BARRIERS TO RETENTION AND ADVANCEMENT OF WOMEN IN TECHNICAL FIELD: A STUDY OF AMERICAN MULTINATIONAL CORPORATIONS IN MALAYSIA

by

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CABARAN WANITA DARI SEGI PENGEKALAN DAN KEMAJUAN KERJAYA DI DALAM BIDANG TEKNIKAL: KAJIAN DI KALANGAN SYARIKAT MULTINASIONAL AMERIKA, DI MALAYSIA

ABSTRAK

Kekurangan bakat dan kekurangan penyertaan wanita dalam tenaga kerja, telah lama menjadi satu fenomena yang amat membimbangkan di seluruh dunia. Berbagai inisiatif telah diambil oleh kerajaan dan organisasi dalam memperkenalkan dasar dan amalan untuk menarik dan membolehkan wanita berusaha dalam kejaya mereka. Walaupun terdapat peningkatan dari segi penyertaan wanita dalam tenaga kerja, namun ia berlaku pada kadar yang lebih perlahan daripada yang dijangkakan, selanjutnya, terdapat penurunan tajam apabila kekananan mereka meningkat. Khususnya di Malaysia, penurunan tersebut tidak meningkat kembali seperti yang dilihat di negara-negara jiran yang lain. Kajian ini, bertujuan untuk menyiasat dan mendapatkan data empirikal berkaitan cabaran yang dihadapi oleh wanita dalam bidang teknikal, dari segi pengekalan dan kemajuan ke arah peranan kepimpinan, dalam kalangan syarikat multinasional Amerika di Malaysia. Temubual kualitatif terperinci dijalankan dengan dua puluh lima wanita, di mana rangka penyelidikan empat kuadran dan pendekatan melalui kajian kes, telah digunakan untuk meneroka sikap, persepsi dan pengalaman wanita dalam bidang teknikal. Triangulasi telah dilakukan untuk memastikan usaha yang dijalankan oleh organisasi melalui dasar dan sumber yang diperuntukkan adalah selaras dengan maklum balas yang diberikan oleh wanita dalam bidang teknikal. Penjagaan terhadap keperluan keluarga, keseimbangan antara kerjaya dan kehidupan, stereotaip jantina, kekurangan peluang memajukan diri, penggajian yang lebih rendah dan perasaan puas-hati dengan status kerjaya,

merupakan cabaran –cabaran yang telah dikenal-pasti melalui kajian ini. Empat cabaran yang pertama memang sudah dijangkakan; namun dua cabaran terakhir masih belum lagi dipaparkan dengan meluasnya di mana – mana kajian sebelum ini di Malaysia. Cabaran-cabaran ini muncul, kerana keperluan wanita di persekitaran kerja tidak dapat ditangani. Keperluan wanita merujuk kepada suasana kerjaya yang selamat, kefleksibelan untuk wanita mengurus dwi-peranan sebagai tenaga kerja dan juga sebagai surirumah, peluang kerjaya dan juga penggajian yang sama-rata. Walaupun, pelbagai usaha telah diambil oleh organisasi untuk menarik, mengintegrasi dan membangunkan wanita dalam tenaga kerja, namun polisi dan amalan yang telah disediakan tidak mampu memberi kesaksamaan substantif (*'substantive equality'*). Wanita masih tidak dapat mengakses dan menggunakan bantuan dan peluang yang sedia-ada; masa, peluang kemajuan dan penggajian. Kajian ini telah mendedahkan, bahawa wanita yang mempunyai kesedaran gender yang tinggi dapat memacu perubahan dalam persekitaran mereka untuk mendorong kesaksamaan substantif. Oleh itu, memupuk kesedaran gender di tempat kerja dan masyarakat, adalah lebih penting dalam mencapai kesamaan gender yang substantif berbanding melaksanakan lebih banyak dasar untuk menarik, mengintegrasikan dan membangunkan wanita dalam tenaga kerja. Pelaksanaan pengurusan arus perdana jantina dengan bekerjasama dengan kaum lelaki dan mewujudkan kesedaran gender adalah kunci untuk memacu perubahan yang akan membolehkan kesaksamaan substantif dapat dicapai.

