INFLUENCE OF PERSONALITY TRAITS, JOB SATISFACTION AND EMPLOYEE FARMING ON JOB PERFORMANCE: A STUDY AMONG ENGINEERING FIRMS IN MALAYSIA

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by

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LIST OF ABBREVIATIONS

ABET	Accreditation Board for Engineering and Technology
BFI	Big Five Inventory
CWB	Counterproductive Work Behavior
DLOQ	Dimensions of Learning Organization Questionnaire
E&E	Electrical & Electronics
GDP	Gross Domestic Product
GMA	General Mental Ability
HRD	Human Resource Development
IC	Integrated Circuits
ICT	Information and Communications Technology
JDI	Job Description Index
JDS	Job Diagnostic Survey
JSS	Job Satisfaction Survey
LMX	Leader Member Exchange
MIDA	Malaysian Investment Development Authority
MITI	Ministry of International Trade and Industry
MOAQ-JSS	The Michigan Organizational Assessment Questionnaire – Job Satisfaction Survey
MSQ	Minnesota Satisfaction Questionnaire
OCB	Organizational Citizenship Behavior

PENGARUH SIFAT KEPERIBADIAN, KEPUASAN KERJA DAN "PERTUMBUHAN PEKERJA" (EMPLOYEE FARMING) PADA PRESTASI KERJA – KAJIAN DI KALANGAN FIRMA KEJURUTERAAN DI MALAYSIA

ABSTRAK

Kemunculan era Industri 4.0 membawa cabaran pengeluaran yang baru. Perubahan in amat penting bagi negara Malaysia yang bergantung kepada sektor pembuatannya untuk mencapai satu masyarakat yang berpendapatan tinggi. Kalangan jurutera perlu mengambil peranan besar untuk mempelopori cabaran ini. Selaras dengan cabaran ini, penyelidikan ini disasarkan kepada individu-individu yang melaksanakan peranan kejuruteraan sambil bekerja di syarikat pembuatan bidang Elektrik dan Elektronik di Malaysia. Kajian ini memberi tumpuan kepada Sifat Keperibadian (Personality) sebagai satu cara memperolehi bakat, Kepuasan Kerja (Job Satisfaction), untuk pengekalkan bakat dan "Pertumbuhan Pekerja" ("Employee Farming") untuk peningkatan bakat. Kajian ini berusaha untuk mencapai 3 objektif. Objektif pertama merupakan penyiasatan bagaimana sifat Keperibadian mempengaruhi Prestasi Kerja manakala objektif kedua ialah untuk menguji sama ada Kepuasan Kerja bertindak sebagai pengantara kepada hubungan sifat Keperibadian dan Prestasi Kerja. Objektif ketiga ialah pengenalan konsep "Pertumbuhan Pekerja" dan menguji sama ada ia menjadi penyederhana kepada hubungan sifat Keperibadian dan Prestasi Kerja. Istilah "Pertumbuhan Pekerja" terdiri daripada dua komponen, iaitu "Organisasi Pembelajaran" (Learning Organization) dan hubungan LMX ("Leader-Member Exchange"). Konsep "Pertumbuhan Pekerja" menarik analogi dari seorang petani (pemimpin) yang mewujudkan persekitaran yang subur ('Learning

Organization') dan memberi penjagaan (hubungan LMX) untuk meningkatkan hasil tanamannya. Untuk mencapai objektif-objektif ini, satu kajian kuantitatif, keratan rentas, satu masa dan korelasional telah dijalankan untuk menguji hubungan hipotesis antara sifat Keperibadian, Kepuasan Kerja, "Pertumbuhan Pekerja" dan Prestasi Kerja. Kajian ini mendapati bahawa Extraversi (Extraversion) dan Keterbukaan (Openness to experience) berkorelasi positif dengan Prestasi Kerja (Job Performance), manakala Kesabaran (Agreeableness) dan Neurotikisme (Neuroticism) berkorelasi negatif dengan Prestasi Kerja. Ia juga mendapati bahawa Kesabaran dan Kesetian (Conscientiousness) berkorelasi positif dengan Kepuasan Kerja manakala Keterbukaan berkorelasi negatif dengan Kepuasan Kerja. Ini menimbulkan dikotomi menarik, di mana Keterbukaan berkorelasi positif dengan Prestasi Kerja tetapi berkorelasi negatif dengan Kepuasan Kerja sambil Kesabaran berkorelasi negatif terhadap Prestasi Kerja tetapi berkorelasi positif dengan Prestasi Kerja. Dikotomi ini dijangka akan meningkat tekanan kerja di kalangan jurutera. Kajian ini juga membangkitkan satu kesimpulan yang tidak disangkai, iaitu Kepuasan Kerja bukan faktor pengantaraan sifat Keperibadian dengan Prestasi Kerja. Selain itu, kajian ini juga menunjukkan bahawa "Pertumbuhan Pekerja" menyederhanakan secara positif hubungan sifat Kesetian dengan Prestasi Kerja. Analisa seterusnya menunjukkan komponen pertama konsep "Pertumbuhan Pekerja" iaitu "Organisasi Pembelajaran" menyederhanakan secara positif hubungan sifat Kesetian dengan Prestasi Kerja manakala hubungan LMX (komponen kedua konsep "Pertumbuhan Pekerja") menyederhanakan secara negative hubungan sifat Extraversi and Keterbukaan dengan Prestasi Kerja. Temuan ini menunjukkan bahawa apabila hubungan LMX menjadi terlalu kuat, keadilan organisasi mungkin dikompromi menyebabkan Prestasi Kerja turun.

