.001	Significant
H2	TW	OP	0.285	2.289	0.022	Significant
H3	TL	OP	0.013	0.117	0.907	NS

NS = Not Significant

Table 4.10 above shows the results of Smart PLS analysis. The table describes the path coefficient, t statistics, and p values of the hypotheses testing. The details explanation on the strength of the hypothesized relationship between each of variable and Organizational Performance (OP) are discussed in the following hypothesized relationships.

H1: There is a significant relationship between Workplace Environment (WE) and Organisation Performance (OP).

Hypothesis one (H1) hypothesized a significant and positive relationship between Workplace Environment (WE) and Organisation Performance (OP). The path coefficient value obtained in this regard is positive (0.442) thereby making the relationship to be significant since the p.value is 0.001 which is < 0.05.

H2: There is a significant relationship between Teamwork (TW) and Organisation Performance (OP).

Hypothesis two (H2) hypothesized a significant and positive relationship between Teamwork (TW) and Organisation Performance (OP). The value of path coefficient obtained from PLS-SEM bootstrapping is positive (0.285) thereby making the path to be significant. The p value in this regard is 0.022 which is < 0.05.

H3: There is a significant relationship between Transformational Leadership (TL) and Organisation Performance (OP).

Hypothesis three (H3) hypothesized a positive relationship between Transformational Leadership (TL) and Organisation Performance (OP). Though the value of path coefficient is positive (0.013), the relationship is however not significant because the p value of is 0.907 which is > 0.05.

4.9.2.3 R Square

In structural model, PLS analysis is performed to explain the variance of the endogenous latent variable. According to Hair, Ringle, and Sarstedt (2011), the R square values of 0.75, 0.50, or 0.25 can be classified as substantial, moderate and weak respectively. In other words, it shows the strength of all independent variables to explain change in the behavior of dependent variable.

In this study, the R square value as presented in figure 4.3 is 0.482. Thus, this can be considered as moderate because the value is > 0.25 and < 0.50 (Sanchez, 2013). This therefore implies that the three latent variables that is; Workplace Environment, Teamwork and Transformational Leadership moderately explain 48.2% of the variance in Organisation Performance.

4.9.2.4 Cohen's f square

Chin (2010) suggested that variable effect size should be determined due to its impact on endogenous variable. In other words, the measurement of f. square complements R square analysis. According to Cohen (1998), f square

values of 0.02, 0.15 and 0.35 can be classified small, medium and large respectively. The f square values for this study are presented in Table 4.11

Table 4.11
The f square values

Variable	R Square	f Square	Effect Size
Organisation Performance	0.482		
Workplace Environment		0.108	small
Teamwork		0.065	small
Transformational Leadership		0.000	small

Based on the information shown in Table 4.11 above, the f square values of Workplace Environment (0.108), Teamwork (0.065) and Transformational Leadership (0.000) have small effect size on Organisation Performance.

4.9.2.5 Predictive Relevance (Q square)

Q square is one of the analysis criteria to measure the structural model. In other words, predictive relevance describes the value of Q square as it also determines the predictive power of the structural model. In this study, PLS-SEM blindfolding technique has been used to obtain the values of Q square. Based on recommendation of Cohen (1998), Q square values of 0.02, 0.15 and 0.35 can be classified small, medium and large in structural model respectively. Table 4.12 presents the Q square value of the endogenous variable.

Table 4.12
The Q square value

	SSO	SSE	Q square
Organisation Performance	738.00	549.414	0.256

Importantly, Hair *et al*. (2011) asserted that the predictive quality exists in the structural model if the values of cross validated redundancy is greater than 0 because the 0 value implies that no conclusion can be made for predictive relevance. Therefore, 0.256 as presented in table 4.12 above is regarded moderate. This is equally depicted in figure 4.5 thereby pointing to medium predictive relevance of the model.