BARRIERS TO RETENTION AND ADVANCEMENT OF WOMEN

IN TECHNICAL FIELD: A STUDY OF

AMERICAN MULTINATIONAL CORPORATIONS IN MALAYSIA

ABSTRACT

Talent shortage and scarcity of women's participation in the workforce, has always been a concern globally for decades. Many actions taken by government and organisations in introducing policies and practices, to attract and enable women to strive in their career, but they have not yielded significant results. Although, there has been an increase of women's participation in the workforce, it is at a much slower rate than anticipated and further, there is a sharp decline as their seniority increases. Specifically, in Malaysia the decline has not bounced back as seen in other countries in the region. This research, attempts to investigate and provide empirical data of the barriers faced by women in the technical field, in retaining and advancing into leadership roles at American based Multinational Corporations (MNCs) in Malaysia. Qualitative in-depth interviews with twenty-five women, adopting a four-quadrant framework and utilising a case-study approach were executed. This explored the attitude, perception and experiences of women in the technical field. A triangulation process was also conducted to affirm the narratives of the women with the efforts undertaken by the organisations, specifically in the availability of policies and practices. Caring for family, work life balance, gender stereotype, lack of development opportunities, low compensation and career contentment, were the barriers highlighted through this study. Indeed, the first four barriers were anticipated; however, the last two barriers were something that has not been vastly captured in past literatures, especially for Malaysia. Women needs of safe and discrimination free environment,

flexibility to manage the dual role that they play, equal development opportunities and compensation that are not being fulfilled, are reflecting as the barriers seen above. Indeed, all of them stems from gender in-equality. Although, organisations have taken the efforts to attract, integrate and develop the women in the workforce, the policies and practices are not providing substantive equality that is desired. Women are still unable to have control to access and utilise resources that they need at the workplace; time, development and compensation. This study has revealed, that women with higher gender consciousness are able to drive change within their environment to push for substantive equality. Hence, cultivating gender consciousness within the workplace and society, is even more crucial in achieving substantive gender equality versus implementing more policies to attract, integrate and develop women in the workforce. Partnering with men in implementing the gender mainstream management and creating gender consciousness is the key to drive change that will enable substantive equality to be achieved.

CHAPTER ONE

INTRODUCTION

1.1   Background

As the world continues to evolve, globalisation, inevitable phenomena in human history, has been bringing the world closer. Globalisation is the process of international integration arising from the interchange of world views, products, ideas, and other aspects of culture (Motairi & Zaki, 2013). Globalisation describes the interplay across cultures of macro-social forces. These forces include religion, politics, and economics. Advances in transportation and telecommunications infrastructure, including the rise of the Internet, are major factors in Globalisation, generating further interdependence of economic and cultural activities (CSIS, 2014).

Over the last few decades, the pace of this global integration has become rapid and more dramatic because of unprecedented advancements in technology, communications, science, transport and industry. Specifically, this is made possible through the establishment of Multinational Corporations (MNCs). MNCs have undertaken a major part of the world's research and development efforts and today they produce, own and control most of the world's advanced technologies (Kokko, 1992). MNCs which plays a central role in international technology transfer have boomed around the world, with some having budgets exceeding several nations' Gross Domestic Incomes (GDI) and thus, having great influence on the local economy of a nation.

MNCs evidently form a crucial part of the country's economic driver including Malaysia. Malaysia ranks amongst the world's top 20 attractive countries for foreign direct investment (FDI), according to the World Investment Prospects Survey 2007-2009 FDI by the United Nations Conference on Trade and Development (Trade Chakra, 2009). The Malaysian government continues with initiatives to create a viable business environment setting and move the nation from a manufacturing sector to a high value stream provider, especially in the technical field (Kok, 2010). The New Economic Model (NEM) contains new policy directions, strategies and programs all targeted at enabling Malaysia to emerge as a developed high-income nation Malaysian Investment Development Authority (MIDA, 2010).

Ultimately, each country's prosperity depends on their workforce availability and capability. Global Workforce Studies are conducted yearly to understand the global talent needs, while preparing industries, especially MNCs, to meet the future growth demands. In 2012 Global Workforce Study, it is indicated that companies are running 21st-century businesses with a 20th-century workplace (Towers Perrin, 2012). Over the course of the 20th century, the compositions of the labour force have shifted from industries dominated by primary production occupations, such as farmers and foresters, to those dominated by professional, technical, and service workers (Lambert, 2006). The labour force has also shifted in others ways too, with significant increase of women in the labour participation over the 20th century. With more women entering the workforce, it becomes even more evitable for the organisations to understand the diverse needs and workforce and hence, prepare for it. This statement proofs that more work is required in both understanding the Globalisation needs and preparing workforce suited for the future.