INFLUENCE OF PERSONALITY TRAITS, JOB SATISFACTION AND EMPLOYEE FARMING ON JOB PERFORMANCE: A STUDY AMONG ENGINEERING FIRMS IN MALAYSIA

ABSTRACT

The advent of Industry 4.0 will bring about new manufacturing challenges. This is especially important for Malaysia which depends on its manufacturing sector to transform the country into a high income society. Engineers, amongst other professionals will have to spearhead this challenge. In line with this challenge, this research is targeted at individuals performing engineering roles who work in Electrical and Electronics based companies in Malaysia. It focusses on Personality Traits (for talent acquisition), Job Satisfaction (for talent retention) and 'Employee Farming' (for talent growth). The study strives to achieve 3 objectives. Firstly, it investigates how Personality traits affect Job Performance. Secondly, it tests if Job Satisfaction is a mediator between Personality traits and Job Performance. Thirdly, it introduces the concept of 'Employee Farming' and tests if it is a moderator to the Personality traits - Job Performance relationship. The term 'Employee Farming' consists of two components i.e. a Learning Organization and a strong Leader-Member Exchange (LMX) relationship. It draws its analogy from a farmer (leader) who creates a fertile environment (Learning Organization) and provides the care (LMX relationship) needed to maximize a crop's harvest. To achieve these objectives, a quantitative, cross-sectional, one-time, correlational study was conducted and its data was used to test the hypothetical relationships between Personality traits, Job Satisfaction, Employee Farming and Job Performance. The study found that Extraversion and Openness to experience was positively correlated and Agreeableness and Neuroticism was

negatively correlated to Job Performance. It was also found that Agreeableness and Conscientiousness were positively correlated to Job Satisfaction, and Openness to experience was negatively correlated to Job Satisfaction. This raises an interesting dichotomy where Openness to experience positively correlates to Job Performance but negatively correlates to Job Satisfaction while Agreeableness negatively correlates to Job Performance but positively correlates to Job Performance. This dichotomy undoubtedly leads to high job stress among engineers. Somewhat unexpectedly, it was found that Job Satisfaction was not a mediating factor between Personality traits and Job Performance. Employee Farming was found to moderate the relationship between Conscientiousness and Job Performance. A second order analysis indicated that a Learning Organization positively moderated the relationship between Conscientiousness and Job Performance, while somewhat unexpectedly, LMX was found to negatively moderate the relationships between Extraversion and Openness to experience and Job Performance. This finding suggests that when LMX relationships become too strong and organizational fairness is compromised, Job Performance will actually drop.

CHAPTER 1

INTRODUCTION

1.1 Chapter Introduction

This chapter describes the background conditions that led to the need for this study, particularly in a developing country like Malaysia. It goes on to describe the problem statement that needs to be addressed and the research questions proposed for this study. It then describes the novelty of the study and its expected contributions. The chapter concludes with the definition of key terms used in this study.

1.2 Background

The global industrial landscape continues to change due to the rapid proliferation of technological and innovative breakthroughs (Pereira and Romero, 2017). To support higher levels of product customization and faster time-to-market, businesses have to revolutionize their product designs, automate their manufacturing processes, increase the intelligence level of their equipment and optimize their supply-chain networks. This gives rise to the fourth Industrial Revolution or Industry 4.0 which follows the earlier three revolutions being the introduction of the steam engine, electricity and computers into manufacturing. Industry 4.0 utilizes amongst others break-thorough concepts like Additive Manufacturing, Artificial Intelligence, Big Data Analytics, Augmented Reality and the Internet-of-Things to create cyber-physical systems that are flexible and efficient (Grieco, Caricato, Gianfreda, Pesce, Rigon, Tregnaghi and Voglino, 2017). Industry 4.0 allows products and services to flexibly connect thorough the internet, enabling automated and self-optimized production of goods with minimal human intervention (Hoffmann & Rusch, 2017).

Industry 4.0 increases cost and time efficiency and improves product quality (Albers, Bartosz, Tobias, Viktoriia and Tobias, 2016). Based on a survey of 235 German industrial companies, 73% of them projected that Industry 4.0 will drive >11% efficiency gain in 5 years (Geissbauer, Schrauf, Koch and Kuge, 2014). The same study pointed out that Industry 4.0 would benefit the electronics and electrical systems industries the most and drive revenue growth of €110B per year. For Southeast Asia, Industry 4.0 is expected to reduce production cost and widen profit margins to the tune of USD 25-45B per year by 2030 (Tonby, Ng and Mancini, 2014).

Industry 4.0 will no doubt bring significant changes. Industry 4.0 calls for greater automation of tasks, meaning that workers need to be retrained for new tasks. In a meta-study of 30 papers related to Industry 4.0, the skill of workers was repeatedly raised as a topic of interest (Maresova, Soukal, Svobodova, Hedvicakova, Javanmardi, Selamat and Krejcar, 2018). This was supported by Pereira and Romero (2017) who stated that skills development was one of the most important factors for a successful adoption of Industry 4.0. The importance of a 'learning factory' was also raised by Elbestawi, Centea, Ishwar and Wanyama (2018).

