UNIVERSITI PUTRA MALAYSIA

MEDIATING EFFECT OF SELF-EFFICACY ON RELATIONSHIP BETWEEN PSYCHOSOCIAL WORK ENVIRONMENT FACTORS AND EMPLOYEE WELLBEING AMONG AIR TRAFFIC CONTROLLERS IN REGION 1 PENINSULAR MALAYSIA

SHAFAZAWANA BINTI MOHAMED THARIKH

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By

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Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Doctor of Philosophy

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October 2019

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Examining the determinants of employee wellbeing are essential for both theoretical and practical reasons because it will contribute to a more inclusive thought of working life. They are related to the everyday work and life experience of all organizational members which must be seriously viewed by the managers to prepare employees to face head-on on new ways of working due to the global environmental changes. In the Eleventh Malaysia plan, civil aviation is one institution that should have been given greater attention. Air traffic controllers (ATCs) as a profession is classified as the most stressful occupation. The successful passing of certain competency test still does not guarantee that ATCs will sustain a high level of wellbeing at the workplace. Hypertension among ATCs is three times higher than normal for their age group. In year 2017, the volume of air traffic in Malaysia has grown tremendously due to the increase in the demand for air travel from 6.5% to 11.8%. When the complexity of the aviation industry increases, ATCs can become overwhelmed with air traffic and it will affect their wellbeing.

Employees' mental health at the workplace should be optimized as workplaces are built and designed to be one of the factors for employee wellbeing advancement. The most worrying part is the mental health problem which is expected to be a major problem among Malaysians by 2020. A comprehensive empirical approach to employee wellbeing has not been completely established in Malaysia. Wellbeing Theory of PERMA's five pillars of Positive Emotions, Engagement, Relationship, Meaning and Accomplishment was used in this study as the underlying theory which could measure the employee wellbeing of ATCs at their workplace. This a logical step and render the variable to be measurable to account for the strength of wellbeing among the ATCs. Hence,

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this study is to examine the level of contributions of psychosocial work environment factors and employee wellbeing of civil ATCs in Malaysia which is mediated by self-efficacy.

A quantitative approach with cross-sectional design as a survey method has been employed in this study and purposive sampling was used as the sampling technique. The instrument adapted was tested and validated by expert opinions and a pilot study. A total of 209 usable questionnaires were processed in this study. Partial Least Square-Structural Equation Modelling (PLS-SEM) was used to validate the research model and to test the hypotheses while the bootstrapping analysis in PLS-SEM was used to test the direct, indirect and the mediation effect of self-efficacy. The measurement model used established satisfactory reliability and validity measures where all indicator loadings were greater than 0.50 while the internal consistency of all the constructs were able to obtain composite reliability (CR) values of more than 0.60, thus demonstrating construct reliability. Coefficient of Determination (R^2) value for employee wellbeing is 0.625, which can be considered high and it indicated that 62.5% of the variance in the employee wellbeing was explained by psychosocial work environment factors.

This study found that the level of psychosocial work environment factors and employee wellbeing level among ATCs are high. The study also shows that there is a relationship between psychosocial work environment factors and employee wellbeing among ATCs while self-efficacy is also found to have a relationship with ATCs' wellbeing. Findings in this study also proved that self-efficacy mediated the psychosocial work environment factors and employee wellbeing.

This study may be broadened to enrich the knowledge on ATCs with regards to understanding their HRD needs and to suggest a new direction on their HRD practices especially on future workplace development plans. In general, having a clear understanding of what and how these variables influence employee wellbeing is important as it can help CAAM to excel in all its endeavors. With respect to practice, this study should assist Human Resource Development (HRD) researchers, leaders and practitioners in understanding the problem of employee wellbeing. Hence the result of this study could be used to help them in advocating the wellness and wellbeing program and provide adequate training to leaders about employee wellbeing. It is also a first in developing an integrated model that explicitly accounts for the influence of psychosocial work environment among civil ATCs in Malaysia.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

KESAN PENGANTARA EFIKASI KENDIRI DALAM HUBUNGAN FAKTOR-FAKTOR PERSEKITARAN KERJA PSIKOSOSIAL DAN KESEJAHTERAAN PEKERJA DALAM KALANGAN PEGAWAI TRAFIK UDARA DI WILAYAH 1 SEMENANJUNG MALAYSIA

Oleh

SHAFAZAWANA BINTI MOHAMED THARIKH

Oktober 2019

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Mengkaji penentu kesejahteraan pekerja adalah penting bagi kedua-dua teori dan praktikal kerana ia menyumbang kepada pemikiran yang lebih inklusif tentang kehidupan di tempat kerja. Ia berkaitan mengenai kerja harian dan pengalaman hidup semua pekerja yang mesti dipandang serius oleh para pengurus bagi mempersiapkan mereka dalam menghadapi cabaran cara bekerja yang baharu berikutan perubahan persekitaran global. Berdasarkan rancangan Malaysia Kesebelas, penerbangan awam adalah satu institusi yang sepatutnya diberi lebih perhatian. Kerjaya sebagai pegawai trafik udara diklasifikasikan sebagai pekerjaan yang paling tertekan. Kelulusan ujian kecekapan yang dtetapkan, tidak memberi jaminan kepada pegawai trafik udara untuk memperolehi kesejahteraan tahap tinggi yang berterusan di tempat kerja. Hipertensi dalam kalangan pengawai trafik udara adalah tiga kali lebih tinggi berbanding kumpulan usia yang sama. Pada tahun 2017, jumlah trafik udara di Malaysia telah meningkat dengan ketara berikutan kenaikan permintaan bagi perjalanan udara daripada 6.5% kepada 11.8%. Apabila permintaan industri penerbangan bertambah, pegawai trafik udara boleh menjadi terlalu letih seiring peningkatan kesibukan lalu lintas udara dan ia mempengaruhi kesejahteraan mereka.