Subsequently, the fundamental requirements in developing any workforce stems from the leadership of the organisation. The core values of an organisation begin with its leadership, which will then evolve to a leadership style. Subordinates will be led by these values and the various behaviours of leaders, it is therefore essential that the behaviour of both parties should become increasingly in line and thus, directing the focus in propelling the organisation to meet its intended vision (Urrabazo, 2006). Developing good leaders continue to be an important and highly sought-after objective. It requires not only an understanding of leadership theory, but an appreciation of the personality traits and behavioural characteristics that are present in the best leaders (Nana, Jackson, & Giles, 2010; Leavy, 2014).

Leadership is arguably one of the most observed, yet least understood phenomena on Earth (Abbasialiya, 2013). Over time, so many leadership theories have been developed, ranging from trait, behaviour, power influence, situational and many others but there is no unique style which can be considered universal. Despite the many diverse styles of leadership, it is with clarity that a good or effective leader inspires, motivates, and will drive employees in meeting the group or organisational goals. Conversely, an ineffective leader does not contribute to organisational progress and can, in fact, detract from the organisational goal accomplishment (Amanchukwu, Stanley, & Nwachukwu , 2015). According to Amanchukwu et al. (2015), effective leadership is a product of the heart and an effective leader must be visionary, inspiring, courageous, passionate, creative, flexible, innovative, imaginative, experimental, and initiates change, which still holds true to this time.

In pursuit to develop leadership, recognising what constitutes the relevant behaviour is required. Studies in Human and Social Sciences have shown that behaviour is a factor of both nature (biological and psychological construct) and nurture (social context, culture and environment) (Hernandez & Blazer, 2006). Psychological dimensions (e.g. values, beliefs, attributions, and decision-making tendencies) are one of the major influencing factors in determining a person's attitude and behaviour at work (Markus, 1991; Erez & Earley, 1993; Early & Mosakowsk, 2004).

Extensive research has been carried in determining the psychological dimensions which in turn will define a specific behavioural pattern, which may change due to situations. Although, there have been efforts in correlating the behaviour patterns with situations, they are still overly static (Roberts, 2006). However, in the work environment, studies e.g. (Marshall & Adamic, 2010; Zheng, Wu, Chen, & Lin, 2017) have shown that there is a strong association between corporate cultures that drive specific behavioural patterns.

Organisational scholars have also focused a great deal of attention on how employee's corporate culture influences their work attitudes and behaviours many decades ago e.g. (Singelis, Triandis, Bhawuk, & Gelfand, 1995; Adler & Gundersen, 2007). Findings from scholar, Adler and Gunderson do indicate that corporate culture is the strongest driver of radical innovation across nations (Tellis, Prabhu, & Chandy, 2009). Culture resides within us as individuals but it is also the hidden force that drives most of our behaviour both inside and outside of an organisation. Corporate culture

and its interaction with psychological dimensions are significant factors in determining organisation behaviours (Hofstede, 2004; 2009).

Apart from understanding the interactions between psychological dimensions and corporate culture, it is also vital to consider the mediating factor of gender in leadership roles, as we reconceptualise the workforce of the future. Women constitutes nearly half of the nation's workforce population; however, women leaders in said workforce are still very scarce not only in Malaysia but around the world. As of 2010, only twelve CEOs of Fortune 500 Companies were women and none are from semiconductor or engineering companies. Catalyst, the not-for-profit New York-women's research organisation, notes that, at this rate, it would take 40 years for the number of female corporate officers to match the number of male officers (Soares, Combopiano, & Shur, 2010). Gender equality is one of United Nation's hot topics in 2010 and it focuses on implementing the internationally agreed goals and commitments in regards to gender equality and empowerment of women as stated in the Millennium Development Goal #5 (United Nations, 2010).

Even after 6 years in 2016, Fortune 500 List indicated a drop in female CEO with just 21 companies with women at the helm— from 24 companies in 2014 and 2015. Looking from a different perspective, women now hold a paltry 4.2% of CEO positions in America's 500 biggest companies (Valentina, 2016). It does seem alarming that even with the creation of Millennium Development Goal #5 by United Nations to support the women empowerment and growth, there are still scarcity of women as top leaders in the industries.

The above scenario is also consistent in Malaysia where the overall workforce comprises of 60% men and 40% women. Male Labour Force Participation Rate (LFPR) is hovering over 80.2% versus female Labour Force Participation Rate (LFPR) which is at 54.3% in 2016 as shared by Malaysian Department of Statistics (DSOM). Although, we have seen some improvements in the female LFPR in Malaysia over the recent years, there is no guarantee in retaining the women through their career, as there is a significant decline in the participation rate when women hit their late twenties-early thirties which coincides with them starting a family and going through their reproductive cycle. This decline in female LFPR does not bounce back as seen in other neighbouring countries such as Singapore, Thailand, Indonesia and Japan and perhaps is one of the factors why Malaysia as a nation, is still unable to achieve 30% women at leadership levels (TalentCorp, 2013).