Industry 4.0 needs human capital nurtured through a competitive education system that stresses on creativity (Agolla, 2018). Human capital is a collection of skills, talents, knowledge, wisdom, intelligence, abilities, judgement, experience and training possessed individually and collectively by an organization that can be utilized to achieve the goals of their shared vision (Becker, 1964). In the workplace, more people need to gain technical skills to meet the demands of Industry 4.0. Lifelong learning is needed to ensure that everybody stays current to the evolving needs of the digital workplace (Agolla, 2018).

Industry 4.0 will require a diverse range of human capital. Among others, Engineers roles will play a large role in the transition to Industry 4.0 which extensively uses Cyber-Physical Systems. Product design, manufacturing methods and equipment will need to be upgraded. Industry 4.0 represents one of the most challenging times for engineering design and education. Engineers in the Industrial 4.0 era will require more than the traditional skillsets in mathematics, design skills, investigative, experimentation and problem solving skills and programming knowledge; they will need a good understanding of industry standards, be 'digitally literate', have strong analytical thinking, communication, teamwork and leadership skills (Motyl, Baronio, Uberti, Speranza and Filippi, 2017). Similarly, managers need to adapt their management strategy to support new market requirements (Erol, Selim, Jager, Hold, Ott and Sihn, 2016) brought in by Industrial 4.0.

The development of human capital begins with recruiting the correct resources. Recruiting is a process of attracting, selecting and appointing the right individuals for a given job. While physical brawn may be the key determinant if a soldier will succeed in the Roman Army, the selection criteria for a successful knowledge worker in the information age is likely to be more complex. Tett, Jackson & Rothstein (1991) found that Personality traits were a good predictor of an individual's job performance. This was supported by Barrick and Mount (1991) who demonstrated that Extraversion and Conscientiousness (Big Five Personality trait descriptors) were good predictors of job performance. This led to the use of Personality traits scorecards like the Five Factor Model and Myers-Briggs Personality trait profile during job interviews.

After hiring the right resources, organizations need to focus on how to retain the pool of human capital. Critical factors that influence employee retention including

providing for the employee's personal and work needs, providing a productive, fair and respectful work environment, providing challenging work opportunities and good supervision and recognition (Ramlall, 2004). These factors have significant overlap with the 9 factors that influence job satisfaction as described by Spector (1997). It is thus reasonable to link job satisfaction to human capital retention. This is supported by the work of Ali & Baloch (2010) who found that job satisfaction was negatively correlated with turnover intention.

Even after an organization has acquired the needed human capital and is successfully retaining them, the organization needs to continually develop its human capital to meet evolving business needs or risk obsolescence (Kennedy & King, 2005). Fuller and Unwin (2011) showed that effective human capital development was highly influenced by the work environment. This was supported by Eraut (2007) and Tynjala (2008) who posited that a cooperative organization culture was needed for informal learning. Senge (1990) defined an organization that provided an environment for people to continually expand their capacity to create results they desire as a "Learning Organization". A Learning Organization creates better ways of learning to improve its performance. Johnston and Hawke (2002) suggested that leaders and individual employees needed to work together to fashion a customized development plan based on individual ambitions and strengths. For this dialogue to happen, there must be open communication and a strong level of trust between leader and employee.

In summary, the advent of Industry 4.0 will bring on new manufacturing challenges. Among others, Engineers will need to acquire new skills and continue learning to maintain job performance. To enable them to thrive and perform well in this environment, we need to hire and retain the correct talent and provide them an

environment where they can continue to learn and grow with changing business needs. This challenge provides the motivation for this research.

1.3 Problem Statement

Being a trading nation, Malaysia must constantly seek growth for its products and services. While Malaysia is rich with natural resources, it is the manufacturing sector that drove the country into an industrial nation. This sector has evolved from a labor intensive industry to one that is more automated and efficient and it has contributed ~22% to the Gross Domestic Product (GDP) for the last 5 years. This sector continues to grow healthily at an annual rate of 5.1% (Ministry of International Trade and Industry Malaysia, 2018). Malaysia ranks 17th among 40 countries in manufacturing competiveness (Global Manufacturing Competitiveness Index, 2016) and ranks 8th in Asia in terms of innovation (Global Innovation Index, 2017).

Quality of labor and higher productivity is the new competitive advantage eclipsing low labor cost. While Malaysia's labor productivity has grown 3-4% in the last few years, its global position has not moved forward; continuing to rank 44th in 2016, unchanged since 2009. Its relative share of high-skilled labor declined from 19% in 2010 to 18% in 2017. To keep pace with the advent of Industry 4.0, Malaysia needs to infuse higher value-added manufacturing processes through the application of advanced digitization, advanced manufacturing technologies and efficient resource utilization. Malaysia needs to capitalize on the reducing cost of adopting the disruptive technologies brought on by Industry 4.0 to improve its manufacturing efficiency and product quality (Ministry of International Trade and Industry Malaysia, 2018).

The stakes for Malaysia to embrace Industry 4.0 are high. The Readiness for the Future Report 2018 jointly published by A.T Kearney on behalf of the World

Economic Forum (WEF) positions Malaysia in the "Leading" quadrant of Figure 1.1 below. It is noteworthy to mention that only Malaysia and China, both non-high income countries were listed in the Leading quadrant. While this is enviable for Malaysia, it also highlights the economic value at stake if Malaysia is unable to transform itself in an accelerated manner and fall further behind regional leaders like China, Singapore, Korea and Japan.