Kesihatan mental pekerja di tempat kerja sepatutnya dapat dioptimumkan kerana tempat kerja dibina dan direka untuk menjadi salah satu faktor pertambahan kesejahteraan pekerja. Masalah kesihatan mental pekerja berada pada tahap yang membimbangkan dan dijangka menjadi masalah utama dalam kalangan rakyat Malaysia menjelang tahun 2020. Pendekatan empirikal yang komprehensif untuk kesejahteraan pekerja belum sepenuhnya diwujudkan di Malaysia. Teori Kesejahteraan atau dikenaili sebagai PERMA model

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berasaskan lima komponen utama; Emosi Positif, Penglibatan, Hubungan, Makna dan Pencapaian telah digunakan dalam kajian ini sebagai teori asas yang dapat mengukur kesejahteraan pegawai trafik udara di tempat kerja mereka. Ini adalah langkah logikal dan menjadi pemboleh ubah untuk mengukur andaian kekuatan kesejahteraan dalam kalangan mereka. Justeru, kajian ini adalah untuk mengkaji tahap sumbangan faktor-faktor persekitaran kerja psikososial dan kesejahteraan pekerja pengawai trafik udara awam di Malaysia menerusi pengantara efikasi kendiri

Pendekatan kuantitatif dengan reka bentuk kajian keratan rentas sebagai kaedah tinjauan dan teknik pensampelan tujuan telah digunakan dalam kajian ini. Instrumen diuji setelah semakan pandangan ahli pakar dalam bidang ini dan mendapat pengesahan daripada keputusan kajian rintis. Sejumlah 209 borang soal selidik yang boleh diguna pakai diproses dalam kajian ini. *Partial Least Square-Structural Equation Modelling (PLS-SEM)* digunakan untuk mengesahkan model penyelidikan dan menguji hipotesis manakala analisis *bootstrapping* di dalam *PLS-SEM* digunakan bagi menguji kesan langsung, tidak langsung serta pengantaraan efikasi kendiri. Model pengukuran mengesahkan kebolehpercayaan yang memuaskan dan semua beban indikator lebih besar daripada 0.50, manakala konsistensi dalam pada semua pembinaan memperoleh nilai kebolehpercayaan komposit *(CR)* lebih daripada 0.60, maka ia telah membuktikan kebolehpercayaan yang membina. Nilai pekali penentuan *(R2)* untuk kesejahteraan pekerja ialah 0.625 yang dianggap tinggi dan menunjukkan bahawa 62.5% varian dalam kesejahteraan pekerja dijelaskan oleh faktor-faktor persekitaran kerja psikososial.

Kajian ini mendapati tahap faktor-faktor persekitaran kerja psikososial dan tahap kesejahteraan pekerja dalam kalangan pegawai trafik udara adalah tinggi. Kajian ini juga menunjukkan terdapat hubungan antara faktor-faktor persekitaran kerja psikososial dan kesejahteraan pekerja dalam kalangan pegawai trafik udara, manakala efikasi kendiri juga didapati mempunyai hubungan dengan kesejahteraan pegawai trafik udara. Dapatan kajian ini juga membuktikan efikasi kendiri menjadi pengantara kepada faktor-faktor persekitaran kerja psikososial dan kesejahteraan pekerja.

Kajian ini boleh diperluaskan bagi memperkaya pengetahuan pegawai trafik udara mengenai pemahaman keperluan Pembangunan Sumber Manusia serta memberi arah baharu kepada amalan terutama untuk rancangan pembangunan tempat kerja pada masa hadapan. Secara umumnya, mempunyai kefahaman yang jelas tentang cara pemboleh ubah ini mempengaruhi kesejahteraan pekerja adalah penting kerana dapat membantu Pihak Berkuasa Penerbangan Malaysia *(CAAM)* agar terus unggul dalam kelebihan berdayasaing. Berkenaan amalan, kajian ini akan membantu penyelidik, pemimpin dan pengamal Pembangunan Sumber Manusia dalam memahami masalah kesejahteraan pekerja. Oleh itu, hasil kajian ini dapat digunakan untuk membantu mereka dalam menganjurkan program kesejahteraan dan menyediakan latihan yang

mencukupi kepada para pemimpin mengenai kesejahteraan pekerja. Ia juga merupakan satu model bersepadu yang pertama secara jelas menyifatkan pengaruh persekitaran kerja psikososial dalam kalangan pegawai trafik udara awam di Malaysia.

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This thesis was submitted to the Senate of the Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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Date: 11 June 2020

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Declaration by graduate student

I hereby confirm that:
- this thesis is my original work;
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ATCs	Air Traffic Controllers
AVE	Average Variance Extracted
CAAM	Civil Aviation Authority of Malaysia
CR	Composite Reliability
DCA	Department of Civil Aviation
DFTZ	Digital Free Trade Zone
EPU	Economic Planning Unit
FAA	Federal Aviation Administration (U.S Department)
HRM	Human Resource Management
HRD	Human Resource Development
KLIA	Kuala Lumpur International Airport
MAHB	Malaysia Airports Holdings Bhd
MWI	Malaysia Wellbeing Index
MOT	Ministry of Transportation
OD	Organization Development
PLS-SEM	Partial Least Square-Structural Equation Modelling
RMAF	Royal Malaysian Air Force
SDT	Self-determination Theory
S.E	Standard Error
SME	Small Medium Enterprise
TUDM	Tentera Udara Diraja Malaysia
VIF	Variance Inflation Factor
WBT	Wellbeing Theory

CHAPTER 1

INTRODUCTION

This study focuses on psychosocial work environment factors and employee wellbeing among air traffic controllers (ATCs) in Malaysia. It also focuses on self-efficacy as the mediator between psychosocial work environment factors and employee wellbeing. Chapter one in this study covers the background of the study that consists of sub-sections on the overview of employees, psychosocial work environment factors, employee wellbeing and self-efficacy. This chapter continues with the explanation of the Civil Aviation Authority of Malaysia (CAAM), the function of air traffic management sector and the role of ATCs as well as their wellbeing at the workplace. This is followed by the statement of the problem, research questions, research objectives, and hypotheses, significance of the study, the scope, the limitation and the assumptions of the study. This chapter will end with the conceptual and operational definitions of terms.