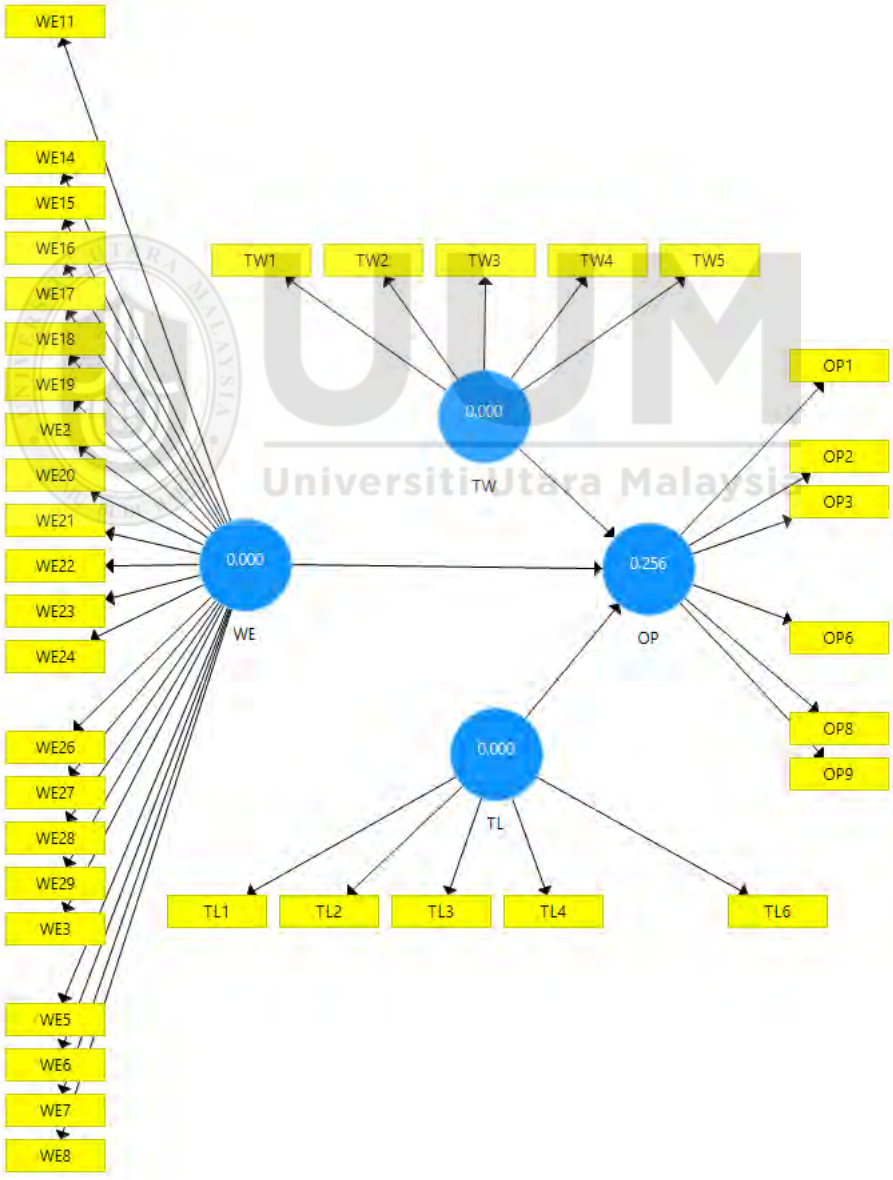

Figure 4.5
Predictive relevance value

4.10 Summary

This chapter explains the specific findings obtained from quantitative analysis via Smart PLS software. The analysis criteria such as convergent and discriminant validity as well as goodness of fit was tested and accepted during the evaluation of the measurement model. The evaluation of structural model was performed to obtain results for collinearity, path coefficient, R square, f square, and Q square. Three hypotheses were tested in order to determine the relationship between Workplace Environment, Teamwork, Transformational Leadership and Organisation Performance.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.0 Introduction

This final chapter consists of five sections. It begins with the recapitulation of the study and discussion on the findings. Next, the theory and practical implications are discussed and follows by the limitation of the study and recommendations for future research. Finally, conclusion of the study is presented.

5.1 Recapitulation of the Study

The focus of this study is to analyse factors that influence organisational performance of electrical and electronic MNCs in Selangor, Malaysia. In order to address the problem statement the variables namely, workplace environment, teamwork, and transformational leadership as well as organisation performance are treated as the independent variables and dependent variable respectively.

As noted in chapter three, data was gathered from electrical and electronic MNCs executive and managerial officers. 300 questionnaires were sent in stages to six electrical and electronic companies in Selangor, Malaysia while 53.6% valid response rate was obtained for final analysis.

In order to analyse the relationship between the independent variables and dependent variable of the study, the following 3 objectives were formulated:

- To examine the relationship between workplace environment and organisational performance.
- To examine the relationship between teamwork and organisational performance.
- To examine the relationship between transformational leadership and organisational performance.

These objectives and as well as related literature were presented in chapter one and two respectively while the research framework was conceptualized in chapter three. As highlighted and discussed in chapter two, the framework was built on the organization learning theory of the firms in relation to workplace environment, teamwork, transformational leadership, and organisational performance. Furthermore, chapter three discusses the methodology issues such as hypotheses development, research design of the study, operational definition of variables, sampling design, and other sub topics. Meanwhile, chapter four presents the statistical results. The findings of the study provide answers to all the research questions accordingly.

Importantly, three sets of hypotheses were developed based on the extensive literature reviews to obtain answers to research questions as well as to achieve the research objectives. These include:

- H1: There is a significant relationship between workplace environment and organisational performance.
- H2: There is a significant relationship between teamwork and organisational performance.

- H3: There is a significant relationship between transformational leadership and organisational performance.

To test these hypotheses, Smart PLS software was used to analyse the influence of workplace environment, teamwork, transformational leadership relationship on organisational performance. Two out of the three hypotheses relationships were found significant. In other words, workplace environment and teamwork were found to have significant effect on organisational performance. However the relationship between transformational leadership and organisational performance was not significant. The findings of this study are considered valuable to both academicians and practitioners. The following sub topics discuss the findings of the study.

5.2 Discussions on the Findings

To provide answers to research questions as well as to achieve the research objectives, three hypotheses were developed based on literature reviews. Based on the results in chapter four, the following section discussed the findings of study.

5.2.1 Workplace Environment and Organisational Performance

Workplace environment and organisational performance showed positive significant relationships because the Path Coefficient is 0.442 while the p value is 0.001. In other words, for every positive improvement in the workplace environment there was a corresponding increase in organisational performance.

Furthermore, the result from the analysis also showed that the factor loading of workplace environment ranged from 0.627 to 0.841 therefore indicating a strong influence of workplace environment on organisational performance. Based on these results, three segments from respondents' profile namely; age, length of work experience and monthly income are analysed to support the evidence and the explanation is as follows.

Considering the age of the respondent, the percentage is equally distributed for 21 to 35 years and 41 to 55 years category. Meanwhile, the distribution for the length of work experience is above 20% for 5 years and below and 6 to 10 years category. For 11 to 15 years and 16 to 20 years as well as 21 to 25 years category, the total percentage is equally distributed for each category. In other words, the middle management as well as managerial level in the electrical and electronic MNCs would like to work with the organization for a long period of time if they perceived that their organization is a good working environment. As a result of efforts, the rate of wages increased exponentially. Based on this result the relationship between workplace environment and organisation performance was expected to be accurate.

This result as obtained in this study is supported by Abdul Hamid and Yahya (2016) as the researchers found a positive relationship between workplace environment and organization performance. In essence, when employees perceive that their workplace environment is conducive, they tend to contribute positively to the goal attainment of their organization. This is also in line with Welch (2011) who reported that employees would contribute to

positive financial performance and other organisational success when the workplace environment is deemed comfortable.

Additionally, the finding of this study also aligns with the results of the studies conducted by Noorizan, Afzan, and Akmar (2016) and Na-an, Chaiprasit, and Pukkaree (2017) where the researchers found that a good working environment could serve as a stimulant of good working behaviour. In other words, when the working environment is good, the employees would able to apply acquired knowledge, skill and attitude to their tasks. Similarly, the findings of Piccoli, Callea, Urbini, Chirumbolo, Ingusci, and Witte (2017) revealed that employees' behaviours in job contexts were driven by evaluation of the perceived belongingness to organisation.

The results of this study therefore revealed that workplace environment has significant characteristic that relates to electrical and electronic MNCs performance in Selangor, Malaysia. Thus, it is a new contribution to this area of the study.