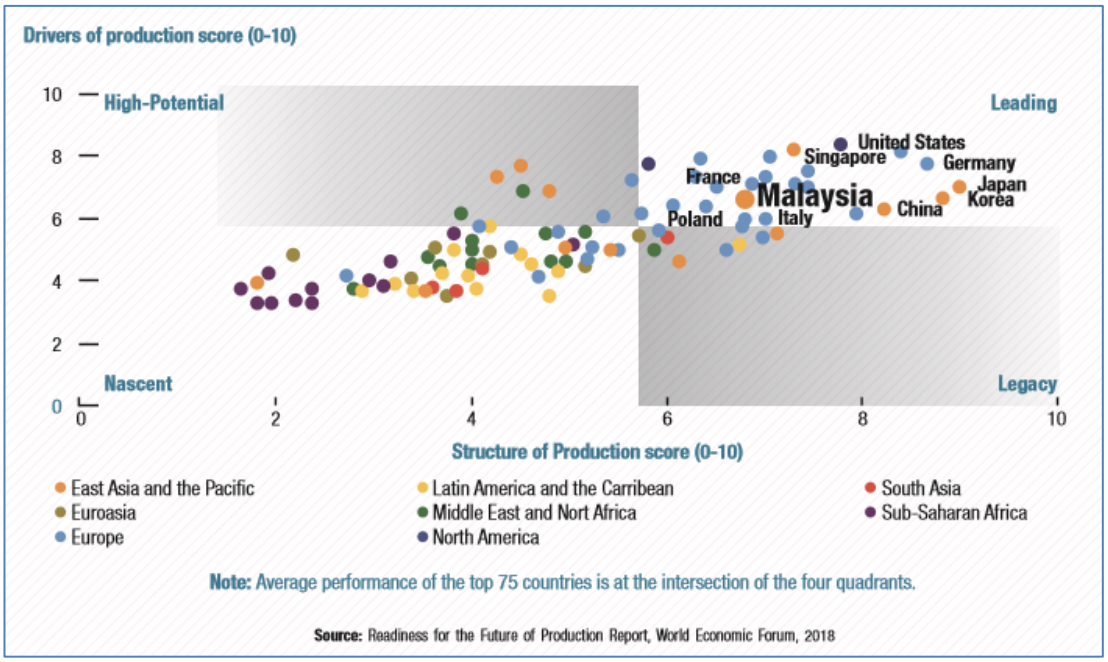

Figure 1.1 Readiness for the Future of Production Report

To successfully transform to Industry 4.0, Malaysia needs to upskill its human capital to focus on productivity (Ministry of International Trade and Industry Malaysia, 2018). Malaysia's National Policy on Industry 4.0 has identified that a significant shortage of skills in the areas of the Internet-of-Things (IoT), Robotics and Artificial Intelligence (AI) and this shortage needs to be addressed.

The new Industry 4.0 era will require engineers to play cross-functional roles with the combined knowledge of IT and production (Cevik, Ustundag, Kadaifci & Oztaysi, 2018). Engineers in the Industrial 4.0 era will need to be digitally- literate and

possess strong analytical thinking, communications, teamwork and leadership skills (Motyl, Baronio, Uberti, Speranza and Filippi, 2017). This is particularly true as the current scope of engineering has expanded to include computer systems, software engineering, semiconductors, aerospace, etc. versus the traditional scope of engineers working on machines, systems and structures.

The leading manufacturing sector in Malaysia is the Electrical and Electronics (E&E) sector which provides employment to 25.3% of the work-force (Malaysian Investment Development Authority, 2016). This sector includes the manufacturing of Integrated Circuits (IC) components, passive devices, printed circuit boards and related products.

In summary, the problem statement is how do we effectively develop engineers in the E&E manufacturing sector to successfully implement Industry 4.0 and keep the country's manufacturing sector viable in the long term.

1.4 Research Objectives

As described in section 1.3, an organization needs high performing engineers to ensure the successful adoption of Industry 4.0 into Malaysia. Firstly, an organization needs to recruit the right individuals into their team and Personality traits can be used as one of the selection criteria. Secondly, an organization needs to look into job satisfaction to retain individuals on the job. Thirdly, an organization needs to provide workplace learning to enable human capital to evolve to meet changing work expectations. This study aims to study how Personality traits, Job Satisfaction and workplace learning affect Job Performance.

The conditions for workplace learning has been previously studied. Senge (1991) had proposed the model of a Learning Organization that describes the 5 dimensions needed to make learning conducive in the workplace. While this model has gained wide acceptance, it was felt that the model did not adequately explain the role of leadership in creating a Learning Organization. Thus, this study would like to introduce the concept of "Employee Farming" which adds human-touch to a Learning Organization to further enhance workplace learning. The concept of "Employee Farming" was first introduced by Muthuveloo (2013) as a proactive method of selecting individuals with the right capacity and developing them to perform in the right job. It draws its analogy from a farmer (leader/manager) selecting the right seeds (individuals) and creating a fertile environment for the crops (team members) to thrive (learn and deliver high performance). This concept will be further explained in later sections.