1.1   Background of the Study

Work is central to almost everyone's life. Every employee struggle to live a better life by looking for contentment in work and life (Bakker, 2015; Plomp et al., 2016) as they do provide a sense of identity, economic wellbeing and reasons throughout their everyday life, as well as the social support (Egerter, Dekker & An, 2010). Employees of an organization are the most valuable asset; therefore, employers should be concerned with their job satisfaction which will affect their productivity and work performance (Ibrahim & Aida, 2012; Othman & Suleiman, 2013).

However, political unrest and the rapid pace of technological changes contribute to the changes in the way they work (Kalliath et al., 2013; Renee Baptiste, 2008; Zakaria, Abdulatiff & Ali, 2014). The world is currently, to an expansive degree, driven by the learning economy, where the number of occupations have expanded focusing on innovation and technology creation demand employees to have specific range of abilities, making people hard to supplant, hence, retaining employees are the essentials of organizational achievement (Keeman et al., 2017; Tonkin et al., 2018).

The psychosocial environment is frequently affected by employees because of their beliefs and culture shared at the workplace. This statement is aligned with studies being done by Elovainio (2015) and Hylén et al. (2018) who found that congruity and esteem among employees and the organization is apparently a basic factor for the impression of a decent psychosocial work environment. The psychosocial work environment is a critical institutional system since it chooses the organizational culture, the employees' wellbeing at work, and effects on how

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employees fulfill the needs of their work whilst the focal measurement in the psychosocial work environment is the employees' responses to their work condition (Lang et al., 2011). Inadequate implementation of initiatives to meet the demand for psychosocial work environment can result in problems with the employees' involvement level at the workplace (Avey et al., 2010), can lead to stress (D'Souza et al., 2003), sickness and absenteeism (Ishizaki et al., 2006).

Work environment such as job demand refers to physical and psychological effort that are related to the volume of work which needs to be fulfilled for certain requirements and time (Ariza-Montes et al., 2018; Ibrahim, Aida & Othsuka, 2008). Highly skilled labor is very important to perform complex, demanding and challenging work as stress always occur in demanding workplaces (Kozak et al., 2013) such as ATCs' workplace (Brink, 2009; Kontogiannis & Malakis, 2013). Learning demand or specialization in certain job is important and should receive attention as it will affect the wellbeing of employee (Greguras et al., 2014; Plomp et al., 2016). Learning demand can be defined as how well a job can be performed based on employees' special skills, knowledge and abilities (Morgeson & Hamphrey, 2006).

Whilst Bragad, Hansez and Coucke (2014) found that other factors that need to be considered as good working conditions such as the work climate and ergonomics which can influence work characteristics (Bragad et al., 2014; Stansfeld & Candy, 2006). In addition to that, human resource management (HRM) is crucial in handling workforce such as occupational safety, workers' compensation and benefits, HR planning and selections, learning opportunities and employees' welfare (Renee Baptiste, 2008). In other studies, conducted by Claudia (2015), the key areas in HRM revolves around how employee workload is managed, how employee cope with their job responsibilities, supportive co-workers and leaders as well as role ambiguity. Turner, Huemann and Keegan (2007), affirmed that HRM is at the centre of every organization to ensure good employment relationship. HRM contributes to the success of an organization or its failure (Van De Voorde, Paauwe & Van Veldhoven, 2012).

Social needs are included in work environment and are among the basic needs of human kind (Öge, Cetin, & Top, 2018). The researchers identified how the employees relate themselves to their work group in developing their beliefs, attitudes, behaviors and culture. One of the important management aspects is leadership style, which can positively enrich the relationships with employees, improve the climate of the workplace, and escalation of efficiency and effectiveness of an organization (Nanjundeswaras wamy, 2014). Good leaders will guide and encourage every employee to take ownership of tasks, be able to be a creative thinker in solving problems at the workplace, and smart in creating the uniqueness and achieving the competitive advantage of the organizations that they are working with (Jing-Horng & Hsu, 2015).

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Different working conditions will affect the employees' levels of wellbeing (Jeffrey et al., 2014; Xanthopoulou et al., 2009). Globalization is unavoidable which would affect every aspect of human life such as the increase in the complexity of one's job, how the job need to be done, new type of workload and demand (Ishak, Mahfar & Yusuf, 2016; Safaria, Othman & Wahab, 2011), opportunities in career growth and implementing the ergonomic designs to fit the employees' long working hours especially those in shift work. It should also be managed with relevant and superior interventions (Cummings & Worley, 2014; Wahab & Jaafar, 2018) which can directly create a positive atmosphere in the organizations.

Employee wellbeing is a significant topical issue in organizations. It is related to the daily work and life experience of all employees which should be seriously viewed by the managers to prepare employees to face head-on on new ways of working due to the change in the work environment. Thoughts on wellbeing are derived from various disciplines of studies, as such the definitions may vary based on the purpose of the study itself (Dodge et al., 2012; Stewart-Brown, 2015). It also differs from society to society and from organization to organization (Bakar et al., 2015; Othman & Suleiman, 2013).

Malaysian government has reported that employee wellbeing is important. It could be seen through the Malaysia Wellbeing Report prepared by the Malaysia Economic Planning Unit (EPU) reporting a well-defined wellbeing as the social, physical, and economic advantages that contributed to the development of quality of life and individual's satisfaction, family and the public (Bakar et al., 2015, Unit 2015). Systematic understanding of wellbeing in Malaysia will also support the Eleventh Malaysia Plan and Malaysia Wellbeing Index (MWI). The Eleventh Malaysia Plan's timeline is vital as it is the final plan before the year 2020, the year that the nation is expected to achieve its vision of becoming an advanced and inclusive nation (EPU, 2015). The MWI comprises of 2 sub-composite indices, namely the economic wellbeing and social wellbeing. The economic well-being sub-composite index has five components, namely, communications, education, income and distribution, transport and working life. It is clearly shown that working life is vital and needed attention. In MWI 2013, it was clearly found that wellbeing was an acquired benefit and satisfaction of life connected to a collective group, environmental and aspects of the economy that improved the quality of life (Bakar et al., 2015).

