

**WOMEN'S LABOUR** FORCE PARTICIPATION AND  
EXIT DECISIONS IN MALAYSIA

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EXIT DECISIONS IN MALAYSIA**

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# **WOMEN'S LABOUR FORCE PARTICIPATION AND EXIT DECISIONS IN MALAYSIA**

## **ABSTRACT**

Almost one out of every two Malaysian women of working age are not in the labour force. Despite significant improvements in schooling, women's participation rate is still low in comparison to men, particularly in the Malay heartland states. Moreover, a large proportion of the currently out-of-the-labour-force female population are dropouts. These patterns have motivated our research. The probable reasons for non-participation (including quitting the labour force) are varied and range from social norms and traditional gender roles within marriage to that of the gender wage differential. All of these factors shaping women's economic status vary considerably by geography. This research utilised a nationally representative survey data, the Malaysian Population and Family Survey (MPFS) 2014, to investigate some of these explanations for limited labour force participation of women. The first objective of this research is to study the size of the gender gap in labour market participation and the role of place of childhood residence, in explaining the labour market participation gap. The probit regression estimation, which includes detailed controls for individual and household characteristics, current location, indirect proxies of care-related factors and place of childhood residence, found a large gender gap in labour market participation, both in rural and urban Malaysia. We also document a large regional variation in conditional estimates of the gender gap. Female labour force participation in economically advanced states are higher compared to Kelantan and Terengganu, the Malay heartland states. However, this gap can also reflect differences in place-specific norms and traditions. But the influence of childhood residence in historically Malay majority states is shown to proxy indirectly for traditional social customs. More specifically, childhood spent in Kelantan and Terengganu was found to be significant and negatively related to

women's participation, whereas it is insignificant for men. At the same time, we show that the influence of childhood residence cannot be explained away by differences in the poverty rate, local labour market wage differentials and other state-specific factors such as share of women in teaching jobs, and Bumiputera population share. The second objective is to estimate the size of the gender gap in wages and to investigate whether the gender wage discrimination explains the participation decisions. The analysis found that women are paid significantly less compared to men of comparable characteristics. The wages gap are significant throughout age groups and schooling levels. Additionally, alongside low participation of women in the labour market, there is also an issue of exits among women from the labour market – which are not well studied. The final objective is to estimate the size of the gender gap in the labour market exit decisions and identify the determinants of women's labour market exit decisions. Heckman-probit regression was applied to circumvent the problem of sample selection bias. The analysis found a sizeable gender gap in exit decisions from the labour market where women are more likely to exit the labour market. Being married decreased the probability of participation in the labour market for women and increased the likelihood of exits. Furthermore, the number of children also increased the possibility of exit among women. This shows that the priority of the mother changed with the presence of children.

**Keywords:** labour market participation, exit decisions, Heckman probit, social customs, Malaysia.

# **KEPUTUSAN GOLONGAN WANITA UNTUK MENYERTAI DAN MENINGGALKAN PASARAN BURUH DI MALAYSIA**

## **ABSTRAK**

Hampir satu daripada setiap dua wanita diumur sepatutnya berkerja tidak berada dalam pasaran buruh. Walaupun terdapat peningkatan ketara dalam persekolahan, kadar penglibatan kaum wanita dalam pasaran buruh masih lagi rendah berbanding dengan penglibatan kaum lelaki terutamanya di negeri-negeri pedalaman yang didominasi oleh orang Melayu. Tambahan lagi, sebahagian besar kaum wanita yang berada diluar pasaran buruh adalah mereka yang berhenti dari kerja. Corak penglibatan kaum wanita yang rendah ini mendorong kepada kajian ini. Perkara yang menyebabkan kaum wanita tidak menyertai pasaran buruh (termasuk mereka yang keluar dari pasaran buruh) adalah pelbagai dan berkisar dari norma sosial dan tradisi berkenaan peranan jantina dalam perkahwinan hingga perbezaan gaji diantara jantina. Perkara-perkara ini membentuk status ekonomi wanita yang berbeza mengikut geografi. Kajian ini menggunakan data daripada Kajian Penduduk dan Keluarga Malaysia 2014. Objektif pertama penyelidikan ini adalah untuk mengkaji saiz jurang jantina dalam penyertaan pasaran buruh dan peranan tempat tinggal dizaman kanak-kanak, dalam menjelaskan jurang penyertaan pasaran buruh. Anggaran regresi probit yang merangkumi kawalan terperinci bagi ciri-ciri individu dan isi rumah, lokasi semasa, proksi tidak langsung faktor yang berkaitan dengan penjagaan dan tempat tinggal ketika kanak-kanak, menunjukkan jurang jantina yang besar dalam penyertaan pasaran buruh di Malaysia, baik luar bandar ataupun bandar. Kajian ini juga menunjukkan variasi yang besar diantara daerah dalam penganggaran jurang jantina. Penyertaan tenaga buruh wanita di negeri maju dari segi ekonomi lebih tinggi berbanding penyertaan tenaga buruh wanita di Kelantan dan Terengganu, iaitu negeri pedalaman yang didominasi oleh orang Melayu. Walau bagaimanapun, jurang ini juga menggambarkan perbezaan norma dan tradisi sesuatu

tempat. Pengaruh tempat tinggal ketika kanak-kanak di negeri-negeri majoriti Melayu dilihat sebagai proksi secara tidak langsung bagi adat tradisi sosial. Lebih khusus lagi, zaman kanak-kanak yang dihabiskan di negeri Kelantan dan Terengganu didapati signifikan dan berkait secara negatif dengan penyertaan wanita, dan perkara ini tidak signifikan bagi penyertaan lelaki. Pada masa yang sama, kajian menunjukkan bahawa pengaruh tempat tinggal dizaman kanak-kanak tidak dipengaruhi oleh perbezaan kadar kemiskinan, perbezaan upah pasaran buruh tempatan dan faktor-faktor lain berkenaan negeri khusus seperti bahagian wanita dalam pekerjaan mengajar, dan bahagian populasi Bumiputera. Objektif kedua adalah untuk menganggar saiz jurang jantina dalam upah dan untuk menyiasat sama ada diskriminasi upah mempengaruhi keputusan penyertaan dalam pasaran buruh. Analisis mendapati bahawa wanita dibayar lebih rendah berbanding lelaki. Selain itu, di samping isu penyertaan wanita dalam pasaran buruh yang rendah, isu wanita meninggalkan pasaran buruh juga yang tidak dikaji dengan baik. Objektif terakhir adalah untuk menganggar saiz jurang jantina dalam keputusan mereka untuk meninggalkan pasaran buruh dan mengenal pasti penentu keputusan wanita untuk meninggalkan pasaran buruh. Regresi Heckman-probit digunakan untuk mengelakkan masalah berat sebelah dalam pemilihan sampel. Analisis tersebut mendapati jurang jantina yang cukup besar dalam keputusan meninggalkan pasaran buruh di mana wanita lebih cenderung keluar dari pasaran buruh. Berkahwin mengurangkan kebarangkalian penyertaan wanita dalam pasaran buruh dan meningkatkan kemungkinan untuk mereka keluar daripada pasaran buruh. Tambahan pula, bilangan kanak-kanak juga meningkatkan kemungkinan keluarnya wanita daripada pasaran buruh. Ini menunjukkan bahawa keutamaan ibu berubah dengan kehadiran anak-anak.