The under representation of women in in the leadership roles have been cited in many research that have been conducted locally, even 2 decades ago. Studies conducted by Yousof (1995) and Tan (1991) indicate that women are generally represented in the lower management and lower paying positions. Yousof (1995) found that in the financial sector in Malaysia, 38.5 per cent of the Malaysian women are employed at management level positions; however, the gender ratio of women in top positions to women in middle and lower management levels is very low (Koshal, Gupta, & Koshal, 1998). Even after 20 years the similar scarcity of women at leadership roles have been recorded by Teoh & Chong (2008) and Abdullah & Ku Ismail (2016), which may imply there's no sufficient effort in building the women talent pipeline to take up these leadership positions.

However, when narrowed into the professional levels of talent, women percentage are much higher than men by over 20% and is also supported by the high number of female graduates from local universities, which has been about 60% to 70% over the past 5 years, even from Science Technology Engineering and Mathematics (STEM) disciplines. Malaysia through the Ministry of Education has placed STEM as a focus in developing the country towards achieving the status of a developed nation. The government acknowledges the role of women as equal partners in nation building. Thus, various policies ranging from economy, education, women's welfare and human resources have been formulated through the years ((MOE, 2016)). This is also in line with the United Nations Sustainable Development Goal to ensure inclusive and quality education for all and promote lifelong learning (United Nations, 2015).

The data has been further validated with a report that was released in book that researched gender statistics in STEM education for 10 years from 2003 to 2013 globally. In the report it was stated that in 2013, 62% of all Malaysian STEM graduates were women (Schmuck, 2016).

Malaysia has proven in churning a higher number of female graduates even in STEM related disciplines, which showcases positive outcome of the efforts taken in building the women talent pipeline which is not reflected in the employment statistics. DSOM indicated that at managerial levels, men hold 77% of the decision-making positions versus women at 23% in 2015. With high number of women graduates, but still a low female LFPR and an even significantly lower percentage of women at the decision-making levels, it is imperative to understand what the barriers that women are experiencing in the workforce are, especially in the technical field.

Further, research has also highlighted that the scarcity of women at the upper levels of organisations is a consequence of gender bias in evaluations (Heilman, 2001). It is proposed that gender stereotypes and the expectations they produce about both what women are like (descriptive) and how they should behave (prescriptive) can result in the devaluation of their performances, denial of credit to them for their successes, or their penalization for being competent. In another context, women are portrayed as caregivers, mothers and with feminine traits which are associated with empathy, gentleness and being sensitive whereas the work environment is expected to be masculine in nature, with traits that exhibit strength, aggressiveness and drive. Hence, when women behave differently from their expected feminine traits to suit the work environment, they are atypical of feminine traits and are penalized for it. Because of the above perception that causes gender bias, it influences the way women are evaluated in the work environment and it has been argued that, being competent does not ensure that a woman will advance to the same organisational level as an equivalently performing man (Carli & Eagly, 2001). Their continued research after 15 years, conclude that the labyrinth is the most useful metaphor for women leaders, because although there has been slow steady improvement in women's access to leadership, women continue to face challenges that men do not face: gender stereotypes that depict women as unsuited to leadership, discrimination in pay and promotion, lack of access to powerful mentors and networks and greater responsibility for childcare and other domestic responsibilities (Carli & Eagly, 2016). This phenomenon is more likely to be seen in a technology industry, where it has been dominated by men over many decades.

The irony of this is that, there are many evidences that women make better leaders than men. A study of more than 900 managers in top U.S. corporations found that "women's effectiveness as managers, leaders, and teammates outstrips the abilities of their male counterparts in 28 of 31 managerial skill areas – including the challenging areas of meeting deadlines, keeping productivity high, and generating new ideas (Falk & Grizard, 2005).

Similar findings were found on another study, led by Professor Øyvind L. Martinsen, Head of Leadership and Organisational Behaviour at the BI Norwegian Business School, assessing the personality and characteristics of nearly 3000 managers. In nearly all areas, they concluded that women were better leaders than their male counterparts.

Women outperformed men in four of the five categories studied: initiative and clear communication; openness and ability to innovate; sociability and supportiveness; and methodical management and goal-setting. However, men did appear to be better than women at dealing with work-related stress and they had higher levels of emotional stability.