Employees that have positive feelings and positive functioning are considered as employees who have good mental health (Keyes, 2002; Page & Vella-Brodrick, 2009). The researchers affirmed that good mental health as the presence of wellbeing rather than the absence of illness. Employees with high level of wellbeing are enthusiastic towards their work and will contribute more ideas and exertion into their work (Keeman et al., 2017). Recently, concerns in employee wellbeing has increased and it is a critical factor for individuals and organizations performance, and it encompasses a much broader concern to the

employees (Clarke & Hill, 2012; Juniper, Bellamy & White, 2011; Wang & Wang, 2016).

It is undeniably normal for organization to enforce employees' wellbeing at work since work is a noteworthy contribution to a person's life (Claudia, 2015). Most of the employees need to work for one-third of their waking life or even need to work more hours even when they are at home (Awan & Sitwat, 2014; Hill et al., 2001). Organization's success is grounded in positive employee wellbeing; therefore, it should be given important considerations by employers especially by top management because it will improve employees' happiness, and also their roles' satisfactions (Burns & Machin, 2013; Zakaria et al., 2014).

Generally, self-efficacy can be defined as the beliefs in one's own capabilities, their level of motivation and actions to take in many circumstances (Bandura, 1986). Self-efficacy is shaped since adolescence and developed with age subsequent to experiencing an assortment of circumstances, experiences, aptitudes, comprehension and assignments (Xanthopoulou et al., 2009). Self-efficacy will develop every time when a task is successfully accomplished and it will affect decisively on the attitude, behaviour's control, and inspiration to be succeed (Ishak, Mahfar & Yusuf, 2016; Nielsen et al., 2009).

At the workplace, self-efficacy can be viewed as a cognitive component that influence someone's action such as influencing feelings, thinking and ability in executing and managing task effectively and efficiently. Self-efficacy has an impact on problem solving and decision making on challenging tasks (Ishak, Mahfar & Yusuf, 2016) such as the ones experienced by ATCs. Self-efficacy beliefs will help employees by managing their challenges, deterrents and obstacles at work (Souza et al., 2014). Thus, self-efficacy can serve as a potential mediator in human needs and also a significant reason for actions. Future career performance is strongly related to employee's self-efficacy, including their ability to perform well in any given circumstances or experience (Nielsen et al., 2009; Souza et al., 2014; Yap & Baharudin, 2016). Concentrating on individual development has long-term benefits for every employee, organization and society but yet the individual is frequently overlooked by organizations (Kalliath et al., 2013; Renee Baptiste, 2008; Zakaria et al., 2014).

1.1.1 Malaysian Government Policies on Human Resource Development (HRD)

In Malaysia's New Economic Model (NEM), human resource development (HRD) is highlighted to be one of the core activities that need to be strengthened (Yusoff & Yaacob, 2010). HRD is crucial in developing an organization's role and accountability concerning employees' wellbeing such as tying people together, enables work behavior and goals accomplishment (Hassan, 2007). Human capital needs to be developed in ensuring employees are resourceful,

competitive, dynamic and highly skilled. HRD entails the grouping of training, career and organizational development which must be placed to act deliberately throughout the organization (Ismail & Lu, 2014). McGuire and Cseh (2006) found that HRD reacts to the shifting nature of work, work's patterns and how work is organized and structured. Likewise, it needs to react to the variety of agendas, perceiving contrasts that may exist crosswise over societies and races. Due to that, organizational development (OD) is a widely used intervention using behavioral science knowledge in the development of plan, strategies for improvement and reinforcement, structures and to lead the organization effectiveness processes (Swanson & Holton, 2001). Furthermore, OD has the ability to significantly improve organizations and the wellbeing of their employees by developing and unleashing human expertise (Swanson & Holton, 2001).

Technology advancement now becomes a central driver for learning systems and employees' development (Öge, Cetin, & Top, 2018), for example ATC's workplace setting. The psychosocial work environment factors of ATCs should be seriously viewed by HRD practitioners as the changes and advancement of technology occur. Similarly, the quantitative demand (e.g. workload), decision demand (e.g. quick decision) and learning demand (e.g. task difficulty), human resource management (e.g. compensation) and work condition (e.g. ergonomics) has also change due to the advancement in technology. In this century, successful organizations will be those that fabricate a powerful worker experience that causes them attract, retain, and connect with the right talent (Öge, Cetin, & Top, 2018),.

HRD and OD are also encouraged to strengthen its role by helping organizations put in place an organic management structure (Ismail & Lu, 2014) and practicing a paternalistic leadership style as proposed in this study. Due to the worldwide intensity in accepting technologies that change the industry structures and processes, all sectors need to examine their present expectations. This implies broad hierarchical change, which require leaders to embrace the changes and strive beyond their limit, their way thinking and taking actions. It is tied in taking a gander at the master plan and establishing strategies and work plans for collaboration and teamwork in the organization (Swanson & Holton, 2001).

HRD practitioners should identify the level of self-efficacy for every ATC. This is because, self-efficacy is the fundamental ingredients for every employee to improve their wellbeing (Na-Nan & Sanamthong, 2019). Employees will be more confident and motivated to work if they have high level of self-efficacy. Stajkovic et al. (2018) found that employees do not easily give up in discharging their work responsibilities when their levels of self-efficacy are high even though they are working in turbulent environment.