5.2.2 Teamwork and Organisational Performance

Teamwork and organisation performance showed positive significant relationship because the Path Coefficient is 0.285 and the p value is 0.022. This is an indication that the teamwork propels and brings about improvement in organisational performance.

This result is further reinforced as the factor loading of teamwork ranged from 0.609 to 0.853. Hence, this revealed a strong influence of the teamwork among the respondents towards improving organizational performance of the

EE sector. Based on these results, two segments from respondents' profile namely; gender and length of work experience are also analysed with the objective of further reiterating the findings.

One of the segments is the percentage of gender. Specifically, the percentage of participation with respect to female and male is 34.1% and 65.9% respectively. In other words, the numbers of female respondents' is about half of the male respondents. Nevertheless, in MNCs organization, teams members are treated equally despite the presence of differences. Thus, all team members had the equal opportunities to enhance their skills and knowledge to complete the given task. Moreover, the distribution for the length of work experience is equally distributed for each category. Thus, it shows that teamwork is highly encouraged in the organisation.

Importantly, the significant and positive relationship between teamwork and organizational performance as obtained in this study aligns with the results of Cha, Park, and Lee (2014) and Chin (2015). These studies reported that many organisations that emphasize teamwork by providing avenues that increase creativity and innovation, had increased organisational performance.

Furthermore, Brock, McAliney, Ma, and Sen (2017), equally found that effective listening and good communication is a key contributor to teamwork success and organisational performance. Hence, successful teams produce desired outcomes for organisation such as better financial performance from export activities (Lacerenza, Marlow, Tannenbaum, & Salas, 2018).

The result of this study therefore demonstrates that teamwork is an essential component in electrical and electronic MNCs in Selangor, Malaysia to foster organisational performance. Thus, it is a new contribution to this area of the study.

5.2.3 Transformational Leadership and Organisational Performance

Transformational leadership and organisational performance showed positive relationships because the Path Coefficient is 0.013. In this study, the result from the analysis showed that the factor loading of transformational leadership ranged from 0.618 to 0.850. Hence, it presents a strong evidence in influencing the performance of the organisation. In other words, the presence of transformational leadership has a positive effect on organisational performance. However, the relationship is not significant because the p value is 0.907. In this study, almost all of the respondents had attended college or university and only 3.3% of the respondents had their secondary school certificate. This means the MNCs preferred graduate from college or university and allocated small percentage through working experience for the post of executive or managerial level to improve the organisational performance. Nevertheless, there is a need for the improvement of transformational leadership specifically for executives, managers and higher level management to make the organisation more competitive in real business world.

To make the organisation more competitive, a non-technical training program needs to be placed as one of the organisation's priorities to enable managerial and middle management employees gain new concepts in productivity. In

fact, leadership and others training program related to productivity may increase employee's knowledge on how to analyse problems in systematic ways and produce required solutions effectively. For example, attending the lean manufacturing activities, counselling program as well as learning from others successful organisation. This approach is the best for this category to upgrade their knowledge to enhance their performance in the organisations.

Even though the result obtained in this study is not significant and in line with the findings of Sattayaraksa, and Boon-itt, (2018), with the probable explanation that effect of transformational leadership on organizational performance may take a while before it manifests. Gonzalez, Jimenez, and Lorente (2018) however argued that the adoption of transformational leadership styles will improve organisational performance when specific learning and innovation are developed in an organisation. Similarly, Ribeiro, Yucel, and Gomes (2018) found that leadership styles stimulate organisational outcomes because they motivate followers to achieve organisational aims. Furthermore, a wealth of research highlights that there is a positive and significant correlation between transformational leadership and organisation performance (e.g. Wang, Oh, Courtright, & Colbert, 2011; Chang, Chao, Chang, & Chi, 2018).

The findings of this study demonstrated that it is essential for leaders to have a proactive thinking in order to steer the organisation to a new direction specifically in productivity and export activities. Thus, the finding is a new contribution to the area of the study.

5.3 Implications of the Study

5.3.1 Theoretical Implications

The present study provides some theoretical implications for the academic community. First, the study bridges the gap of scarcity of studies within the EE sector, especially among MNCs in Selangor, Malaysia. Therefore, this study could serve as a point of reference for future scholars who may want to work on organizational performance in this sector.

Second, the framework of the study could be used by future researchers to predict the organizational performance generally using organizational learning theory which is hardly employed. This study has simultaneously combined workplace environment, teamwork, and transformational leadership to predict organizational performance which previous studies have narrowly considered. Hence, the framework could be employed by future researchers when intend to establish an effective strategy in building and strengthening the short, medium and long-term relationship between manufacturers and the buyer in manufacturing sectors.

Third, this research provides sufficient evidence in which workplace environment, teamwork, and transformational leadership have some influence on the performance of MNCs. The evidence obtained supports the relationships, thus confirming the significance of the model in exploring performance of the organisations. Thus, this study expands the current theory as well as literature on organisational performance especially in the context of electrical and electronic manufacturing industry in Malaysia.

Finally, the expansion of organisational learning theory focuses on employees' capabilities and firm resources. Hence, this viewpoint is an appropriate theory (NLOT) for the clarification of the study regarding the influence of workplace environment, teamwork, and transformational leadership variables on organisation performance of electrical and electronic manufacturing industry in Selangor, Malaysia (see figure 5.1).

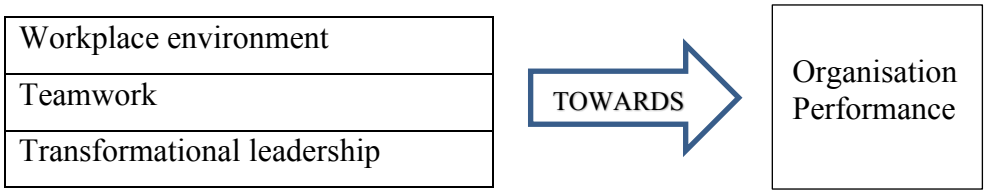

Figure 5.1
Dimensions of New Learning Organisation Theory and Performance Outcomes

5.3.2 Practical and Policy Implications

The results of this research provide a positive contribution for various electrical and electronic policy makers specifically to the owners and government in terms of developing policies as well as strategies to enhance the performance of the organisations.