The objectives of this study are as follows:

1) Determine the relationship between Personality traits and Job Performance.
2) Determine if Job Satisfaction mediates the relationship between Personality traits and Job Performance
3) Study if the concept of "Employee Farming" would moderate the relationship between Personality traits and Job Performance

This study is targeted at professionals working in engineering roles in Malaysia who will have to rapidly develop new skills to usher in the era of Industrial 4.0.

1.5 Research Questions

Based on the research objectives and the target population stated above, the following research questions will be addressed:

Q1: Do Personality traits have significant influence on Job Performance?

Q2: Does Job Satisfaction mediate the relationship between Personality traits and Job Performance?

Q3: Does "Employee Farming" positively moderate the relationship between Personality traits and Job Performance?

1.6 Research Significance

The contributions of this research to the academic and practitioner perspectives are shown in the following sections.

1.6.1 Academic Perspective

From an academic perspective, this study will first contribute to the extant literature relating Personality traits and Job Performance and how Job Satisfaction plays in this relationship. Secondly, it will study if "Employee Farming" moderates the Personality traits – Job Performance relationship to increase Job Performance.

"Employee Farming" is a novel concept introduced by Muthuveloo in 2013. "Employee Farming" is a proactive method that stresses firstly on the selection of individuals based on their capability and secondly on the development of these individuals to enable them to perform in future job roles. Studies on Leader-Member Exchange (LMX) theory have linked the process of selecting candidates for development to strong LMX relationships. Studies on Workplace learning have identified amongst others, the need for organizational and leadership support for effective Workplace Learning (Kozlowski & Hults, 1987, Fuller and Unwin, 2011). In 1991, Senge proposed the Learning Organization model which sheds light on the

requirements for Workplace Learning. However, it falls short of describing the relationship needed between leaders and managers with their team members to make the model work. This study aims to fill this gap and will propose a theoretical model where the combined effect of a Learning Organization with a strong LMX relationship ("Employee Farming") will act as a moderator to the Personality trait – Job Performance relationship. The development and testing of the "Employee Farming" concept forms the novelty of this study.

1.6.2 Practitioner's Perspective

From a practitioner's perspective, this study will firstly provide managers with an additional method of selecting candidates for engineering roles using Personality traits. Conversely, an individual can also identify if they possess the needed Personality traits to excel in an engineering role. Secondly, managers will benefit from understanding how Job Satisfaction correlates to Job Performance and this will help their teams retain high performing employees. Thirdly, managers will benefit from the concept of "Employee Farming" which will enhance the effectiveness of Workplace Learning among their team. In addition to creating a Learning Organization and using coaching, succession planning, mentoring, etc. as development tools, managers will also need to understand the importance of manager-employee relationships when upskilling their teams to meet evolving job needs.

1.7 Definition of Key Terms

The definition of key terms used in this study are shown in the following sub-sections.

1.7.1 Personality Traits

Personality traits is defined as a consistent pattern of behaviors demonstrated by an individual as a result of his or her personal values, experience, feelings and desires derived over time (Revelle & Condon, 2015). The Five Factor Model (FFM) as described by Costa and McCrae in 1992 was chosen to describe Personality traits as it is widely used, allowing easy data comparison with other studies when necessary. The Five Factor Model describes Personality traits in terms of five basic dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to experience.

1.7.2 Job Performance

Job performance is defined as the contribution of an individual to his or her job workplace in the form of Task Performance, Contextual Performance and Counterproductive Work Behavior (Rotundo and Sackett, 2002 and Viswesvaran and Ones, 2002).

1.7.3 Job Satisfaction

Job Satisfaction describes the extent to which people like (are satisfied) or dislike (are dissatisfied) their jobs. It is a general feeling about the various aspects of the job (Spector, 1997).

1.7.4 Employee Farming

Employee Farming is a novel method of proactively selecting individuals with the right capacity and developing them to perform in the future job roles. It entails selecting candidates, understanding their career interest and providing them a learning environment with management support to increase their performance (Muthuveloo, 2013). For the context of this study, Employee Farming is defined as a system that uses a Learning Organization (Senge, 1991) in combination with a strong LMX relationship to enhance Workplace learning which in turn increases Job Performance.

1.7.4(a) Learning Organization

A Learning Organization is a team working together to enhance their capabilities to create results that are meaningful for themselves (Senge, 1991) The five dimensions in this model are Systems Thinking, Personal Mastery, Mental Models, Shared Vision and Team Learning.

1.7.4(b) Leader-Member Exchange (LMX) Relationship

The Leader-Member Exchange (LMX) theory is based on a two-way relationship between leaders and followers (Graen and Uhl-Bien, 1995). The relationship is based on 3 dimensions: Mutual affect between members, public support for the goals of the team and the team's acknowledgement of the leader and lastly the perceived work contribution of the team. (Liden & Maslyn, 1998).

1.7.5 Engineers and Engineering Roles

The Meriam Webster Learner's Dictionary defines an engineer as a person who is scientifically trained to work on, design or construct complicated machines, systems, structures or products. The American Accreditation Board for Engineering and Technology (ABET) defines engineering as a profession where mathematics and natural sciences are used to develop ways to economically utilize material and harness natural forces for the benefit of humankind. They broadly classify engineering roles as research, development and design which converts concepts to new products, modelling, testing and maintaining engineering systems, managing technical personnel and projects and teaching and consulting on engineering topics.