With more companies now recognizing that collaborative, rather than competitive behaviour creates more success, women are well placed to lead in this century. There are many findings (Mahmoud , Mustafa, & Muhammad, 2016; Fidanoski, Simeonovski, & Mateska, 2014) that reinforces companies with women on the Board perform better. The above finding on women leadership capability is also echoed by Business Insider, a well-known business and technology news website, by

sharing a report done by Zenger Folkman on a survey of 45000 leaders in 2014, to gauge the leadership capability between men and women and the outcome was some more data to proof the capability of women's performances in leadership roles (Sherwin, 2014).

Although significant amount of research shows and proofs the capability of women as good leaders, scarcity of women in leadership roles continues to persist, which warrants for studies to understand what is contributing to this scarcity. Most of the researches performed to understand the gender gap in organisations, prescribes a need to change for equality (Rao, Sandler, Kelleher & Miller, 2016). These changes apart from highlighting the cultural barriers and organisational culture have alluded to, lack of gender policies and enabling women to control, access and utilise the available resources to enable them to retain and develop into leadership roles (Coronel, Moreno, & Carasco, 2009). To address the gaps of policies and practices that have been called out by many researches, government and organisations have introduced many policies and practices such as anti-harassment, diversity and inclusion, maternity and meritocracy policy, to support the women's need in the work force. But there is still a significant gap in women talent as seen by the low percentage of female LFPR globally at 49.5 % (The World Bank, 2015), and 54.3% in Malaysia in 2016. This seems to be more apparent in male dominant industry such as the technology industry.

Further, most of the studies conducted on the leadership-gender debate have been quantitative in nature and there is an insignificant amount of empirical research into this leadership-gender debate – with most of this contemporary literature being purely conceptual (Groves & LaRocca, 2011; House, Hanges, Dorfman, Mansour &

Gupta, 2004). This is a similar situation seen and captured by researches in Malaysia, Teoh and Chong (2008) indicated that there were very limited studies have been undertaken in the past to assess the issues faced by women and specifically women entrepreneurs in Malaysia.

Therefore, the goal of this study is to initiate scientific inquiry to investigate the barriers that women experiences to sustain and further progress into leadership roles, targeting the technology industry in Malaysia.

1.2   Problem Statement

As Malaysia continues its journey to become a high-income nation as conceptualised by the New Economic Model (NEM), it is imperative for the country to garner support with Foreign Direct Investors to create job opportunities for the growing number of population in Malaysia. As shared by Kok (2010), technology MNCs have been a significant growth driver for the Malaysian economy, therefore, it is eminent that the government ensures the sustainability of those MNCs here.

One of the key drivers for sustainability of the technology MNCs, which is also applicable to practically all MNCs is the talent availability. Thus, it is important to understand whether Malaysia as a country is able to develop and provide a talent pipeline to support the demanding needs of the MNCs, in this case, technical talent for the technology MNCs.

It has been acknowledged that we have been having a scarcity of talent from as early as in the seventies, which has driven the Ministry of Education to implement

policies to build this pipeline. Specifically, Ministry of Education Malaysia, through the implementation of policies in creating education blueprints to support the workforce demands of the country by outlining Science Technology Engineering and Mathematics as one of the critical needs and setting a target of 60:40 (Technical/Arts) graduates even as early as in the seventies, however we are only hovering above 45% in 2014 (MOE, 2013) .

As the above demonstrates evidential proof of shortage of STEM talent in Malaysia, there is also evidence that the shortage observed is even more significantly driven by the low women LFPR, as most STEM graduates in Malaysia are indeed women. The Prime Minister in his opening address at the Global Women Summit 2013 in Kuala Lumpur Convention Centre, stated that Malaysia is churning out approximately 60% to 70% of female graduates in all disciplines for the past five years. He also mentioned that it is paramount for women to continue active participation in the labour force, thus driving the nation's development agenda along a pledge for the government's commitment in supporting the needs of women to retain and progress in their careers.

Malaysia female LFPR has picked up over the past five years and as indicated is at 54.3% as of 2016, however, we continue to see a decline of women from the work force when they enter the age of late twenties and early thirties which coincides with women having a family and starting the reproductive cycle. TalentCorp, the talent agency for the government, has mentioned in many of their Talent reports that the decline seen in the women LFPR in Malaysia is unique when compared to other neighbouring countries. In Malaysia, the decline doesn't show a bounce back of female

re-entering the work force – this is commonly referred as the single peak and double peak scenario. The question that comes into mind is why women who are leaving the work force, are not returning as seen in other countries. This is indeed a question that many of the government and private sectors in Malaysia are baffled with, as there is availability of capable talent for women who have entered the work force and they are depleting in numbers as they progress in their career. Hence, it's crucial to have an empirical understanding on what barriers women are experiencing, to be able to put in corrective measures to retain and further develop them in the work force.