**Kata Kunci:** Penyertaan tenaga buruh, Heckman probit, norma sosial, Malaysia.

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## LIST OF SYMBOLS AND ABBREVIATIONS

DOSM	:	Department of Statistics Malaysia
EPU	:	Economic Planning Unit
GDP	:	Gross Domestic Product
HIS	:	Households Income Survey
LFS	:	Labour Force Survey
S&W	:	Salaries and Wages Survey
MWFCD	:	Ministry of Women, Family and Community Development
MPFS	:	Malaysian Population and Family Survey
NACIWID	:	National Advisory Council on the Integration of Women in Development
NDP	:	National Development Policy
NCWO	:	National Council of Women's Organisation Malaysia
NGOs	:	Non- governmental organisations
NHSF	:	National Household Sampling Frame
NEP	:	New Economic Policy
NPFDB	:	National Population and Family Development Board



## CHAPTER 1: INTRODUCTION

### 1.1 Background of the Research

Gender equality in labour force participation is associated with higher economic growth (ILO, 2017; Kabeer, 2012; Knowles et al., 2012) and women's improved status among family and community (Boserup, 1970; Kabeer et al., 2011). Nevertheless, women's participation in the labour force remains low, particularly in developing countries. Globally, the participation rate of women in the labour force was 26.5 percent lower than that of men (ILO, 2018). Besides low participation, the majority of dropouts from the labour market are also women (Liu et al., 2014; Sarkar et al., 2019).

Additionally, despite a general increasing trend in women's labour force participation rates, the stagnation and decline in women's participation in some countries remain puzzling. This trend is particularly true for countries in South Asia, East Asia, the Middle East and North African regions (Chi and Li, 2014; İkkaracan, 2012; Klasen and Pieters, 2015; Nazier and Ramadhan, 2018). Even countries like China, with historically high female labour force participation, show evidence of decline (Xiao and Asadullah, 2020). Besides the economic development, higher educational attainment and decreased fertility rate are also observed in countries with the low participation rate mentioned above.

This perplexing situation is partly due to the u-shaped hypothesis between women's participation in the labour force and the country's economic development (Goldin, 1995; Tam, 2011; Mammen and Paxson, 2000). The U-shaped feminisation hypothesis stated that the involvement of women is hampered at a high level of economic development due to the constraints imposed by social and cultural norms from participating in the manufacturing sector. The situation could be reversed only when the women re-enter

the labour market due to the availability of white-collar jobs for women and increment in wages (Goldin, 1995).

Despite findings on the recent literature which put the theory into question (Gaddis and Klasen, 2014; Heath and Jayachandran, 2018), the literature on social norms cultural factors has been identified as factors affecting labour market participation continues to grow (Fernandez, 2009). The prevalence of social stigma against women may result in the low participation of women in the labour force. The negative impacts of social and religious norms prevent women from working outside their homes, affecting their participation in the labour market (Sequino, 2011; Asadullah and Wahhaj, 2016, 2019). Additionally, the evidence also shows the traditional view on gender as a contributing factor to the low labour force participation among women (Heintz et al., 2018; Nazier and Ramadhan, 2018). This view is particularly true in patriarchal countries such as MENA and the South Asian region.

Similarly, the negative attitudes towards women participation in the labour force also significantly affect their participation (Del Boca et al., 2000; Sorsa et al., 2015). Meanwhile, women also contemplate their involvement in the labour force due to discrimination (Ahmed and Maitra, 2010). Wage inequality demotivates women from participating in the labour force as they are paid less despite owning identical criteria as men. Meanwhile, marriage and the presence of children have been highlighted as the factors governing the non-participation (Blau et al., 2014; Euwals et al., 2011) and discontinuity from the labour force among women (Sarkar et al., 2019; Herrarte et al., 2012; Khoudja and Fleischmann, 2018; Khoudja and Platt, 2018; Jeon, 2008; Long and Jones, 1980). Women withdraw from the labour force after marriage and due to family and childcare obligations.

Despite having undergone rapid structural changes since independence and achieving progress in educational attainment in Malaysia, the growth of female labour force participation rate over the past few decades has been rather modest and low compared to men (Abdullah et al., 2008; Asadullah, 2020). Furthermore, a large proportion of Malaysian women have also been identified to have withdrawn themselves from the labour market. Nearly half of the out-of-the-labour-force female population comprises dropouts (DOSM, 2019a). Moreover, the main reasons for dropping out of the labour force include domestic responsibilities, family-specific roles, and community commitments (DOSM, 2019a). Hence, giving rise to the single-peaked labour force participation profile indicates that women who leave the labour market do not re-enter (World Bank, 2012). The mean monthly salaries or wages in Malaysia for men and women comparatively was RM 3,174 and RM2,959 in 2018 (DOSM, 2019b).

Understanding the determinants for participation and exit decisions among women is crucial for policy implementations. Of lately, the rather modest improvement of women's participation in the labour force in Malaysia has become a growing concern. The female labour force participation rate for 2015 was only 54.1 percent (DOSM, 2016), which failed to meet the government's target of 55 percent for the year (EPU, 2011). In the following year, the government implemented strategies to enhance women's role in development, as embodied in the 11th Malaysia Plan, aiming to increase their participation in the workforce to 59 percent by 2020 (EPU, 2016). Therefore, Malaysia provides an interesting context to investigate the gender gap on women's participation, wages and exit decisions from the labour market.

This chapter is organised into the following sections. Section 1.2 discusses the problem statements of the research. Followed by Section 1.3 and Section 1.4, which present the research questions and research objectives, respectively. Section 1.5 clarifies

the scope of the research, and Section 1.6 highlights the significance of the research. Finally, Section 1.7 illustrates the structure of chapters for this research.