The Board of Engineers Malaysia (BEM) is a governing body that defines a Professional Engineer as a registered graduate engineer whom they have certified and issued with a Practicing Certificate. However, in the Malaysian E&E manufacturing sector, Professional Engineers are frequently not required as their engineering work is not regulated by the government. The E&E manufacturing sector typically uses a looser definition of Engineer as any technically trained individual who performs an engineering function. For the purpose of this study, any individual who performs engineering roles as defined by ABET above is termed an Engineer, regardless whether the individual is a Professional Engineer as defined by BEM.

1.8 Chapter Conclusion

Chapter 1 has outlined the rationale for the study and defined the problem statement and research objectives and questions to be addressed. It has also listed the definition of key terms used in this study. In Chapter 2, the current literature related to

this study will be reviewed while in Chapter 3, the research methodology used will be presented. Chapter 4 will share the data collected in this study and describe how it was analyzed while Chapter 5 will discuss the conclusions drawn from the data and outline limitations of the study and areas for future research.

CHAPTER 2

LITERATURE REVIEW

2.1 Chapter Introduction

The chapter begins by reviewing the literature that describes the key parameters used in this study. First, it reviews job performance and the factors affecting it. Secondly it reviews Personality traits and the factors used to measure it. Thirdly, it reviews job satisfaction and the factors affecting it. Next, the concept of Employee Farming is introduced and the factors affecting it are proposed. The importance of Employee Farming in developing employees in an environment of change is then discussed.

The chapter then discusses the relationships between the variables discussed above. Firstly, the relationship between Personality traits and Job Performance is discussed, followed by the relationship between Personality traits and Job Satisfaction. Next, the relationship between Job Satisfaction and Job Performance, the relationship between Personality traits and Employee Farming and the relationship between Employee Farming and Job Performance are discussed. This is followed by a discussion on the gaps in the current literature.

A theoretical model to study the gaps identified in the literature is then proposed, with explanations on how the theoretical model was developed. Hypotheses are then presented to validate the proposed theoretical model.

2.2 Literature Review of Key Parameters

A literature review of the key parameters used in this study and their inter-relationship with each other are discussed in the below sections.

2.2.1 Job Performance

Job performance describes the action needed to get a job done. It describes the activities needed to reach a set of objectives or goals defined by an organization or job function (Campbell, 1990), but does not describe the consequence of the job itself. Job performance is strictly a behavior and is separate from job outcomes which can be described or measured as key success indicators. The outcome or result of job performance is separated from job performance as it may be influenced by situations outside the influence of the individual. An example of this may be an individual who diligently tries to sell a product or service that is no longer relevant. As hard as he or she attempts, the level of sales (outcome) will not correlate to the effort put in. By defining job performance as a behavior, the individual's direct contribution can be studied and improved on. The outcome of job performance is captured under organizational performance which encompasses a group of individuals or an organization and forms a separate area of study. Campbell (1990) proposed that job performance is a complex set of activities and this is supported by Borman & Motowidlo (1993) who defined job performance as the combined value of the action and behaviors an employee directly and indirectly contribute to organizational goals

Job Performance has been shown to have a multidimensional construct. (Campbell, 1990; Austin and Villanova, 1992). Rotundo and Sackett (2002) and Viswesvaran and Ones, (2002) suggested that job performance is formed by 3 dimensions: Task Performance (getting the job done), Contextual Performance (behavior while getting the job done) and Counterproductive Work Behavior (CWB) which describes behaviors that hinder work. These 3 dimensions are discussed in separate sections 2.2.1(a) through 2.2.1(c) below.

Not all researchers agree that Performance is defined by these 3 dimensions. Pulakos (2006) proposed Adaptive Performance as the fourth dimension affecting Job Performance. Adaptive behavior includes generating new, innovative ideas, adjusting goals and plans to meet situational needs, being flexible to learn new skills and technologies, and remaining calm and acting appropriately. However, the research done by Koopmans, Bernaards Hildebrandt, Schaufeli, deVet and van der Beek (2011) showed that Adaptive Performance was not a different dimension, but rather an extension of contextual performance. A sample of research papers reviewed on this topic are shown in Table 2.1.

Table 2.1 Sample of Research Papers on Job Performance

Author (year)	Title	Source	Findings
Borman & Motowidlo (1993)	Expanding the Criterion Domain to Include Elements of Contextual Performance	Personnel Selection in Organizations pp 71-98	Task performance is the in-role duties an employee has to perform. Contextual performance is an extra-role performance that supports the broader organizational and social environment needed for work.
Viswesvaran and Ones (2002)	Perspectives on Models of Job Performance	International Journal of Selection and Assessment 2002	Job Performance is linked to task performance, contextual performance, OCB, counter-productivity and organizational deviance.
Rotundo & Sackett (2002)	The Relative Importance of Task, Citizenship and Counterproductive Performance to Global Ratings of Job Performance: A Policy-Capturing Approach.	Journal of Applied Psychology (2002) Vol 87 No 1 pp 66-80	Discussed the relative importance of task performance, citizenship and counterproductive performance in different job types
Lievens, F., Conway J.M. and DeCorte, W. (2008)	The relative importance of task, citizenship and counterproductive performance to job performance ratings: Do rater source and	Journal of Occupational and Organizational Psychology (2008) Vol 0 pp 1-18	Job Performance defined as task, citizenship and counterproductive performance. The importance of these dimensions varied across organization cultures and rating source with team based culture

	team-based culture matter?		and peers respectively prioritizing citizenship behavior versus task.
Fogaça, N., Rêgo, M., Melo, M., Armond, L. and Coelho Junior, F. (2018)	Job Performance Analysis: Scientific Studies in the Main Journals of Management and Psychology from 2006 to 2015	Performance Improvement Quarterly 30(4) pp 231-247	Meta-analysis of previous studies relating to job performance