Although employee wellbeing is one of the central points of OD in HRD, it seemingly has been overshadowed by other factors such as job satisfaction,

employees' performance and job burnout. This study addresses how positive employee wellbeing will benefit the organizations and to affirm individual employees by boosting their self-efficacy. Malaysians prosperity and wellbeing are being anchored in the Eleventh Malaysia Plan (Unit, 2015). It clearly shows that the Malaysian government has urged a harmonious relationship between employers and employees. Fourteen components of wellbeing; transports, communications, education, income and distribution, quality of work life, housing, leisure, governance, public safety, social contribution, culture, health, environment and family have been reported in MWI report by Malaysia's Economic Planning Unit (EPU). Working life has been highlighted as one of the components that underlie economic wellbeing (Bakar et al., 2015; Unit, 2015). In nutshell, OD in HRD is responsive to human and organization needs. HRD is believed to make a difference in organization development at the air traffic management settings. Hence, this study is very constructive to the organization development of air traffic management in Malaysia.

1.1.2 Civil Aviation Authority of Malaysia (CAAM) and Air Traffic Controllers (ATCs)

One of the agencies under the Ministry of Transport (MOT) is the Civil Aviation Authority of Malaysia (CAAM) which was formerly known as the Department of Civil Aviation (DCA). The rebranding is to augment the commitment of the government to push Malaysia's aviation sector to greater heights. CAAM also inspires new initiatives in the improvement of civil aviation competencies, skills and services in this country (CAAM, 2018). Civil aviation should receive greater attention to ensure that the sector is well planned and organized to guarantee competitiveness and sustainability in the aviation industry (Unit, 2015).

International and domestic air links play a vital role in nation building (Bowen, 2000; Brink, 2009). The developing inescapability of air travel can be seen via new airport design to accommodate more passengers and the expanding number of new airports today. This translates into more passengers and more flights producing financial and social advantages to air networks far and wide (Sahrir et al., 2012).

Kuala Lumpur International Airport (KLIA) Aeropolis venture is on track and an important initiative is the Digital Free Trade Zone (DFTZ) which will encourage small and medium enterprises (SMEs) to send out their products globally effortlessly, empower worldwide commercial centers to source items from Malaysian producers and dealers, and turn the nation into a territorial satisfaction center for worldwide brands to entice ASEAN and worldwide purchasers. The aeropolis would boost cargo volume and such augmentation will result in expansion of airport development. As aviation is one of the key areas identified to invigorate the Malaysian economy, this effort will extend and bolster the industry future development and would increase in air traffic.

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The aviation industry has strong impact towards other industries (Mahzan & Abidin, 2015; Moon, Yoo & Choi, 2000) especially in developing countries such as Malaysia. It is a very complex technology-centric industry which needs highly specialized skilled employees (Kuo, Jou, & Lin, 2012; Teperi, Leppänen, & Norros, 2015) as it includes a multifaceted set of routinised activities such as continually handling changing information, keeping the mental picture of the air traffic circumstance and dividing attention among diverse situations, which require very high levels of knowledge and expertise, particularly on specific cognitive skills relating to communication and human relations (Sanda, 2018).

Air traffic control all over the world is a 24-hour operation including public holidays and weekends leading to ATCs working in shifts and at night regularly (CAAM, 2018; FAA, 2018). They are highly trained professionals (Brink, 2009; Kontogiannis & Malakis, 2013). They must pass certain test in competencies such as personality test, physical and mental health test and must be fluent in conversational English (Basu, Mitchell, & Sabhnani, 2009; Moon, Yoo & Choi, 2011).

The primary job responsibility of ATCs is to control and navigate the movement of planes especially during take-off and landing (Juo & Lin, 2012; Kontogiannis & Malakis, 2013; Tobaruela et al., 2014). The researchers further explained that the job demands of ATCs require a high level of awareness and concentration as they need to carry out various functions at the same time, such as, thinking, listening and speaking. The job characteristics are distinct, and it leads ATC to be a stressful and demanding job (De Beer & Tshabalala, 2011).

There are three types of ATCs:

1. **Area Controllers**
   Area controllers will help pilots to direct airplanes to the most efficient route and they can track the exact position of each aircraft by using radar and computer technology.

2. **Approach Controllers**
   When the aircraft approaches the airport, approach controllers will take control of the communication from area controllers and are accountable for deciding when and where each airplane should be landed.

3. **Aerodrome Controllers**
   They will manage the movement of aircraft on the ground before landing or before departing.

As they are working in shift, it means that they work outside the normal hours. It leads to stress, fatigue and resulting an impact on ATCs' wellbeing if the shift schedules are not organized systematically in terms of their shift length, rest

breaks and consecutive shifts (Dall'Ora et al., 2016; Folkard, Robertson & Spencer, 2007). This could contribute pressure to air traffic management agencies and the industry as a whole.

In sustaining the system's efficiency, safety and the wellbeing of those working within it, the complex systems such as air traffic management and control is vital. As aviation is a complex sociotechnical system, even though the core function of ATCs is to prevent collisions between aircrafts, there is always a risk of turbulence in the system. As the decision makers and executor of the system, ATC's performance is narrowly interrelated with the system safety and efficiency (Jou et al., 2013; Wang et al., 2013). Some of the complexity factors that contribute to the ATCs' level of stress in their workload such as the number of airplanes, number of take-off and landing, horizontal vicinity measure, shift schedules-night work and a variety of emergencies (Bongo et al., 2019; Ćosić, 2019).

In a year of 2035, the estimated total growth of air traffic is expected to grow by 6.2 percent. (Tomic and Liu, 2017). Considering that, in the next 20 years, the recruitment of ATCs' will increase, as such the stress and fatigue levels of ATCs is expected to increase. Thus, organizations housing ATCs should prepare a positive psychosocial work environment and ensure future ATCs are equipped with high level of self-efficacy and improve their wellbeing as their tenure increases.