First, based on the results of this study, it is evident that when organizations such as the EE sector provide a continuous positive culture (e.g. good working environment) it would enable the staff to develop new skills in the organisation, This in turn would stimulate them to exchange knowledge and innovation in order to improve organisations' competitiveness in real business world.

Second, considering the result of this study, it is imperative that the electrical and electronic industries owner and managers should focus more on the importance of organizational learning dimensions which are workplace environment, teamwork, transformational leadership, and organisational performance. It is essential as this may curb future occurrence of downsizing and other similar exercises which may lead to experienced employees in the executives and managerial service's category leaving the organisations thereby improving the performance of the organisation tremendously.

Importantly, to make the organisation more competitive, non-technical training programs such as lean manufacturing activities, counselling program as well as learning from others successful organisation need to be placed as one of the organisation priorities to develop the newcomers of both categories. By doing so, it will enable managerial and middle management employees to gain new concepts in process control as well as productivity. In other words, leadership and others training program related to organisational performance may increase employee's knowledge on how to analyse problems in systematic ways and produce solution effectively.

Third, it is essential that government policy makers should refer and consider the findings of this study to design programs in supporting the development of other industries specifically, SMEs manufacturing sector. The Department of Statistic Malaysia (2017) reportedly showed the exports of SMEs manufacturing is 7.8% (2016: 7%) and the growth rate increased to 6.8% (2016: 4.8%). Thus, the findings of this study can benefit the government and

policy makers in strengthening SMEs activities by offering consultation services and training programs to the leaders and owners of the firms.

5.4 Limitation and Future Research

The research findings of this study, though, provide significant contribution to both practitioners and academic, it has several limitations. This research only explored the influence of extension of organisational learning model towards the organisational performance of the EE MNCs in the west region of Malaysia by examining influence of workplace environment, teamwork, and transformational leadership on organisational performance. However, there are other factors that could be examined by other future researchers. For instance, this study did not consider any mediating or moderating effect between the selected independent variables and organizational performance.

In this regard, variables such as industry type (Kathuria *et al*., 2010), and New Product Development (NPD) strategies, innovation culture (Sattayaraksa, & Boon-itt, 2017) and human resource management (Para-González *et al*., 2018) could be examined as either mediator or moderator. Likewise, factors such as the fit between competitive orientation and environment, employees previous experience and objectives criteria of organizational performance such as profitability, sales growth and growth in market share (e.g., Kathuria *et al*., 2018; Yu, Yen, Barnes, & Huang, 2019) may be considered by the future researchers. When these variables are considered, a significant improvement could be recorded in the performance of organization.

Additionally, as the data of this study were collected in a specific period of time from several electrical and electronic MNCs in Selangor, the findings should be generalized with caution and systematically to other sectors. It is therefore advised that future researchers should engage in longitudinal studies using larger sample size in other regions as this will foster a better generalization of the findings.

Furthermore, since this study is limited to the EE sector in Malaysia, a comparative study on organisational performance of electrical and electronic MNCs and other companies may be conducted by future studies. This is because different companies may differ in their performance and possibly committed to different strategy. Thus, this could provide a holistic view on performance of the organisations.

5.5 Conclusion

The empirical results of this study provided significant insight into the influence of workplace environment, teamwork, and transformational leadership on organisational performance. Three hypotheses were developed based on research framework to examine the relationship between the chosen independent variables and organisational performance. The findings of the study based on these hypotheses reveal that the chosen independent variables are essential in different degrees to influencing the organizational performance

Therefore, these findings importantly, provide additional evidence to the body of knowledge specifically to leaders in organisation and academicians

concerning the importance of relationship between the internal factors and organisational performance. Also, the findings would be useful to other organisations managers in planning as well as in decision making to enhance the capabilities of their organisations.

Lastly, based on the findings of this study, it is essential to emphasise that there must be a good understanding between leaders and subordinates in creating an innovative organisation. Strong relationships in the organisations in terms of workplace environment, teamwork, and transformational leadership may be instrumental to achieve this milestone with a consequential effect on organizations' short and long term objectives.

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Appendix 1: Questionnaire

Relationship Between Workplace Environment, Teamwork and Transformational Leadership on Organisation Performance of Electrical and Electronic Manufacturing Companies in Selangor

Dear Respondents,

I am a student at the Universiti Utara Malaysia (UUM). I am currently conducting a study on the above in partial fulfilment of my Doctor of Business Administration (DBA).

I seek your assistance in completing the questionnaire, which has five sections. Section A asks about your demographics while section B, C, D, and E ask questions about the topic of the study. The estimated time required to complete all sections is between 10 and 15 minutes.

Please note that your responses will be strictly confidential and anonymous. So, please answer all questions as honestly as possible.

Thank you for your time.

Yours sincerely,

Azammullah Abu Bakar

QUESTIONNAIRE DISTRIBUTION PROCEDURE

Instruction for Electrical and Electronic Manufacturing companies representative.

For the ease of distribution and representativeness of the data, please follow the following procedures during the distribution of the questionnaires.

1. Based on employees' name list, please segregate for executive and managerial level.
2. For each group, numbered the employees accordingly in the list.
3. For the each group, please select the every 4th employee in the name list. E.g:

No	Executive	No	Managerial
1	Balqis	1	Johnny
2	Arja	2	Ramsy
3	Roslan	3	Seto
4	Mei Ling	4	Hakimi
5	Safri	5	Ainina
6	Ramasamy	6	Paul. Jr
7	Ally	7	Khairudin
8	Atika	8	Nelsen
9	Johnny	9	Fujii
10	Delaila	10	William
11	Azili	11	Shara
12	Sofea	12	Smith

Note:

1. For executive level: select employee no. 4 (Mei Ling), no. 8 (Atika), no. 12 (Sofea)…n (until end of the list).

2. For managerial level: select employee no. 4 (Hakimi), no. 8 (Nelsen), no. 12 (Smith)…n (until end of the list).

4. Distribute the questionnaire for the selected employees as in identified in each group.

5. Recollect the questionnaire within five (5) days.

SECTION A: RESPONDENT DETAILS

Please tick ☑ in the space provided.