2.2.1(a) Task Performance

Task performance describes how an individual performs his or her formal job responsibilities. These responsibilities are clearly documented and are measurable. Task performance is termed "in-role behavior" (Koopmans et al., 2011).

2.2.1(b) Contextual performance

Contextual performance or Organizational Citizenship Behavior (OCB) refers to a set of voluntary, interpersonal behaviors that, while not officially required, contribute to the contextual component of job performance. Contextual performance is valued by an organization as they help maintain or improve the social and psychological environment needed for the effective and efficient operation of an organization.

Organ (1988) first categorized the collection of Organizational Citizenship Behavior into 5 areas: Altruism (doing the right thing), Courtesy (conflict management), Conscientiousness (willingness to do things well), Civic Virtue (willingness to contribute to the team) and Sportsmanship (tolerance). This was later reclassified by Podsakoff (2000) into 6 dimensions – Helpfulness, Sportsmanship, Organizational Loyalty, Organizational Compliance, Individual Initiative and Civic Virtue.

The first dimension, Helpfulness, describes an individual's willingness to help others resolve or prevent work related problems voluntarily. Organ (1988) and George & Brief (1992) identified this helping behavior as a key form of OCB. The second dimension is Sportsmanship behavior which is described as a willingness to bear the inconvenience caused by work without complaining (Organ, 1990). Individuals with good sportsmanship remain positive when things go wrong and do not take offense when their suggestions are not followed. They willingly make sacrifices and put the interest of the work group ahead of their personal interest. The third dimension is Organizational Loyalty which describes a willingness to spread goodwill and speak positively of an organization to protect it (George & Jones, 1997). Individuals with high organizational loyalty will promote the organization to outsiders. The fourth dimension is Organizational Compliance which describes an individual's acceptance of the procedures, rules and regulations set by the organization and their willingness to follow them. The fifth dimension is described as Individual Initiative. This describes voluntary behaviors like creativity and innovation to continuously improve the performance of the organization. Individuals with high Individual Initiative demonstrate enthusiasm in their work place and frequently take on extra responsibilities and encourage the rest of the team to do the same. This is reflected in the Conscientiousness dimension described by Organ (1988). The sixth dimension is Civic Virtue which describes an individual's willingness to contribute to the team's governance, including sharing their opinions and monitoring the environment for threats and opportunities.

2.2.1(c) Counterproductive Work Behavior

Counterproductive Work Behavior (CWB) is any deliberate behavior that negatively impacts task performance or the environment where the task is performed.

CWB is defined as intentional employee behavior that harms an organization (Spector & Fox, 2002) CWB and OCB can be viewed as opposites in the sense that the former harms the organization while the latter benefits it. CWB can take the form of deliberate acts of sabotage, theft, abuse and aggression or subtle forms like failing to do the job correctly or failing to follow instructions. CWB has been conceptualized in different ways and include dimensions like organizational aggression, antisocial behavior, delinquency, retaliation and bullying (Fox, Spector and Miles, 2001)

2.2.2 Personality Traits

The definition of Personality traits was first introduced by Gordon Allport in the 1930s. He defined Personality traits as the behaviors exhibited by an individual as a result of his or her unique response to the environment. Personality traits refers to the thought patterns, attitudes, perceptions, feelings, behaviors, expectations and social adjustments that are consistently demonstrated thorough time (Krauskopf & Saunders, 1994). Personality traits represents the internal agency within oneself that determines the characteristics, habits, thoughts, feeling and actions of an individual (Fiske & Butler, 1963, p. 258). These characteristics are consistent and long-lasting in nature. Personality traits is an all-embracing term description of an individual's behavior and the way it is organized and coordinated when he or she interacts with the environment (Ozer & Benet-Martinez, 2006). Personality traits is described in terms of traits or types (Toplis, Dulewicz and Fletcher, 1991). The trait concept of Personality can be defined as a stable and relatively enduring aspect of an individual that distinguishes him or her from other people. Traits drive individuals to behave in a certain manner in a given situation and this consistent set of behavior allows future behaviors to be predicted. An individual's

Personality traits is affected by his or her values, personal experiences, habits, attitudes, social relationships and skills (McAdams & Olson, 2010).

Researchers have long attempted to describe a person's Personality traits. Hippocrates first described 4 types of temperaments. A sanguine temperament which is sociable, active and enthusiastic; a choleric temperament for being short tempered and irritable; melancholic temperament for being analytical, wise and quiet; a phlegmatic temperament for being peaceful and relaxed. Plato and Aristotle suggested a classification of Personality traits into 4 types: artistic, sensible, intuitive and reasoning.