1.2 Statement of the Problem

ATCs can be classified as a very stressful profession (Sanda, 2018; Tomic & Liu, 2017; US Department of Labor & Bureau of Labor Statistics, 2010). The successful passing of certain competency test still does not guarantee that ATCs will sustain a good wellbeing at the workplace. ATCs are facing three times higher of hypertension compared to the other normal for their age group (Cosic et al., 2019). This is due to their quantitative demand, decision demand and learning demand which have different scope from other occupations (Falkland, Emma & Wiggins, 2019). The high-end technology systems used in air traffic management settings still could not cope with the heavy workload and mental demand (Öge, Cetin, & Top, 2018). The volume of air traffic in Malaysia has grown tremendously due to the increase in the demand for air travel from 6.5% to 11.8% year-on-year for its Malaysian operations (Malaysia Airports Holdings Bhd. (MAHB), 2017) and the development of air cargo hub such as the KLIA aeropolis could contribute to the congested airspace and will become more complex to manage by the ATCs (Juo, Kuo & Tang, 2013; Tomic & Liu, 2017).

When the complexity of the aviation industry increases, ATCs can become overwhelmed with traffic and it will affect their behavior in performing their work (Tobaruela et al., 2014; Tomic & Liu, 2017; Yang & Dattel, 2017). In commercial

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aviation accidents, 70% are attributed to human errors, making human factor as the final frontier in improving aviation safety (Bongo et al., 2018; Kontogiannis & Malakis, 2013; Teperi et al., 2015). In response to such errors and accidents, many researchers have focused their efforts to develop tools to prevent human errors among ATCs (e.g. Teperi et al., 2015), but almost no studies have been conducted to develop and improve the ATCs' wellbeing. Notwithstanding that, ATCs felt isolated as an occupational group (Brink, 2009; Tshabalala, 2011; Tomic & Liu; 2017) as most researchers have given their attention to other unit analysis (e.g. Teachers, doctors, nurses and the police). At present, researches that have been conducted on the employee wellbeing of Malaysian ATCs is almost nonexistence.

Examining the determinants of employee wellbeing are essential for both practical and theoretical reasons because it will contribute to a more inclusive thought of working life. Employees' mental health at workplace should be optimized as workplaces are built and designed to be one of the factors for employee wellbeing advancement. Regrettably the knowledge and awareness on the work environment as a critical area for wellbeing efforts of various types may not yet be broadly accepted (Abdin et al., 2018).

The most worrying part is that the mental health problem is expected to be a major problem among Malaysians by 2020 (Hassan et al., 2018). Even though some of the employers are implementing wellbeing initiatives, psychosocial work environment factors and their influence on the employee wellbeing has not been acknowledged by employers as key factors in management (Clarke & Hill, 2012; Hanna & Mona, 2014) especially in Malaysia (Ibrahim & Aida, 2012). Notwithstanding that, this absence of transparency in employee wellbeing in the workplace is the main concern that should be given attention.

A comprehensive empirical approach to employee wellbeing has not been completely established in Malaysia. To date, scholars have not reached a consensus on the components of employee wellbeing since most past researches focused on general wellbeing as psychological wellbeing (e.g. Burns & Machin, 2012) and subjective wellbeing (e.g. Nordenmark et al., 2012). To fill in this gap, it is imperative that employee wellbeing should include subjective wellbeing - emotion, psychological wellbeing – self-actualization and workplace wellbeing (WWB) –work related affect, in which all these clearly shows what an employee must deal with each day at work.

Previously, most of the wellbeing studies were underpinned by theories such as the set-point theory (e.g. Page & Vella-Brodrick, 2009), Maslow's theory (e.g. Benjamin et al., 2014) and the conservation of resources theory (e.g. Avey, 2010) which are more focused on subjective wellbeing and psychological wellbeing. Wellbeing Theory (WBT) used in this study as the underlying theory has not been completely established in a varied range of populations (Coffey et

al., 2016) such as ATCs. Employees are multifaceted individuals who live their good life in a multitude of ways such as affected by decent workplace and their positive relationship with the superior. Most of the studies on WBT were conducted on wellbeing among college students such as in the United States (Coffey et al., 2016) United Arab Emirates (D'raven & Pasha-Zaidi, 2016), Australia (Kern et al., 2015), workers in higher educational institutions in Malaysia (Othman et al., 2018) but not to employee wellbeing among ATCs. Thus, this study attempts to examine the application of WBT to further justify the theoretical gap in employee wellbeing among ATCs in Malaysia.

Self-efficacy is expected to influence the individuals' social comparison (e.g. leadership styles) or personal experience (e.g. work environment). Self-efficacy can play as a corrective action role such as on job burnout (Xiao, Liu & You, 2014) and job performance (Chen, Gully & Eden, 2001). How individuals interpret their proficiencies and competences are revealed in their life fulfillment (Azizli et al., 2015). Souza et al. (2014) stated that high self-efficacy helps to resist over processes of stress, to increase individual's self-esteem, to increase general health and to live for a better wellbeing. Because of the characteristics specific to the ATCs profession, self-efficacy is crucial to increase and sustain their employee wellbeing. However, up until now most studies have only examined self-efficacy independently (e.g. Oyugi, 2015; Zhu et al., 2016).

Several studies have identified self-efficacy beliefs as mediators for transformational leadership and employee wellbeing (Liu, Siu & Shi, 2010), ethical leadership and multidimensional organizational citizenship behavior (Yang, Ding & Lo, 2016), entrepreneurship education and entrepreneurial intention (Oyugi, 2015), knowledge sharing and employee innovation (Hu & Zou, 2016), emotional intelligence and clinical communication competencies (Zhu et al., 2016), employee psychological empowerment and proactive behavior (Huang, Jiatao, 2017) but no studies have been conducted using self-efficacy as the mediator on the relationship between psychosocial work environment factors (work environment and leadership styles of superiors) and employee wellbeing.

In this sense, considering the importance of self-efficacy beliefs among ATCs, this study seeks to explain the gap on the relationship between psychosocial work environment factors (work environment and leadership styles of superiors) and employee wellbeing among ATCs as mediated by self-efficacy based on the Malaysian context.