1. Gender:

	Male		Female

2. Age:

	20 years and below		31 to 35 years		46 to 50 years
	21 to 25 years		36 to 40 years		51 to 55 years
	26 to 30 years		41 to 45 years		Above than 56 years

3. Service's category:

	Managerial: Asst. Manager and above		Executive: Section Head, Engineer and others.

4. Length of work experience at the current organisation:

	5 years and below		16 to 20 years		Above than 31 years
	6 to 10 years		21 to 25 years		
	11 to 15 years		26 to 30 years		

5. Education:

	Secondary Level		Master's Degree		Others: Please specify
	Diploma		PhD		a)
	Degree		DBA		b)

6. Monthly income:

	RM 1000 – RM 2000		RM 3001 – RM 4000		RM 5001 – RM 6000
	RM 2001 – RM 3000		RM 4001 – RM 5000		RM 6001 and above

SECTION B: WORKPLACE ENVIRONMENT

Please tick ☑ in the space provided.

Questionnaire		*Scale*				
		Strongly Disagree	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**
		1	**2**	**3**	**4**	**5**
1	In my organization, we can make a lot of decisions without requiring approval.	☐	☐	☐	☐	☐
2	In my organization, we have a chance to use personal initiative in carrying out the work.	☐	☐	☐	☐	☐
3	In my organization, we can self-manage our work.	☐	☐	☐	☐	☐
4	In my organization, we can decide on the order in which things are done.	☐	☐	☐	☐	☐
5	In my organization, we can plan how we carry out the work.	☐	☐	☐	☐	☐
6	In my organization, we can prioritize our tasks as we see fit.	☐	☐	☐	☐	☐

SECTION B: WORKPLACE ENVIRONMENT

Please tick ☑ in the space provided.

Questionnaire		*Scale*				
		Strongly Disagree	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**
		1	**2**	**3**	**4**	**5**
7	In my organization, we can adapt our roles to the needs of a new problem.	☐	☐	☐	☐	☐
8	In my organization, we can adapt our job roles according to the workplace's needs.	☐	☐	☐	☐	☐
9	In my organization, we have the flexibility to adapt our job responsibilities according to unexpected demands or problems.	☐	☐	☐	☐	☐
10	In my organization, we are always aware of how well we are doing the job.	☐	☐	☐	☐	☐
11	In my organization, regular feedback is provided on the quality of the work we do.	☐	☐	☐	☐	☐
12	In my organization, negative feedback is provided in a constructive way.	☐	☐	☐	☐	☐

SECTION B: WORKPLACE ENVIRONMENT

Please tick ☑ in the space provided.

	Questionnaire	*Scale*				
		Strongly Disagree	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**
		1	**2**	**3**	**4**	**5**
13	In my organization, we get a pat on the back when we do our job right.	☐	☐	☐	☐	☐
14	In my organization, work effort is appreciated.	☐	☐	☐	☐	☐
15	In my organization, we feel that we are listened to.	☐	☐	☐	☐	☐
16	In my organization, the management is concerned about our welfare.	☐	☐	☐	☐	☐
17	In my organization, the management shows that they have confidence in the people who work for them.	☐	☐	☐	☐	☐
18	In my organization, the management can be relied upon to give good guidance.	☐	☐	☐	☐	☐

SECTION B: WORKPLACE ENVIRONMENT

Please tick ☑ in the space provided.

	Questionnaire	*Scale*				
		Strongly Disagree	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**
		1	**2**	**3**	**4**	**5**
19	In my organization, the management shows an understanding toward people.	☐	☐	☐	☐	☐
20	In my organization, there are opportunities to develop friendships.	☐	☐	☐	☐	☐
21	In my organization, we have the chance to get to know other people.	☐	☐	☐	☐	☐
22	In my organization, we have opportunities to met with others.	☐	☐	☐	☐	☐
23	In my organization, people are trustworthy.	☐	☐	☐	☐	☐
24	In my organization, we feel comfortable asking each other for help.	☐	☐	☐	☐	☐

SECTION B: WORKPLACE ENVIRONMENT

Please tick ☑ in the space provided.

	Questionnaire	*Scale*				
		Strongly Disagree	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**
		1	**2**	**3**	**4**	**5**
25	In my organization, people are open to sharing ideas.	☐	☐	☐	☐	☐
26	In my organization, there is a good atmosphere between colleagues.	☐	☐	☐	☐	☐
27	In my organization, there is good co-operation between colleagues.	☐	☐	☐	☐	☐
28	In my organization, there is a feeling of community.	☐	☐	☐	☐	☐
29	In my organization, people are comfortable with each other.	☐	☐	☐	☐	☐

SECTION C: TEAMWORK

Please tick ☑ in the space provided

Questionnaire		Scale				
		Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
		1	2	3	4	5
1	In my organization, teams have the freedom to adapt their goals as needed.	☐	☐	☐	☐	☐
2	In my organization, teams treat members equally despite of any differences.	☐	☐	☐	☐	☐
3	In my organization, teams focus both on the groups task and how well the group is working.	☐	☐	☐	☐	☐
4	In my organization, teams revise their thinking as a result of group tasks.	☐	☐	☐	☐	☐
5	In my organization, teams are confident that the organization will act on their recommendations.	☐	☐	☐	☐	☐

SECTION D: TRANSFORMATIONAL LEADERSHIP

Please tick ☑ in the space provided

Questionnaire		*Scale*				
		Strongly Disagree	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**
		1	**2**	**3**	**4**	**5**
1	In my organization, I spend time for coaching.	☐	☐	☐	☐	☐
2	In my organization, I express satisfaction when others meet expectations.	☐	☐	☐	☐	☐
3	In my organization, I re-examine critical assumptions to question whether they are appropriate.	☐	☐	☐	☐	☐
4	In my organization, I value differing perspectives when solving problems.	☐	☐	☐	☐	☐
5	In my organization, I talk enthusiastically about what needs to be accomplished.	☐	☐	☐	☐	☐
6	In my organization, I express confidence that goals will be achieved.	☐	☐	☐	☐	☐

SECTION E: ORGANISATION PERFORMANCE
(Knowledge Performance)