## **1.2 Problem Statement**

Women's participation in the labour force has positively contributed to individuals, society and the economy (Bandara, 2015; Duflo, 2012; Kabeer, 2012; Klasen, 1999; Klasen and Lamanna, 2009). Despite the growth in the global economy and the significant progress in women's educational attainment, their participation in the labour force remains low globally, whereby the gender gap in this regard continues to distend in developing countries (ILO, 2018). In 2018, women's participation rate in the labour market globally was 48.5 percent, which was 26.5 percent lower than men (ILO, 2018). Furthermore, among those working women, they remain to be overrepresented in vulnerable employment with informal work arrangements (Chen, 2001; ILO, 2018<sup>1</sup>).

Despite the rapid industrialisation process which took place post-independence and improvements achieved in the field of education in Malaysia (Abdullah et al., 2008; Ahmad, 1997; Ismail and Sulaiman, 2014; Noor, 1999; Nor and Said, 2016; Zin, 2014), women's labour force participation rate remained modest and low in comparison to men. Men's labour force participation rate fluctuated between 85.6 percent in 1985 to 80.4 percent in 2018, whereas for women, it ranged between 45.9 percent to 55.2 percent, respectively (DOSM, 2019a). The labour force participation rate for women in Malaysia is also considerably low compared to other Southeast Asian countries (World Bank, 2016). For the year 2018, Malaysia ranked 101 out of 149 countries in the global gender gap index (GGGI) and was placed at the bottom two in terms of economic participation and opportunities among ASEAN countries (WEF, 2018). Meanwhile,

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<sup>1</sup> Vulnerable employment represents own-account workers and contributing family workers. As reported by ILO (2018), the women rate of vulnerable employment globally was over 42 percent.

based on World Development Indicators (WDI) data, Malaysia was found to be lagging in terms of female labour force participation rate (55 percent). However, it performed slightly better compared to Indonesia (52.9 percent) and the Philippines (51.7 percent).

Among the factors significantly affecting women's participation decisions in the labour force include marriage (Blau et al., 2014; Duncan et al., 1993; Euwals et al., 2011; Lee et al., 2008), children (Contreras and Plaza, 2010; Contreras et al., 2010; Dildar, 2015; Heath, 2017), and elderly care (Nishimura and Oikawa, 2017; Van Houtven et al., 2013). These factors have negatively affected women's labour market participation decisions. The issue of the double-burden syndrome has led to the non-participation of women in the labour market. Apart from that, the extent and causes of gender wage inequality and discrimination against women have also been among the central issues discussed in economic literature (Ahmed and Maitra, 2010; Ahmed and McGillivray, 2015; Chi and Li, 2014).

On the other hand, the human capital theory posited the significant impacts of education (Mincer and Polachek, 1974) as the central element in women's labour market participation decisions (Gunatilaka, 2013; Kanjilal-Bhaduri and Francesco, 2018; Klasen and Pieters, 2015; Sudarshan, 2014). Meanwhile, the U-shaped feminisation hypothesis hypothesised a non-linear relationship between economic development and women's labour force participation (Goldin, 1995). The proposed theories hold that the overall drop in women's participation in the workforce can be traced to social and cultural trends that hold women back from entering the manufacturing industry.

The debate over the determinants of women's labour market participation has shifted over to the significant impact of social norms on women's participation decisions. Social norms restrict the extent and nature of women's movements outside their homes

(Asadullah and Wahhaj, 2019, 2016; Heintz et al., 2018). Additionally, traditional views on gender roles also constraint women's participation in the workforce (Chamlou et al., 2011; Contreras & Plaza; 2010; İkkaracan, 2012; Khoudja and Platt, 2018). Studies on these factors have been mainly conducted in countries that have inherited the patriarchal system, such as South Asia (Asadullah and Wahhaj, 2016, 2019; Heintz et al., 2018) and the Middle East (İkkaracan, 2012; Nazier and Ramadhan, 2018).

Compared to other developing countries, research on the determinants of women's participation decisions in Malaysia is relatively scarce. Available studies on the determinants of labour market participation were focused on specific groups such as married women and educated married women (Amin et al., 2016; Ismail and Sulaiman, 2014; Nor and Said, 2016, 2014; Tan et al., 2015). Additionally, several studies have also highlighted the gender wage differential issues in Malaysia, indicating possible discrimination against women (Goy and Johnes, 2015, 2012; Ismail and Jarji, 2012; Ismail et al., 2017). However, to the best of my knowledge, none of the existing studies in Malaysia examined the impact of the gender wage gap on labour market participation.

Malaysia is a multi-cultural and multi-ethnic society with a majority of the Malay population and a significant minority of Chinese and Indians. In terms of labour force participation rate among women, the Chinese have the highest participation rate (60 percent), followed by the Malays (52.7 percent) and Indians (51.9 percent). However, the variation in the participation rate could be due to the fertility rate, which also differs among ethnicity. Even though the fertility rate has been declining for all ethnicities throughout the years, the fertility rate of the Malays was estimated at 2.4 in 2018, higher compared to the Chinese and Indians (1.1 and 1.3 respectively) (DOSM, 2019c).

Moreover, except for Negeri Sembilan, all the administrative states in Malaysia follow *adat temenggung* (i.e., patriarchal). However, there are socio-demographic, economic participation and other varying factors among the states. For instance, Terengganu and Kelantan on the east coast are homogenous in terms of ethnic composition (i.e. over 95 percent of the population in these states are Malays). Both states also have the highest poverty rate, the lowest female labour force participation rate in Malaysia and also have been under the rule of the Islamic Party. Therefore, due to the patriarchal nature and the regional variation in the ethno-religious profile of the population, female labour force participation is hypothesised to vary across locations regardless of the economic opportunities available in the labour market. The ethno-religious differences are manifested in terms of social customs regulating the women's labour market participation decisions. Some available literature in Malaysia has stated that the religion or ethnicity factors have been controlled to a certain level in influencing labour market participation (Amin and Alam, 2008; Amin et al., 2016). However, the influence of location and associated social customs have not been the central focus of their research. As individuals move around throughout times, this research is focusing on the place of childhood residence, i.e., whether individuals choice of labour market participation is influence by the differences in location. In a similar context, studies concluded that the place of origin is associated with parental religiosity (Guner and Uysal, 2014), educational outcome (Noury and Speciale, 2016), ancestral ecological endowment (Hazarika et al., 2019), which in turn influences women's labour participation decisions. Thus, this research aims to identify new determinant, i.e. place of childhood residence and provide an in-depth analysis of its potential influence on women's labour market participation decisions in Malaysia.