In more recent times, Carl Jung proposed that individuals can be categorized into 2 groups: Introverts who derive their energy from within themselves and extroverts who derive their energy from interacting with others. Alongside this group, he further added 4 psychological functions: thinking, feeling, sensation and intuition into his model forming the popular Myers-Briggs Personality traits profile. With some 4500 words in the English language used to describe personal traits, researchers spent a lot of time grouping synonyms together and using factor analysis to distill the number of descriptions to a manageable level. The most commonly used model today was introduced by Costa and McCrae in 1992. This 'Five-Factor-Model of Personality traits describes Personality traits in terms of five basic dimensions: Conscientiousness, Extraversion, Agreeableness, Neuroticism and Openness to experience. Using a different approach, Goldberg (1992) had independently derived similar factors called the Big 5 Personality traits to describe Personality. Both Goldberg's (1992) and Costa and McCrae's (1992) models shared the same 5 dimensions of Conscientiousness, Extraversion, Agreeableness, Neuroticism and Openness to experience. Details of each facet are described below.

2.2.2(a) Conscientiousness

Conscientiousness is a trait of being cautious and vigilant. It implies a desire to perform a task well and takes seriously the obligation to others. They are efficient, organized and show self-discipline and act dutifully. Their actions are generally systematic, well thought through and planned. Conscientious people are determined, goal-oriented and likely to be conformists (DeYoung, Peterson & Higgins, 2002). They tend to be careful and reliable (Costa & McCrae, 1992b). Conscientiousness includes self-efficacy (confidence and optimism), orderliness (organized), dutifulness (responsible), achievement-striving (goal oriented), self-discipline and cautiousness (Goldberg et al., 2006).

2.2.2(b) Extraversion

The extraversion facet captures an individual's comfort with relationships. People high in extraversion are characterized as being comfortable with other people, gregarious, talkative, active, assertive and generally sociable (Costa & McCrae,1992b). They enjoy activities that involve large social gatherings and tend to work better in groups. Goldberg, Johnson, Eber, Hogan, Ashton & Cloninger (2006) included friendliness, excitement seeking and cheerfulness as descriptors of extraversion. The opposing facet is introversion and introverts tend to be reserved, timid, quiet and independent. Introverts enjoy solitary activities like reading, hiking or fishing and are easily overwhelmed with too much stimulation from a social gathering. They prefer to concentrate on one task at a time and are analytical before they speak.

2.2.2(c) Agreeableness

The agreeableness dimension refers to an individual's likeability or ability to accommodate the needs of others. Highly agreeable people are warm, trusting and cooperative. Goldberg et al., (2006) added that agreeableness includes altruism, sympathy and morality. Individuals high in agreeableness are cheerful, adaptable, cooperative and generally likeable. They tend to agree and demonstrate sympathy towards other people (Costa & McCrae, 1992b). People who score low on agreeableness are cold and antagonistic.

2.2.2(d) Neuroticism

Neuroticism or more positively known by its converse, Emotional Stability measures a person's ability to withstand stress. Neuroticism is manifested through anger, anxiety, self-consciousness, immoderation, vulnerability and depression (Goldberg et al., 2006). People with high neuroticism tend to have negative feelings and thoughts and suffer from embarrassment, nervousness and fear (Costa & McCrae, 1992b; McCrae & John, 1992) while people with low neuroticism (or high emotional stability) tend to be self-confident, secure and calm.

2.2.2(e) Openness to Experience

Openness to experience describes an individual's range of personal interests and his or her interest with subjects that are novel. This includes an individual's interest in artistry, emotionality and willingness to be liberal and adventurous (Goldberg et al, 2006). People high in openness to experience tend to be aware of their own feelings and are intrinsically curious and imaginative (Costa & McCrae, 1992b). Individuals with low openness to experience are conventional and uncomfortable with change.

2.2.3 Job Satisfaction

Job satisfaction is a popular research variable in the study of organizational behavior and workplace psychology. Job satisfaction can be described as an individual's attitude or feeling toward his or her job that is caused by experiences and beliefs about the job (Ilies & Judge, 2004). Job satisfaction is a subjective emotional feeling that a person perceives based on a variety of factors about the work and work environment (Christen, Lyer and Soberman, 2006). Spector (1997) describes job satisfaction as the degree to which people like (are satisfied) or dislike (are dissatisfied) their jobs. He adds that job satisfaction is a generic feeling and attitude towards the job.

There are many theories proposed to explain job satisfaction. Among the first was the theory of Maslow's hierarchy of needs which is frequently linked to human motivation. This theory suggests that there are five hierarchies that need to be met to achieve job satisfaction. The fundamental hierarchies being the physiological and safety needs (work, pay, benefits operating procedures), followed by the need to belong (supervision, co-workers, communication), esteem (contingent rewards) and self-actualization (promotion). Herzberg's motivator-hygiene theory implies that job satisfaction and job dissatisfaction are not directly opposed. For example, while motivating factors like pay, promotions and recognition may contribute to job satisfaction, hygiene factors like work procedures, supervision and co-workers contribute to job dissatisfaction.

The Job Characteristic Theory provides a set of principles to enrich jobs in an organization. It proposed that the 5 main job characteristics (i.e. the variety of skills, identity of task, significance of task, work autonomy and supervisory feedback) affect 5 work related outcomes (i.e. motivation level, Job Satisfaction, Job Performance,