Further, on average in Malaysia, women make up no more than 15% of the top executives and even less of the Board Directors and no company have many women in the top executive positions or on the boards. These numbers only worsen when it is related to the semiconductor or engineering type of companies. The lack of progress still does exist despite the media identifying the problem close to 20 years ago in addition to the government acknowledging the disparity and promoting suggestions to improve diversity for more than ten years (Cho, McLean, Amornpipat, & Chang, 2015).

While the lack of Technical Leadership is prevalent and availability is scarce, there is significant bias in having a female technical leader in the MNCs. Percentage of women in Senior Management or Leadership occupations are significantly lower than men although the ratio of female graduates is higher at 3:2 and females constitutes ~ 50% of the workforce in technical fields in Malaysia (Merican & Ghani, 2016).

This trend is also seen globally and has been captured in many researches and reports (Falk & Grizard, 2005). Women are also being viewed as more open to new ideas, better suited for teamwork and in possession of good qualities such as listening and negotiating skills. In academia, women are found to excel on par with men (Ibrahim & Ismail, 2008). In addition, women's leadership styles are more democratic than men's, which can transform and enhance organizational effectiveness (Berkery, Morley, & Siobhan , 2013).

Although there are many studies done even in Malaysia to understand the barriers to retention and progression women in leadership/management positions, there are still insignificant empirical research done to understand what are the underlying factors that are hindering these women from retaining and progressing into leadership roles, especially in the technical field, in Malaysia (Ramayah, Lo, Yang Amri, & Noor Hazlina, 2011; Ismail, Mohd Rasdi, & Abd. Jamal, 2011).

As such, this thesis targets to find the empirical evidence of the barriers faced, through lived experiences of the technical women in technology MNCs. Having the empirical evidence of these barriers would be crucial in helping to formulate the corrective measures in addressing them through government and organisation interventions. This in turn, would enable the continuity of the talent pipeline to support the sustainability of these MNCs, which are fundamentally driving the economic growth in Malaysia.

1.3   Research Objectives

This study intends to probe the underlying barriers in retaining and advancing women into leadership roles in the technical field at the MNCs in Malaysia. Explicitly, this study aims to find the empirical evidence on the experiences of women in the technical field through their career journey and how the existing organisational culture, policies and resources are supporting or negating them. The study will achieve these general aims by meeting the following objectives:

1) To profile the technical women pipeline in American MNCs in Malaysia.

2) To investigate the barriers for retention of women in the technical field in the American MNCs in Malaysia.

3) To investigate the barriers and challenges for advancement of women into leadership roles in the technical field, in the American MNCs in Malaysia.

4) To investigate whether there are relevant policies and practices available in the American MNCs to support the retention and advancement of women in the technical field.

5) To investigate whether women are utilising the available policies and practices to support in retaining and advancing them to leadership roles in the technical field of American MNCs in Malaysia.

1.4   Research Questions

This study seeks to achieve its specific objectives by answering these research questions:

1) Who are the technical women and how many are there in Malaysia?

2) What are the barriers for retention of technical women in American MNCs in Malaysia?

3) What are the barriers for advancement into leadership roles for women in technical field in American MNCs in Malaysia?

4) What are the available policies in the MNCs that support the retention and advancement of women talent in technical field of American MNCs in Malaysia?

5) How are women utilising the available policies and practices to help them sustain and advance into leadership roles in American MNCS in Malaysia?

1.5 Definition of Key Terms Used

Technical – the technical field focuses on having a Science, Technology and Engineering related education and working directly in designing and manufacturing of the product or service. Technical and technology field have been interchangeably used and it refers to the same context.

Non-Technical – is referred to having a non-Technical related education and is not working directly in designing and manufacturing of the product or services. This study does not include investigation into women in the non-technical field.

Technology Industry – provides the basis for chip productions, information and communication systems, and computer systems. The companies included in this study serve as developers and manufacturers of the products which drive the increasing

efficiency and production of mobile phones, computers, televisions, as well as other communication and information systems.

Leadership – refers to a position of influence and decision making. It refers to talent with higher seniority that is parallel to mid-level management and above.

Gender Consciousness - is the recognition that one's physical sex shapes one's relationship with the political world. It entails identification with others like oneself, a positive affect towards them, and a sense of connectedness with the group and its well-being (Sue Tolleson, 1992).

Women's need – refers to women seeking a safe and discrimination free work environment that supports them in their traditional role as care givers and mothers and also provides equal development opportunities for them to excel in their career.