Although the discussion above postulated several reasons as to why many women do not work, it is also important to highlight that there are two sides to the story. There is

the issue of non-participation of women in the labour market, whereas, on the other hand, there lies the problem of women leaving the workforce. Millions of women are in the labour market with the number increasing every year; however, a substantial number also leave the labour market. Compared to the labour market participation decisions, the second strand of literature which looks at the exit decisions is scant for developing countries. Previous literature highlighted children and childcare related issues were central to their analysis in studying women's decision to exit labour market in developed countries (Herrarte et al., 2012; Hotchkiss et al., 2011; Liu et al., 2014; Shafer, 2011). Hence, highlighted that the double burden syndrome might not just affect women's participation but also makes it difficult for them to continue being in the labour market. Additionally, longitudinal data studies focusing on the dynamics of labour market decisions (i.e., both participation and exit decisions) (Jeon 2008; Khoudja and Fleischmann, 2018; Khoudja and Platt, 2018; Long and Jones, 1980) are also limited to developed countries (for an exception see Sarkar et al., 2019). Data unavailability is a possible reason for the lack of study done in developing countries.

Unlike other East Asian countries, women's labour force participation profile in Malaysia is single-peaked (World Bank, 2012) which stipulate that once women leave the labour market, they do not re-enter. In 2018, 68.3 percent out of a population of 7 million people outside the labour force consisted of women, with 48.4 percent of them having prior working experience (DOSM, 2019a). When inquired regarding their decision not to work, 60.2 percent of women cited housework, family responsibilities or community commitments as reasons to remain outside the labour force. At the same time, only 3.6 percent of men reported the same reasons (DOSM, 2019a). Thus, this situation affirms the inability to retain women in the labour market.



Therefore, Malaysia provides an interesting context to examine women's exit decisions from the labour market since such studies are limited. An exploratory study conducted in the Klang Valley reported the presence of young children as a reason for women leaving the labour market (Subramaniam et al., 2010). Another qualitative study which focused on female graduates in Malaysia also concluded that having and raising children are the main factors influencing women's decision to exit the labour market (Halim et al., 2016). Nevertheless, the underlying reasons for the observed link between childcare responsibilities and women's labour market exit decisions in Malaysia remain vague. Hence, this topic calls for further investigation.

Therefore, careful analysis should be conducted in examining the labour market participation decisions, taking into account the domestic roles and responsibilities taken up by women as well as economic factors (e.g. local labour market conditions) and social barriers (manifested through the influence of region/location of childhood residence and work) which are at play. Also, to further investigate probable reasons which resulted in the inability of women to continue working. This has been the background which motivates the research carried out in this dissertation.

### **1.3 Research Questions**

The general objective of this research is to understand gender inequality in the labour force in Malaysia. This research specifically seeks to answer three research questions as follows:

1. What are the determinants of labour force participation in Malaysia? What is the role of place of childhood residence in explaining the participation?
2. How large is the gender gap in wages? Does gender wage discrimination also explain women's labour force participation decision?

3. What are the determinants of labour market exit decisions among women?

#### **1.4 Research Objectives**

1. To estimate the determinants of the labour market participation and to examine the role of place of childhood residence in explaining the labour market participation.
2. To estimate the size of the gender gap in wages and to investigate whether the gender wage discrimination explains the labour market participation decisions.
3. To identify the determinants of women's labour market exit decisions.

#### **1.5 Scope of the Research**

This research aims to investigate the gender gap and women's participation and exit decisions from the labour market in Malaysia by including the proxies of social customs and care-related variables. The fifth MPFS (MPFS-5) for the year 2014 was procured as the primary source of data for this study. The MPFS surveys are conducted by the National Population and Family Development Board (NPFDB) once every ten years since 1974. The data gathered is derived from the responses of 13,219 respondents consisting of ever-married women, ever-married men and singles. This research also utilised data from the 2014 Household Income Survey (HIS) as a complementary resource.

#### **1.6 Significance of the Research**

Understanding women's employment decision is vital in explaining the labour market decisions among women. In the Malaysian context, the concern has been raised over the almost stagnant labour force participation rate among women despite higher educational attainment and significant progress on economic development. The literature on the existence of gender gaps in women's labour market participation

decisions and wages have received attention from researchers. However, several gaps have been recognised in the literature. First, reliable evidence on women's labour market participation decisions for Malaysia is relatively scarce compared to other developing countries. Second, none of the previous studies in Malaysia has considered the role of social customs – either as a direct measure or as a proxy - on women's labour market participation decisions. Third, none of the studies on the gender wage gaps in Malaysia has considered the wage gaps as the explanatory variables on women's participation decisions. Additionally, for the literature on women's exit decisions. Fourth, previous quantitative research on exit decisions is limited for developing countries, and as for Malaysia, to our knowledge, there is none on this topic. Fifth, prior studies also did not take into account the participation and exit decisions simultaneously.

Therefore, in light of the above gaps, this research contributes to the international literature on women's economic involvement in developing countries in several ways. First, for Malaysia, we add to the literature on the social influence of place of childhood residence as a proxy of social customs. In doing so, we also inform the literature on the regional pattern in women's economic well-being in Malaysia. Second, this research is the first to examine the effect of the gender wage differential to participation decision. Due to the limitation of the available datasets, this research is the first in Malaysia to have created a hybrid dataset to get the measure of gender wage differential at the local labour market – which was then included as a regressor in the estimation of the participation decisions. Third, apart from the qualitative study by Halim et al. (2016) and preliminary study by Subramaniam et al. (2010), this research can be considered as the first quantitative study on labour market exit decisions in Malaysia, and it is also the first that take into account the participation and exit decisions simultaneously.

## **1.7 Organisation of the Research**

This thesis consists of six chapters. This introductory chapter provides the background of the research, problem statement, research questions, and research objectives. This is followed by an explanation of the scope and organisation of the research.

Chapter 2 provides an overview of the economic development in Malaysia, followed by the labour force participation trends. The chapter also highlights the role of religion, region and culture with particular attention given to the status of women. Finally, various policies and regulations on the labour market and development for women in Malaysia were also outlined at the end of the chapter.

Chapter 3 discusses previous literature on the theory of female labour supply, focusing on the extensive margin of labour supply. Followed by a review of the empirical literature on the determinants of women's participation and exit decisions from the labour market. This chapter also highlights the research gaps and outlines the proposed conceptual framework. Chapter 4 presents the data, instruments and measurement of labour market participation and exit decisions. It also describes the method applied to examine the women's labour market participation, the gender wage gap and exit decisions from the labour market.