Please tick ☑ in the space provided

Questionnaire		Scale				
		Strogly Disagree	Disagree	Uncertain	Agree	Strongly Agree
		1	2	3	4	5
1	In my organization, customer satisfaction is greater than last year.	☐	☐	☐	☐	☐
2	In my organization, the number of suggestions implemented is greater than last year.	☐	☐	☐	☐	☐
3	In my organization, the number of new products is greater than last year.	☐	☐	☐	☐	☐
4	In my organization, the percentage of skilled workers compared to the total workforce is greater than last year.	☐	☐	☐	☐	☐
5	In my organization, the number of individuals learning new skills is greater than last year.	☐	☐	☐	☐	☐

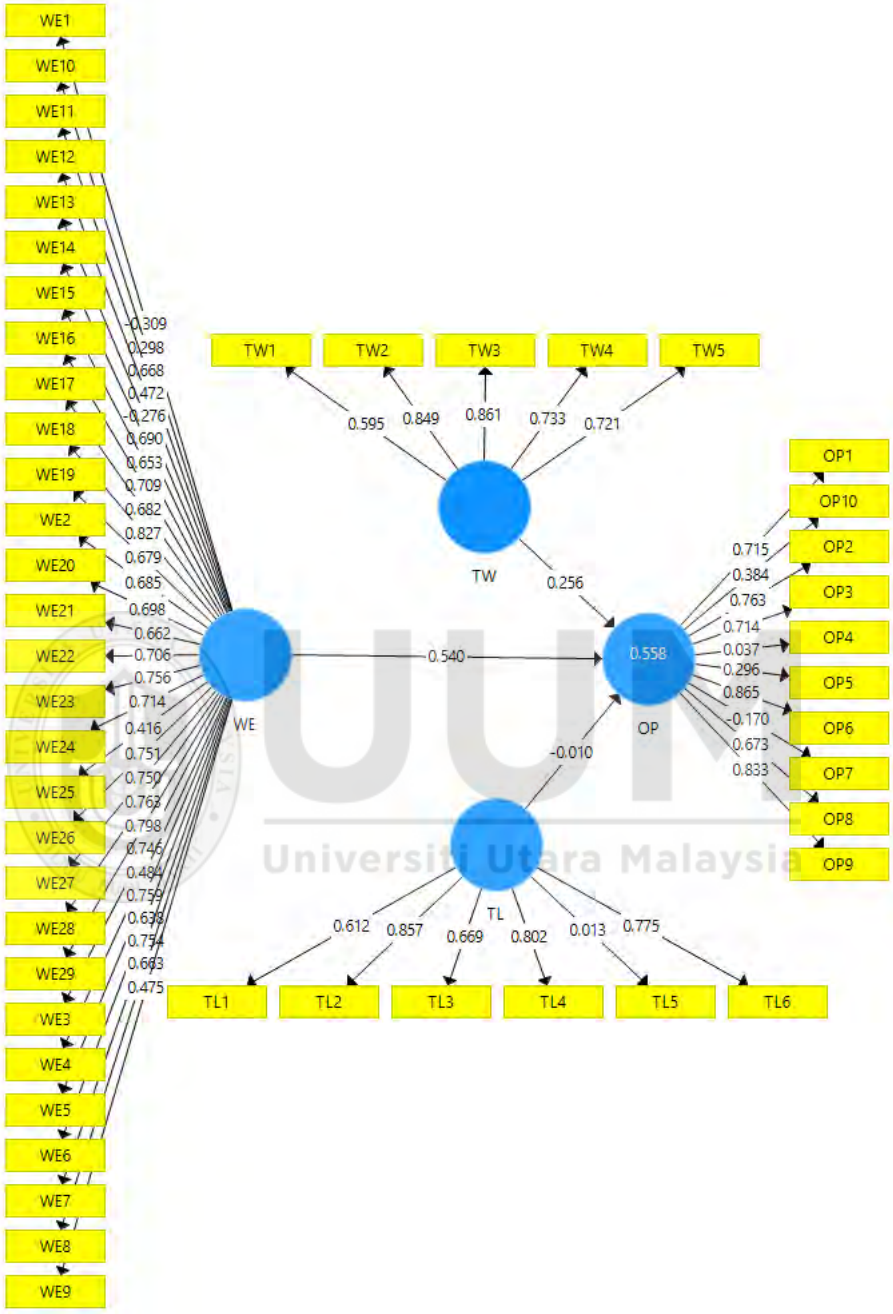
SECTION E: ORGANISATION PERFORMANCE
(Financial Performance)

Please tick ☑ in the space provided

Questionnaire		Scale				
		Strognly Disagree	Disagree	Uncertain	Agree	Strongly Agree
		1	2	3	4	5
6	In my organization, return on investment is greater than last year.	☐	☐	☐	☐	☐
7	In my organization, time to market for products is less than last year.	☐	☐	☐	☐	☐
8	In my organization, response time for customer complaints is better than last year.	☐	☐	☐	☐	☐
9	In my organization, the market share is greater than last year.	☐	☐	☐	☐	☐
10	In my organization, the cost per business transaction is less than last year.	☐	☐	☐	☐	☐