1.6   Significance of This Study

This study has significant contributions, both to the growth of the nation and the women talent in Malaysia, especially in the technical field. As shared in the overview, it is eminent for Malaysia to sustain the women through the talent pipeline and develop them into leadership roles, to support the talent scarcity that the nation is already seeing. This research which targets to better understand the key influencing barriers of retention and advancement, specifically for technical women in a Malaysian technology industry is a pioneering empirical study in this domain.

MNCs have adopted many policies and practices to attract, integrate and develop women into the workforce. This study would help in providing empirical

evidence whether the policies and practices are indeed supporting the women in retaining and advancing them into leadership positions.

1.7   Scope of Study

It's imperative to note that, majority of the technology MNCs in Malaysia are predominantly American MNCs and have been in the country for more than thirty-five years (MIDA, 2010). Big players like Intel, Dell, Freescale, AMD, Flextronics, Motorola, and Western Digital are some of the MNCs that are housed in the northern region of Malaysia, which is referred to as the Silicon Valley of the country. Thus, the scope of the present study is limited to the investigation of barriers of retention and advancement of women in the technical field from American MNCs in the northern region,

It will adapt the case-study research methodology through conducting in-depth interviews which are semi-structured to allow flexibility to probe and seek deeper understanding of the barriers for retention and advancement to leadership roles of the technical women in the American MNCs in the northern region in Malaysia. It would also investigate the organisation culture, policies and practices through the lenses of technical women and also from the MNCs view point via in-depth interviews with their respective HR Directors.

1.8   Organization of Chapters

The intent of this study is to examine the barriers of retention and advancement of women in technical field at American MNCs in the northern region of Malaysia as

illustrated in this introduction chapter. Chapter Two will unfold the literature reviews that have been critically reviewed, to support or dispute the existing barriers, underlying influencing factors and organisational actions taken to address them. Further, it would also provide context of the four-quadrant conceptual framework that was adapted for this study. Chapter Three will outline the mix mode of quantitative and qualitative methodology utilised for this study; delineating the case study of the grounded theory, utilisation of the four-quadrant framework and triangulation to ensure the reliability and validity of the study.

The findings and discussions will be segregated into three different chapters starting from Chapter Four through Chapter Six. Chapter Four will provide findings and discussions that are related to the quantitative part of the study, which includes secondary data analysis on the population and demographics of the workforce in the northern region of Malaysia. It would also include the technical workforce composition of the five MNCs that were investigated in this study and the demographic profile of the twenty-five women who were interviewed. Chapter Five will showcase the qualitative findings and discourse in reference to the in-depth interview on the four-quadrant framework that was adapted, targeting the upper left (UL) quadrant on gender consciousness and lower left (LL) barriers to retention and advancement. Subsequently, Chapter Six will provide the findings and discussions on the lower right (LR) quadrant on policies and practices and upper right (UR) on utilisation of resources, sharing the rich narratives of the lived experiences of women in the technical field. Finally, the conclusion, strength, limitations of the study, future research opportunities and recommendations will be shared in Chapter Seven.

1.9 Summary

This chapter provides the introduction and the problem statement of this undertaken study, to understand the barriers of retention and advancement into leadership roles, for the technical women in American MNCs in Malaysia. It further clarifies the research objectives and research questions that are aimed to be addressed from executing this study. Further, the significance of the study and key terms used were shared. Subsequently, Chapter Two will unfold the literature reviews that have been critically reviewed to support or dispute the existing barriers, the underlying influencing factors and organisational actions taken to address.

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

Talent shortage to support the growing global economy environment, has been the centre of many discussions among the top leaders, across nations. Extensive research has been done to understand what is causing the talent shortage and what is required to address them. Although, many actions have been taken to reduce the talent shortage from building the education curriculum to meet future demand, training, upskilling and others, talent shortage persist. Women, who constitute nearly half of the world's population have not been fully tapped to support the talent shortage and continue to lag men in labour force, with larger gaps at the top levels.

This chapter is devoted in providing a review of the literature on the global and Malaysia talent environment, what is driving the talent shortage and what are the major talent gaps. Then, it would narrow to review the measures taken in tapping the women talent, reviewing the Labour Force Participation Rates, policies and practices to integrate the women into the workforce. Further, literatures on gender theories will be scrutinized to better understand the women's need in an organisation and why existing measures have not yielded the required results. After which, a review of the American MNCs, policies, practices and culture will be discussed comparing with Malaysia, in integrating women into the organisation. Subsequently, literatures on women in MNC technical field will be reviewed to ascertain the barriers for retention and advancement. From this literature review, the gaps will be determined and will substantiate the

perusal of this study. Following pursuit, a framework would be derived to support the research work.