Chapter 5 presents and discusses the findings of the research. Firstly, it examines the gender gap and the sources of the gap in the labour market participation of the pooled regression followed by the estimations of sub-groups; urban versus rural and men versus women. Additionally, an analysis was also conducted on married women. Besides these analyses, the chapter also presents the outcome of the gender wage gap in the

participation decision. Finally, the existence of the gender gap and the determinants of the labour market exit decisions among women were also explored.

The final chapter provides a summary of the findings. This chapter also highlights the contributions of this research and discusses the policy implications based on the findings. At the end of this thesis, while acknowledging the limitations of this research, it provides suggestions for future research.

Universiti Malaya

## **CHAPTER 2: STUDY CONTEXT - MALAYSIA**

### **2.1 Introduction**

This chapter describes the overall study context pertaining to the performance of women's labour market by presenting background information on economic development and key structural changes in post-independence Malaysia. Section 2.2 of this chapter discusses the economic development pattern in Malaysia and followed by the trends in labour force participation that gives particular attention to women in Section 2.3. Next, a discussion on the Malaysian society and the social customs that govern the lives of women in the majority Malay ethnic group is presented (Section 2.4). This section looks into the marriage patterns and the regional variations in light of social norms and customs. The final two sections outline relevant policies on the labour market and the development of women, as well as the laws and regulations related to women and employment (Section 2.5 and Section 2.6).

### **2.2 Economic Development in Malaysia**

Malaysia has experienced a number of structural changes since its independence in 1957 (Leete, 2007). Post-independence, the Malaysian government has set several goals to attain bullish economic growth, to reduce economic instability and unemployment, to eradicate poverty, as well as to enable a more equitable distribution of income and wealth (Zin, 2014). Macro-economic policies for the development in Malaysia can be broadly classified into three phases: market-led development, state-led development, as well as liberalisation and globalisation.

The first phase refers to the phase of market-led development that incorporates government intervention in promoting rural development, besides providing social and physical infrastructure (1957-1970). Post-independence, Malaysia relied heavily on the agricultural sector, especially on the export of rubber and tin (EPU, 1965). Nevertheless,

the falling price of rubber and the depleting reserves of tin imposed problems to the economic sector. The strategy employed in the First Malaysia Plan was to diversify the exports and to minimise the reliance on imports by promoting industrialisation. Promoting industrialisation programs was pursued to offer employment opportunities in the growing labour market, apart from diversifying the economy. Although the devised policies had led to growth at a rapid rate, there was relatively little reduction in the level of absolute poverty, particularly amongst the *Bumiputeras*, in which high-income inequality remained for the income between rural and urban households. The Chinese who lived in the urban area enjoyed better access to economic opportunities as well as social infrastructure. As a consequence, this very issue of economic imbalance had sparked the racial riots in bleak May 13, 1969 (Gomes, 1999).

In 1971, The New Economic Policy (NEP), was formulated to resolve the issue of economic imbalance between races. Some goals of the NEP were poverty eradication, provision of employment opportunities for all Malaysians irrespective of race, and restructuring of society to eliminate the identification of race with economic functions.

The NEP implementation marked the second phase, which is also described as the state-led development stage (1970-1990). During the 1990s, the manufacturing sector turned into the main contributor to the Malaysian economy. The expansion of the manufacturing sector was fuelled by a number of strategies executed by the government that focused on a broader and export-oriented market (EPU, 1991). The Industrial Master Plan (IMP) was introduced to offer a long-term plan for specific subsectors, so as to enhance private investments, apart from promoting the research and development (R&D) sector.

The National Development Policy (NDP, 1991-2000) had continued to emphasise on the strategy of growth with equity. The private sector acted as the driver of development

during this period whilst the public sector played a supporting and complementary position. The National Vision Policy (NVP, 2001-2010), a continuation of NEP and NDP policies, was embedded into the Third Outline Perspective (OPP3) Plan 2001-2010. One of the fundamental goals under the OPP3 was to address the rural-urban disparities by implementing several strategies to enhance rural development. The NVP involved some critical thrusts that were aimed at establishing a progressive and prosperous *Bangsa Malaysia*. The NVP is composed of an overriding objective of unity - for people to live in harmony, as well as to engage in a full and fair partnership.

In 2009, the adverse effects of the global recession stemming from the downfall of the financial institutions in the US had hit the economy on a global scale. As a result, a sharp decline was observed in both private investments and external demand. Nonetheless, the economy witnessed recovery during the fourth quarter of 2009, with positive growth flourishing in 2010. The government had decided to inject a stimulus package worth RM 67 billion to enhance its fiscal position and to ascertain a robust economy. In fact, the primary objective of the stimulus package injection was two-fold; to boost consumption, and to spur private investment.

Towards becoming a developed country and escaping the middle-income trap, the government had introduced the four pillars of national transformation. The first pillar refers to the '1Malaysia, People First, Performance Now' concept launched in April 2009 to unite all Malaysians to face the challenges ahead. The second pillar is the Government Transformation Programme (GTP), which was implemented to strengthen public services in the National Key Result Areas (NKRAs). Launched in March 2010, the third pillar denotes the New Economic Model (NEM) that was achieved through the Economic Transformation Programme (ETP). Lastly, the fourth pillar refers to the 10th Malaysia Plan 2011-2015 (10MP), which was introduced in June 2010 to provide new



policy directions, strategies, and programs that could enable the country to achieve the long-sought 'developed country' status.

A range of strategies was implemented in the past few decades to elevate the status of women in Malaysia. The NEP established in 1970 restructured society through active participation of Bumiputeras and encouraged women to participate in the economy (Noor, 1999). Provision of education and productive employment opportunities were the main strategies executed to achieve the goals outlined in the NEP. Eventually, more job opportunities were provided for women (Noor, 1999; Zin, 2014). The National Advisory Council on the Integration of Women in Development (NACIWID), established in 1975, served as an advisor to female-related matters concerning development within the government sector. Detailed discussion on policies and regulations that stipulated the improvement and protection of women is presented in Sections 2.5 and 2.6 of this chapter.