Therefore, considering the above arguments, the research questions for this study are formulated as;

1) What are the levels of psychosocial work environment factors (work environment and the leadership styles of superiors), self-efficacy and employee wellbeing among ATCs?
2) Do psychosocial work environment factors (work environment and leadership styles) influence the self-efficacy of ATCs and their employee wellbeing?
3) Do the self-efficacy of ATCs influence ATCs wellbeing at the workplace?
4) Does self-efficacy have a mediating effect between psychosocial work environment factors (work environment and the leadership styles of superiors) and employee wellbeing among ATCs?

1.3 Objectives of the Study

This study generally attempts to investigate the psychosocial work environment factors (work environment and the leadership styles of superiors) and the mediating self-efficacy on employee wellbeing among ATCs in Malaysia.

1.3.1 Specific Objectives

1. To determine the level of psychosocial work environment factors, self-efficacy and employee wellbeing.
2. To determine the relationship between psychosocial work environment factors (work environment and the leadership styles of superiors) with self-efficacy and employee wellbeing.
3. To determine the relationship between self-efficacy and employee wellbeing.
4. To determine the mediating effect of self-efficacy on the relationship between psychosocial work environment factors (work environment and the leadership styles of superiors) and employee wellbeing.

1.4 Hypotheses

1. **Hypothesis 1 (H_1):** Psychosocial work environment factors (work environment and leadership styles of superiors) significantly influence employee wellbeing.
2. **Hypothesis 2 (H_2):** Psychosocial work environment factors (work environment and leadership styles of superiors) significantly influence self-efficacy.
3. **Hypothesis 3 (H_3):** Self-efficacy has significant relationship with employee wellbeing.

4. **Hypothesis 4 (H$_4$):** Self-efficacy significantly mediates the relationship between psychosocial work environment factors (work environment and leadership styles of superiors) and employee wellbeing.

1.5 Significance of the Study

Due to the critical roles of ATCs in CAAM, it is therefore crucial that the investigation of their psychosocial work environment factors and employee wellbeing be pursued based on available theories and practices.

1.5.1 Theoretical Significance

This study offers a comprehension of the variables and their relationships for theory development on the subject matter, employees' career progression decisions, organizational practices and national policy. Due to the crucial roles of ATCs, an investigation on factors influencing their wellbeing based on the psychosocial work environment factors mediated by self-efficacy is conducted. This study should provide added value for the theoretical evolution of the subject, practice and policy development.

The investigation from this perspective seeks to reduce the research gap which is lacking in empirical evidence to capture the interaction between the independent variables and employee wellbeing. Consideration and support for wellbeing is increasingly anticipated as an interdisciplinary issue that should be given more attentions at various levels within a system, including individuals, employees and management, societies, and countries (Butler & Kern, 2016). Some theories focus on hedonic elements such as emotions, some emphasize on eudemonic elements such as self-actualization but the WBT has combined both eudemonic (psychological wellbeing) and hedonic (subjective wellbeing) elements.

Thus, this study also contributes to the body of knowledge by integrating Wellbeing Theory and Self-determination Theory (SDT) in order to develop a dynamic model of employee wellbeing at their workplace among ATCs in Malaysia. This is so because basically SDT is the indication of the influence of diverse factors from the environment (Deci, Olafsen & Ryan, 2017) especially on workplace wellbeing (work-related elements) (Zheng et al., 2015) which is one of the employee wellbeing components in this study as stated in the statement of problem.

In addition, the adoption of self-efficacy as the mediator in this study would specify the process that SDT postulates self-efficacy in developing positive career development (Plomp et al., 2016; Zheng et al., 2015), however, according

to Ismail and Lu (2014) employees' experiences depends on the outcomes from the relationship between environmental and individual factors.

For the theoretical evolution, this study extends the limitation of previous studies (e.g.; Kristensen et al., 2005; Reineholm; 2013; Zheng et al., 2015) on psychosocial work environment factors by integrating other related variables such as the work environment and leadership styles of superiors to explain the phenomenon of employee wellbeing specifically among the ATCs.

SDT focuses on the work group atmosphere experienced by the employees (e.g. Deci, Olafsen & Ryan, 2017) such as how well they cope with their task at one time, how they make their decision, solve the complexity of task, convenience at their work station such as tools and work method that they are using and also how well they have been recognized at their work. SDT is also evaluated by employees' insights on the autonomy practiced by leaders such as their leadership styles (e.g. Cheng et al., 2014) as recognizing the perspectives of employees, proposing choices, providing significant feedback, inspiring initiation, creating assignments optimally interesting, and giving justifications when requesting employees to finish specific tasks.

1.5.2   Practical Significance

With respect to practice, this study will assist HRD researchers, leaders and practitioners in understanding the problem of wellbeing. Hence the result of the study could be used to assist them in advocating wellness and wellbeing program, provide adequate training and leaders training pertaining to employee wellbeing. Moreover, this study involves practices in human resource development (HRD) which can be implemented to clarify the increase in HRD interferences and practices in the broader context of individuals and their career development. This may also lead to the appointment of counselors among former ATCs since they knew the role and responsibilities of ATCs.

For the national HRD policies, the findings of this study are beneficial to provide understandings to influence the individual contextual factors in determining human capital development. The findings on the mediator effect on employee wellbeing will enable the HRD practitioner to design effective HRD interventions to meet the employees' and organizations' needs. This study will also provide added value to policy development such as wellness policies and workplace health in CAAM.

From existing knowledge, in the West, greater attention is given by managers and scholars to employee wellbeing (Keeman et al., 2017; Robertson & Cooper, 2010; Tonkin et al., 2018; Zheng et al., 2015). The difference in culture between the East and the West tend to lead to differences in beliefs about wellbeing

(Ibrahim & Aida, 2012; Zheng et al., 2015). Zheng's study has led this study to focus on employee wellbeing in Malaysia – the East. This is because Malaysia is presently facing rapid economic growth, industrial development, urbanization, increase in population and a varying lifestyle (Chong, Mohamad & Er, 2013; Graymore, Sipe & Rickson, 2010). Besides, in Malaysia, there are few studies that are focused on wellbeing such as financial wellbeing (Mokhtar et al., 2015), economic wellbeing (Bakar et al., 2015), worker wellbeing (Ibrahim et al., 2013) health and wellbeing (Javaid et al., 2015). Therefore, this research will help bring a new dimension of findings from the Malaysian perspective; one of the Eastern cultures.