2.2   Global Talent Environment

Tectonic market shifts are transforming the global business landscape. Economic realignment, advances in technology, the Globalisation of markets, changing demographic trends, new customer needs and increased competition are radically altering how companies operate in virtually every industry and region of the world. Evidence of this new world order can be seen in the trade numbers. In 1990, the total of the world's exports and imports accounted for only 30% of the world's GDP – today, they make up more than half. These structural shifts are reshaping both the supply and demand for talent across the globe (Towers Watson, 2016).

Technological advancement, continuous evolving demographics and a world prone to economic, political and social surprises have created a global environment in which talent shortages are becoming a concerning reality, as shown in Figure 2.1. In addition, business cycles have become compressed, so too have skills cycles.
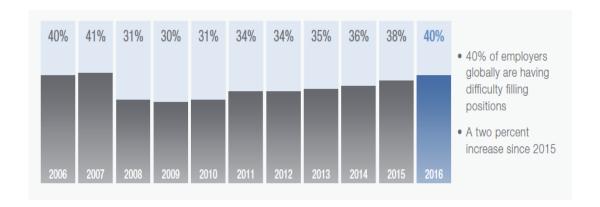
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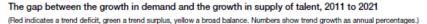Figure 2.1: Global Talent Shortages (Source: Manpower Group 2017)

As shared by the recent Manpower Group Talent shortage survey (refer to Figure 2.1), there's a steady increase in shortage of talents over the past few years, where in 2016, 40% of employers globally have declared having difficulty filling jobs due to a lack of available talent. This is the highest shortage since the start of the global recession (Manpower Group, 2017).

The above finding form Manpower group survey substantiates the many surveys and report in the past few years that was indicating this anticipated talent shortage globally. A study by KPMG International in September 2008 also predicted that a demographic fault line lies at the end of this decade, which will have a negative impact on the supply of labour and talent in the developed world. Yet, another study found that the retirement of the Baby Boomer generation (born 1946–1961) from the labour force and absence of Generation Y employees (born 1976–1991) to substitute them, has already resulted in the reduction of the labour force in the many countries such as UK, US, China, Japan, Australia, Canada and much of Western Europe, with other to follow suit in the next few years (Emerton, 2010).

Although the talent shortage is something that has been creeping up over the past years, majority didn't expect that this will cause significant impact to their business. This behaviour was driven by the fact that universal challenge was something; their competitors also faced with and so the notions "wait and see" to address it was prevalent.

To handle with a changing business environment, employers are demanding new skills from their employees; yet often find they are short in supply, whereas on the other hand forty million workers in the industrialised world are unemployed, according to recent estimates by the International Labour Organisation in 2016.

Figure 2.2 is a snapshot of heat map that was produced by Oxford Economics to reflect the talent shortage that is becoming a global concern (Towers Watson, 2016). However, it is important to note that countries which are red in the heat map are already experiencing the talent shortage to a larger degree. Most talent shortage are seen in the developed nations where labour cost has escalated over the years and through globalisation, low level work, especially manufacturing were offshored to countries such as India, China, Singapore, Thailand and even Malaysia. Most of these countries which were able to predict and were in fact anticipating these growths has planned ahead to support the surplus of talent needs which are highlighted in green, including Malaysia.

The gap between the growth in demand and the growth in supply of talent, 2011 to 2021
(Red indicates a trend deficit, green a trend surplus, yellow a broad balance. Numbers show trend growth as annual percentages.)
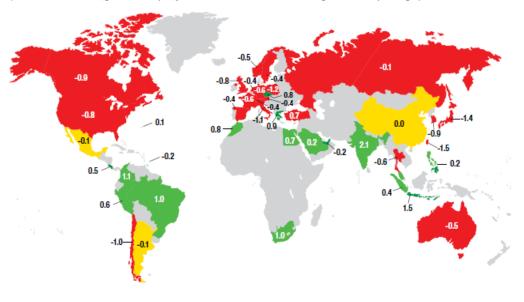
Figure 2.2: Global Talent Heat Map (Source: Oxford Economics 2016)

Although the map shows green for Malaysia, it may not be the case in the years to come, as this speculation was based on Malaysia's talent surplus due to manufacturing type of job movements. However, in the recent years, the government has shifted its focus into higher skill jobs relating to research and development and also global services to further support the economic growth (Downe, Loke, & Ho, 2012). This change of landscape would definitely warrant different type of skills, and high likelihood that the heat map for Malaysia will be trending towards red.