Malaysia has improved significantly for educational attainment over the years. The literacy rate had hiked from 93.5 percent in 2000 to 97.3 percent in 2010 (DOSM, 2013). Those above 20 years old with higher education increased from 16.0 percent in 2000 to 21.6 percent in 2010 (DOSM, 2013). Such escalating trends were observed across ethnicity – Malay, Chinese, and Indian. Besides, the enrolment of women in primary, secondary, and tertiary levels of education had enhanced significantly (Abdullah et al., 2008).

The data retrieved from the World Development Indicators revealed that the number of enrolments into the tertiary level of education had increased throughout the years. The gross enrolment for men was at 6.2 percent in 1985 and grew to 38.6 percent in 2017, while 5.2 percent to 45.5 percent for women within the same period. Nevertheless, although women could outperform men in the tertiary level of education,

this has not been translated into higher participation since the labour force participation rate for women is still lower than men (Abdullah et al., 2008; Wye & Ismail, 2012).

The Organisation for Economic Co-operation and Development, OECD (2016) had highlighted that despite the increasing participation rate of women in the workforce sector and the shrinking of the gender gap in educational attainment, the progress displayed by women worldwide seems to be uneven. The gender gap in labour market participation persists, and this is particularly obvious in the emerging market. Within the context of Malaysia, apart from the issue of low participation of women in comparison to men, the rate of female labour force participation rate is also low compared to other ASEAN countries. The overall performance of Malaysia in terms of its ranking in the Global Gender Gap Index (GGGI)<sup>2</sup> also raised some concerns.

**Table 2.1: Global ranking on the gender gap for ASEAN countries, 2018**

Country	Global Index		Economic participation and opportunity		Educational attainment	
	Rank	Score(0-1)	Rank	Score(0-1)	Rank	Score(0-1)
Malaysia	101	0.676	84	0.656	01	1.000
Philippines	08	0.799	14	0.801	01	1.000
Lao PDR	26	0.748	01	0.915	105	0.968
Singapore	67	0.707	24	0.761	88	0.988
Vietnam	77	0.698	33	0.740	101	0.972
Thailand	73	0.702	22	0.763	81	0.991
Myanmar	88	0.690	35	0.738	98	0.976
Indonesia	85	0.691	96	0.629	107	0.967
Cambodia	93	0.683	45	0.719	119	0.938
Brunei Darussalam	90	0.686	26	0.752	84	0.990

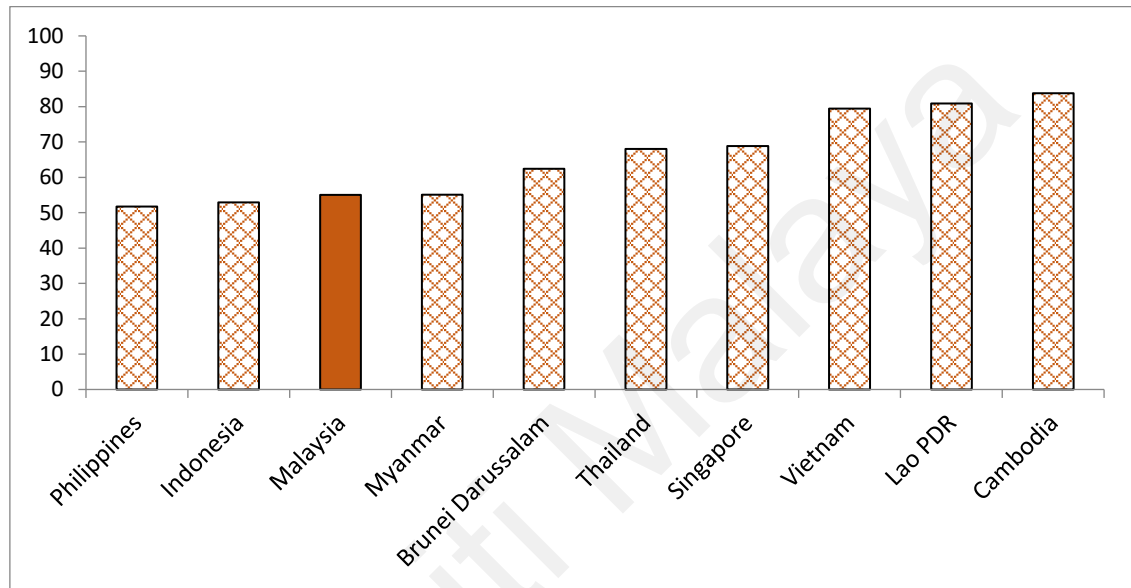
**Source:** Author, based on data extracted from the gender gap report (WEF, 2018).

**Notes:** There were 149 countries. The score to the point of 0.00 indicates imparity, while near 1.00 shows parity.

Table 2.1 lists the overall index and the two features of the GGGI ranking in 2018 for Malaysia compared to other ASEAN countries. Malaysia's global gender gap was ranked at 101 out of 149 countries (WEF, 2018), which is the lowest among the

<sup>2</sup> The GGGI measures the gap between women and men across four key areas: economic participation and opportunity, educational attainment, health and survival, and political empowerment (WEF, 2018).

ASEAN region. Next, despite the achievement of a parity score of 1.000 in educational attainment<sup>3</sup>, Malaysia seemed to be lagging in terms of economic participation and opportunity. With a score of 0.656, Malaysia was ranked at 84, which was slightly higher than Indonesia that scored 0.629 and ranked at 96 - the lowest ranking among the ASEAN countries.



**Source:** Author, based on data extracted from World Development Indicators (WDI).

**Figure 2.1: Female labour force participation rate for ASEAN countries, 2018**

Malaysia recorded among the lowest female labour force participation rates compared with other ASEAN countries (see Figure 2.1). Malaysia's female labour force participation rate was 55.0 percent, slightly above Indonesia (52.9 percent) and the Philippines (51.7 percent). The highest female participation was noted for Cambodia at 83.8 percent. Therefore, despite economic growth and education improvement displayed by women in Malaysia, these were not translated into their involvement in the workforce. The following section outlines the trends in labour force participation in Malaysia, emphasising the variances between male and female.