It is hoped that this study will provide more informed link between theory and practice to address the current gaps in the literature today. The findings of this study should be applicable to the aviation industry in outlining their strategies to address the issues with respect to the wellbeing of employees in order to achieve a win-win situation for the organization and its employees.

1.6   Scope of the Study

The Malaysian airspace is divided into the Kuala Lumpur and Kota Kinabalu Flights Information Regions (FIR); however, this study only covers Peninsular Malaysia called Region 1 (CAAM, 2018).

The Air Traffic Management Sector is the largest sector in the CAAM. There are two types of air traffic controllers in Malaysia; the military air traffic controllers owned by the Royal Malaysian Air Force (RMAF-*TUDM*) and the Civil ATCs under the CAAM. This study is to be conducted only within the boundaries of civil ATCs in Malaysia located at the Subang Airport and the Kuala Lumpur International Airport (KLIA) in Sepang

This study focuses only on employee wellbeing that includes subjective wellbeing, psychological wellbeing and workplace wellbeing. Psychosocial work environment factors in this study consisted of quantitative demand, decision demand, learning demand, work conditions and human resource management. While another factor is leadership styles which is limited to paternalistic leadership styles that consist of authoritarianism, benevolence and moral.

1.7   Limitation of the Study

First limitation was on the letter of permission. Letter of permission to distribute questionnaires was sent to Department of Civil Aviation (DCA) in year 2017 and was approved by the top management of DCA, but due to the personal circumstances faced by the researcher, the activity to distribute the

questionnaire was not carried out. A year later, the permission letter was invalid and the researcher needed to start from the beginning to reapply for the permission due to the rebranding of DCA to CAAM.

Respondents might be unfit or reluctant to give the required data, particularly if the data mentioned are sensitive or private, structured questions and fixed-response choices may influence validity of particular data, for example, feelings and beliefs, expressing the exact words in inquiries is not straightforward, question wording may majorly affect reactions, mistaken assumptions that could not be recognized and rectified, the earnestness or genuineness of reactions may not be practical to check.

Conducting the study within those two airports could limit the generalizability of the findings to other states or areas. This is because, both areas recorded a high number of ATCs. The fact that different ATCs may define employee wellbeing differently would have introduced inconsistency in the result of the study. In addition to that, the total number of ATCs concentrated in one place may contribute to the inconsistency of the results.

Moreover, since the study uses a survey questionnaire, the discoveries made somewhat may be corrupted with response bias. This study is also limited to quantitative approach with cross sectional study. This approach is confined to a single point of time, thus there is less ability to uncover the exact nature of the theoretical linkages being investigated.

This study employed the Partial Least Square-Structural Equation Model (PLS-SEM) to analyze the data because lesser respondents (Hair et al., 2017) are to be expected since the targeted sample is only 248 respondents from a total of population of 653.

1.8 Assumption of the Study

Throughout the study, it is assumed that the adaptation of Wellbeing Theory and Self-determination Theory are applicable in the Malaysian setting. The selection of the independent variables in this study were extracted from review of literatures and found to be contributing towards employee wellbeing. Thus, this study assumed that the relationship between the selected independent variables, employee wellbeing and self-efficacy as the mediating variable would provide insights to better understand the phenomenon of employee wellbeing in Malaysia.

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1.9   Conceptual and Operational Definitions of Terms

Any potential disarray in elucidation of the ideas utilized in this study should be avoided, the definitions utilized in this study are exhibited below. These definitions are utilized as rules in examining the findings from tested hypotheses.

Psychosocial work environment is the psychological and social conditions people experience in the workplace (Hammer et al., 2004). In the course of this study, psychosocial work environment factors are operationalized as the work environment and leadership styles of superiors as both factors are related to the interrelation of social factors and individual thought and behaviour at the workplace. It is also a continuous process to maintain the organization's performance and competitive advantage.

Wellbeing is a positive physical, social and mental state which stems from a host of collective goods and relations with people and places. It requires basic needs to be met and enhanced by the conditions (Bakar et al., 2015). Wellbeing in this study, conveys information with respect to a wide scope of mental health, social connections, leisure, and subjective states such as feelings and mental engagement.

Employee Wellbeing can be defined as creating an environment to promote a state of contentment which allows an employee to flourish and achieve their full potential for the benefits of themselves and their organization (Chartered Institute of Personnel & Development (CIPD), 2007). In this study, employee wellbeing is comprised of subjective wellbeing which is considered as the daily emotions (e.g. sad, joy) of every worker in the workplace which also include psychological wellbeing as individuals will endeavor to like themselves notwithstanding whether they know about their self-acceptance impediments and workplace wellbeing which is affected by the relationship with their job, colleagues and the management.

Self-efficacy is defined as people's beliefs about their capacities to produce designated levels of performance and exercise influence over events that affect their lives (Bandura & Locke, 2003). Self-efficacy in this study is believed to be developed by each person at the workplace based on how well their effort, persistence and initiatives to be a better ATC.

Air Traffic Controllers (ATC) are persons that are in charge of the air traffic management to ensure safe flight distances between planes, effectively avoid flight delays and to ensure when it is safe for flights to take off and land safely (CAAM, 2018). This study is operationalized by Civil ATCs as the important group to receive attention as their workload is increased due to the increasing number of flights.

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BIODATA OF STUDENT

Shafazawana Mohamed Tharikh graduated from Universiti Tenaga Nasional with a Bachelor of Business Administration (Hons) in Human Resource Management in 2007. She received a Master of Human Sciences in Human Resource Development from Universiti Putra Malaysia in 2009. She started her teaching and research career in June 2010 at Universiti Tenaga Nasional in Muadzam Shah Campus as a Lecturer. Her primary interest are in areas related to HRM and HRD

LIST OF PUBLICATIONS

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