Appendix 2: Smart PLS Results

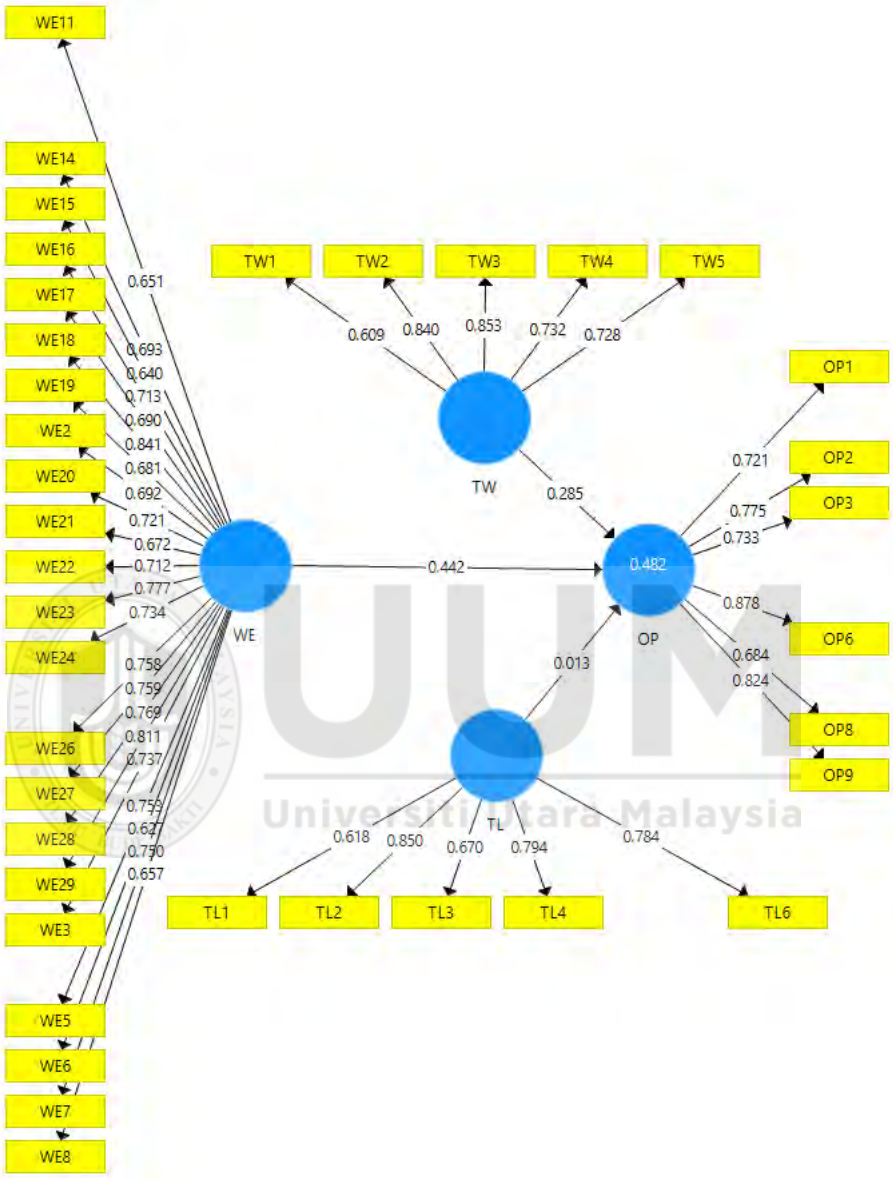
1. Loading Factor for Each Indicator



2. Output Smart PLS for Loading Values of Each Indicator

	Organisation Performance	Transformational Leadership	Teamwork	Workplace Environment
OP1	0.715			
OP2	0.763			
OP3	0.714			
OP4	0.037			
OP5	0.296			
OP6	0.865			
OP7	-0.170			
OP8	0.673			
OP9	0.833			
OP10	0.384			
TL1		0.612		
TL2		0.857		
TL3		0.669		
TL4		0.802		
TL5		0.013		
TL6		0.775		
TW1			0.595	
TW2			0.849	
TW3			0.861	
TW4			0.733	
TW5			0.721	
WE1				-0.309
WE2				0.685
WE3				0.746
WE4				0.484
WE5				0.759
WE6				0.638
WE7				0.754
WE8				0.663
WE9				0.475
WE10				0.298
WE11				0.668
WE12				0.472
WE13				-0.276
WE14				0.690
WE15				0.653
WE16				0.709
WE17				0.682
WE18				0.827
WE19				0.679
WE20				0.698
WE21				0.662
WE22				0.706
WE23				0.756
WE24				0.714
WE25				0.416
WE26				0.751
WE27				0.750
WE28				0.763
WE29				0.798

3. Loading Factor for Each Indicator (Loading Factor is lower than 0.70 and the value of AVE is equal to 0.50 and above)



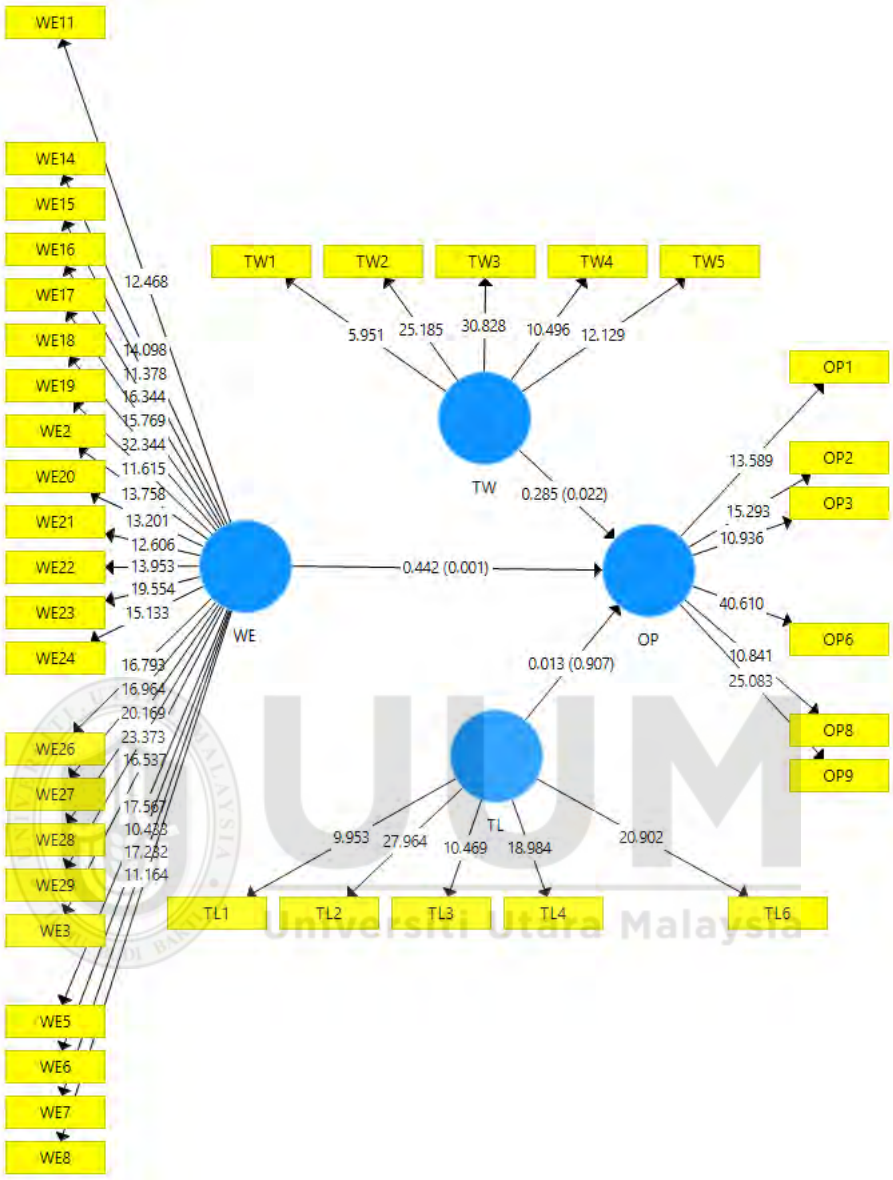
4. Output Loading Factor for Each Indicator (Loading Factor is lower than 0.70 and the value of AVE is equal to 0.50 and above)