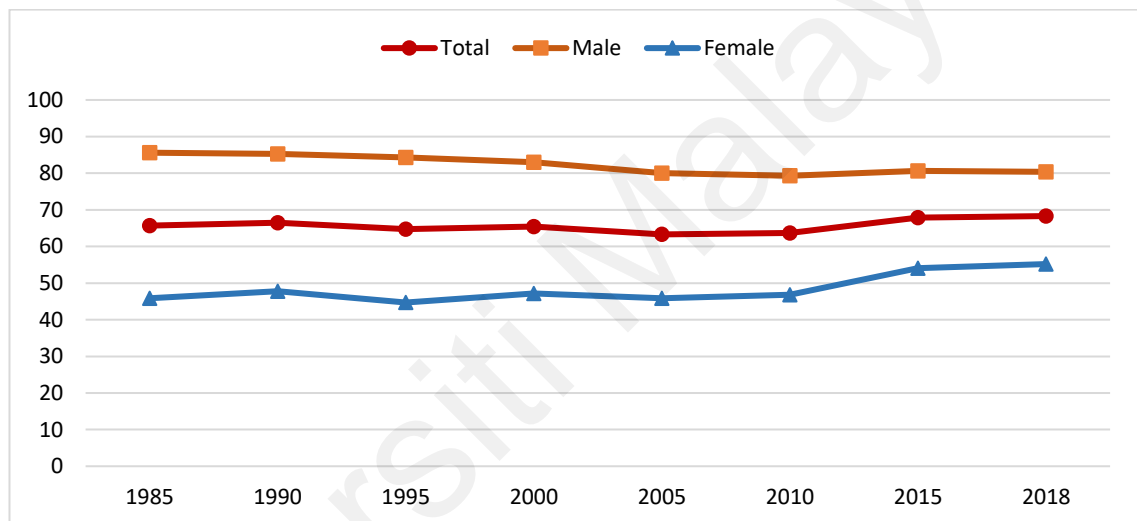
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<sup>3</sup> Enrolment in primary, secondary, and tertiary levels of education.

## 2.3 Trends in Labour Force Participation in Malaysia, 1985 - 2018

### 2.3.1 Labour Force Participation Rate among Men and Women

The total number of employed persons in Malaysia rose from 5.7 million in 1985 to 14.8 million in 2018 (DOSM, 2019a). On the contrary, the unemployment rate declined from 5.6 percent to 3.3 percent for the same duration. The transition from agricultural-based economy post-independence to industrialised sector has enhanced participation in the labour force.



Source: Author, based on data from the Department of Statistics Malaysia.

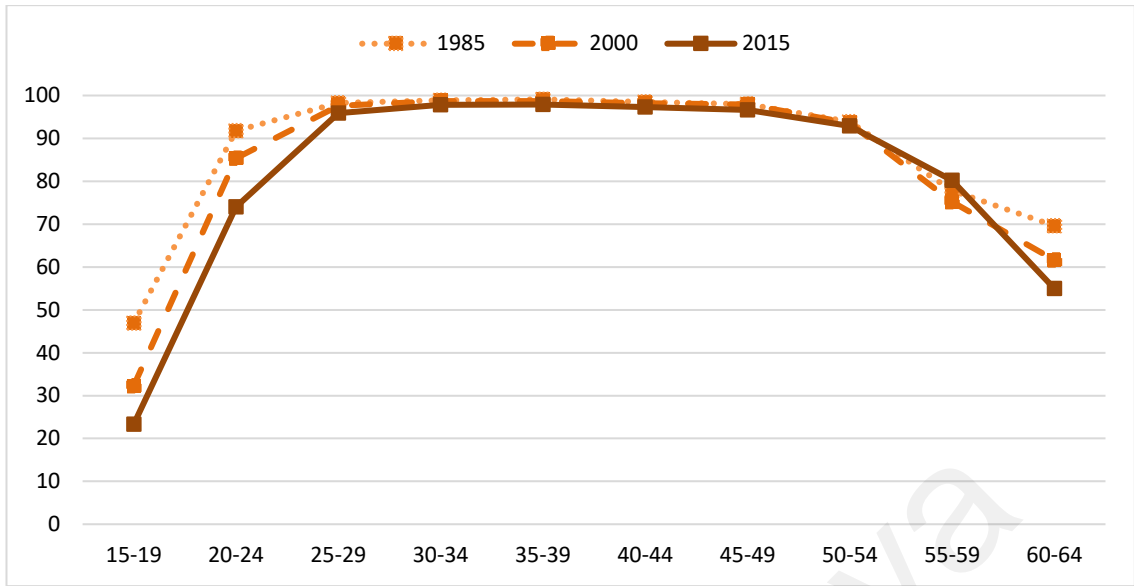
**Figure 2.2: Labour force participation rate by gender, Malaysia (1985-2018)**

Referring to Figure 2.2, the labour force participation rate fluctuated between 65.7 percent in 1985 and 68.3 percent in 2018. A slight decrease was noted in participation post-economic downturn 1997, which showed a slump to 64.3 percent in 1998, further dropping to 64.2 percent in 1999. Nonetheless, the participation rate increased slightly in the year 2000 as a result of economic recovery. The small proportion of women in the labour market from 1970 to 1990 was primarily due to a lack of appropriate skills acquired by female employees and conflicting demands between the workplace and the home (EPU, 1991). Furthermore, the shortage of adequate and high-quality childcare

facilities and inflexible working environments were two explanations for the poor presence of women in the labour force in the 1990s. (EPU, 1996).

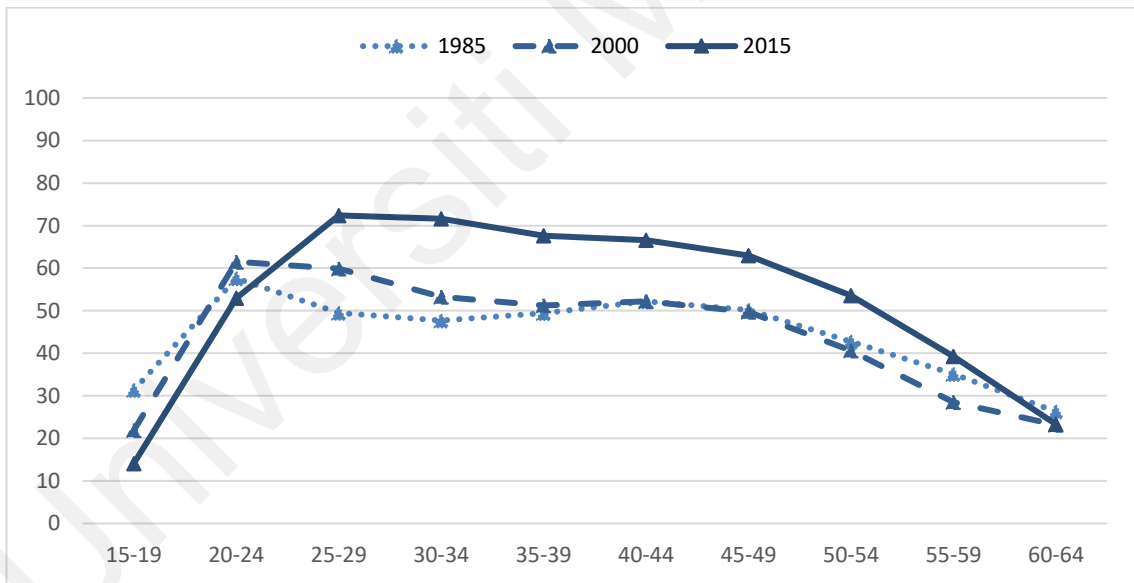
On the contrary, the male labour force participation rate had declined slightly from 85.6 percent in 1985 to 80.4 percent in 2018, wherein growth from 45.9 percent to 55.2 percent was observed for the female labour force participation rate within the same period. Although this increment appeared to be rather modest, it did surpass 50 percent for the first time in 2013. The decline in fertility rate and the increased age of marriage had contributed to this increment in the labour market participation among women (Ahmad, 1998). Structural changes in economic activities and equal education and training opportunities have elevated women's independence and status, thus improving women's participation in the labour market (Yahaya, 2009).