	Organisation Performance	Transformational Leadership	Teamwork	Workplace environment
OP1	0.721			
OP2	0.775			
OP3	0.733			
OP6	0.878			
OP8	0.684			
OP9	0.824			
TL1		0.618		
TL2		0.850		
TL3		0.670		
TL4		0.794		
TL6		0.784		
TW1			0.609	
TW2			0.840	
TW3			0.853	
TW4			0.732	
TW5			0.728	
WE2				0.692
WE3				0.737
WE5				0.753
WE6				0.627
WE7				0.750
WE8				0.657
WE11				0.651
WE14				0.693
WE15				0.640
WE16				0.713
WE17				0.690
WE18				0.841
WE19				0.681
WE20				0.721
WE21				0.672
WE22				0.712
WE23				0.777
WE24				0.734
WE26				0.758
WE27				0.759
WE28				0.769
WE29				0.811

5. Measurement Fit for Reflective Models and AVE

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
OP	0.863	0.878	0.898	0.596
TL	0.802	0.827	0.863	0.560
TW	0.810	0.823	0.869	0.574
WE	0.956	0.958	0.960	0.521

6. Path Coefficient Relationship



7. Path Coefficient Relationship Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
TL -> OP	0.013	0.014	0.112	0.117	0.907
TW -> OP	0.285	0.293	0.124	2.289	0.022
WE -> OP	0.442	0.443	0.136	3.254	0.001

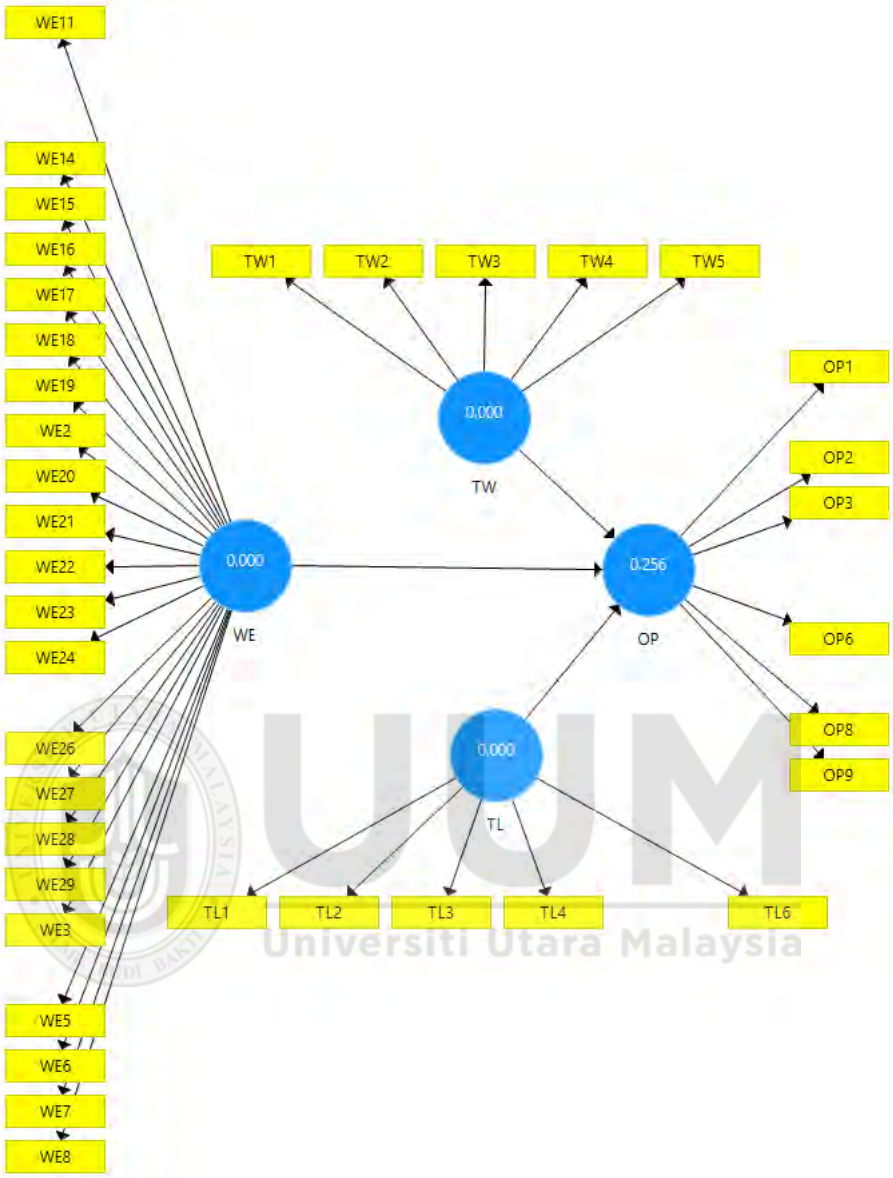
8. R Square

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
OP	0.482	0.509	0.051	9.367	0.000

9. Cohen's f square

	Original Sample (O)	Sample Mean (M)
WE -> OP	0.108	0.112
TW -> OP	0.065	0.086
TL -> OP	0.000	0.010

10. Predictive Relevance (Q square)



	SSO	SSE	Q² (=1-SSE/SSO)
OP	738.000	549.414	0.256
TL	615.000	615.000	
TW	615.000	615.000	
WE	2706.000	2706.000	