Unfortunately, such improvement achieved in respect of women's tertiary level of education did not reflect their participation in the labour force (Abdullah et al., 2008; Nagaraj et al., 2014). Female graduates seemed to have a higher probability of participation in a low-paid job or unemployed, especially when compared to male graduates (Nagaraj et al., 2014). Despite the increased women's participation in the labour force, their participation rate is still lower than that of men. This indicates the existence of the gender gap in labour market participation in the past decades. In fact, the slight decrease in the gender gap is ascribed to the decline in the labour force participation for males in the past decade.



Source: Author, based on data from the Department of Statistics Malaysia.

**Figure 2.3: Male labour force participation rate by age cohort, Malaysia (1985-2015)**



Source: Author, based on data from the Department of Statistics Malaysia.

**Figure 2.4: Female labour force participation rate by age cohort, Malaysia (1985-2015)**

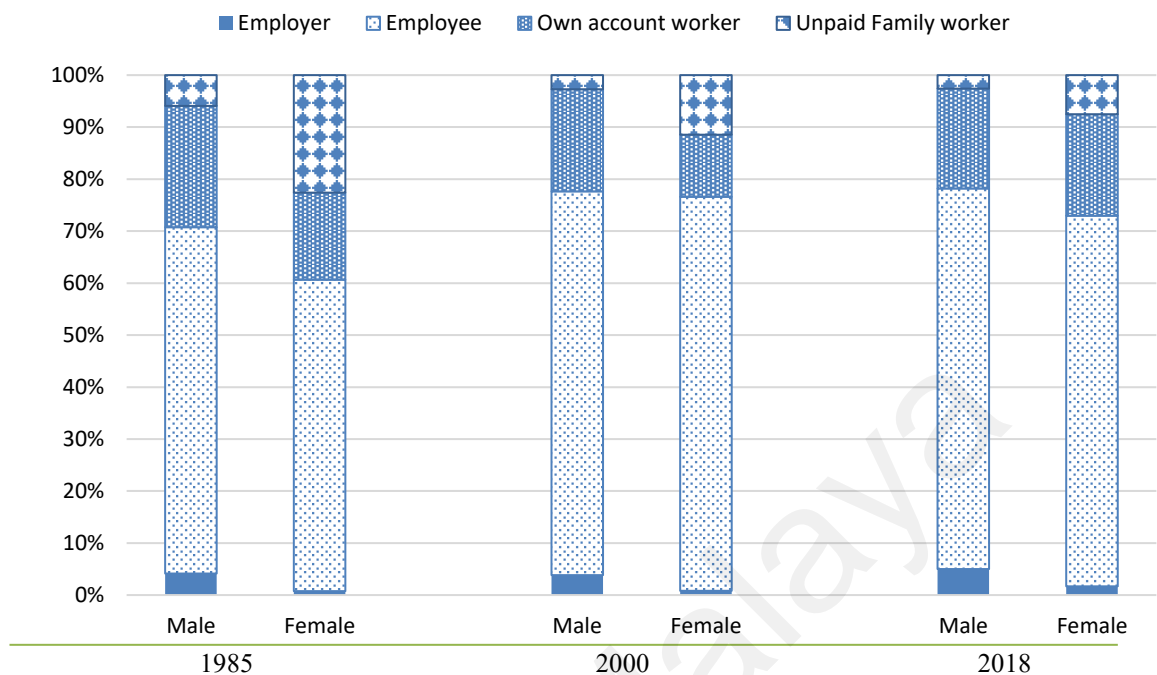
Figure 2.3 and 2.4 illustrate the male and female labour force participation rates by age cohort between 1985 and 2015. The graphs portray the pattern over time with regard to age and the overall trend of labour force participation between men and

women. Men's labour force participation was the highest for the 25-29 age range and stable throughout their adult years prior to a decline during the retirement ages of 55-59. On the other hand, women appeared to be active in the labour market at 20-24 and 25-29 age ranges. However, Figure 2.4 shows that a decline is noted for the subsequent age cohort after reaching its peak.

Unlike other East Asian countries, women's labour force participation profile in Malaysia is single-peaked. Generally, women's labour force participation profile is double-peaked, as higher participation is commonly observed before marriage that later declines due to their decision to exit the labour market because of marriage and childbearing purposes. Women tend to re-enter the labour market at a later age or once their children are in school. The single-peaked labour force participation profile for women in Malaysia signifies that they do not always re-enter once they leave the labour market. Women experience higher rates of participation at younger ages, which then falls after reaching the peak.

In 1985, 79.0 percent of the population outside the labour force was female, with a slight decrease observed throughout the years to 68.3 percent in 2018 (DOSM, 2019a). In fact, 60.2 percent of women were reported to be outside the labour force due to housework, family, and community commitments in 2018 (DOSM, 2019a), whilst only 3.6 percent of men were reported to be outside the labour force for the same reasons. Within the same year, schooling also emerged as one of the main reasons men were outside the labour force at 63.1 percent compared to women at 31.4 percent (DOSM, 2019a). As mentioned earlier, lower labour force participation among men could stem from education participation, hence narrowing the gender gap in the labour force participation rate. Besides, 48.4 percent of the women's population outside the labour force claimed to possess working experience.

### 2.3.2 The Employment Status and Occupational Structure by Gender



Source: Author, based on data from the Department of Statistics Malaysia.

**Figure 2.5: Employed males and females by employment status, Malaysia (1985-2018)**

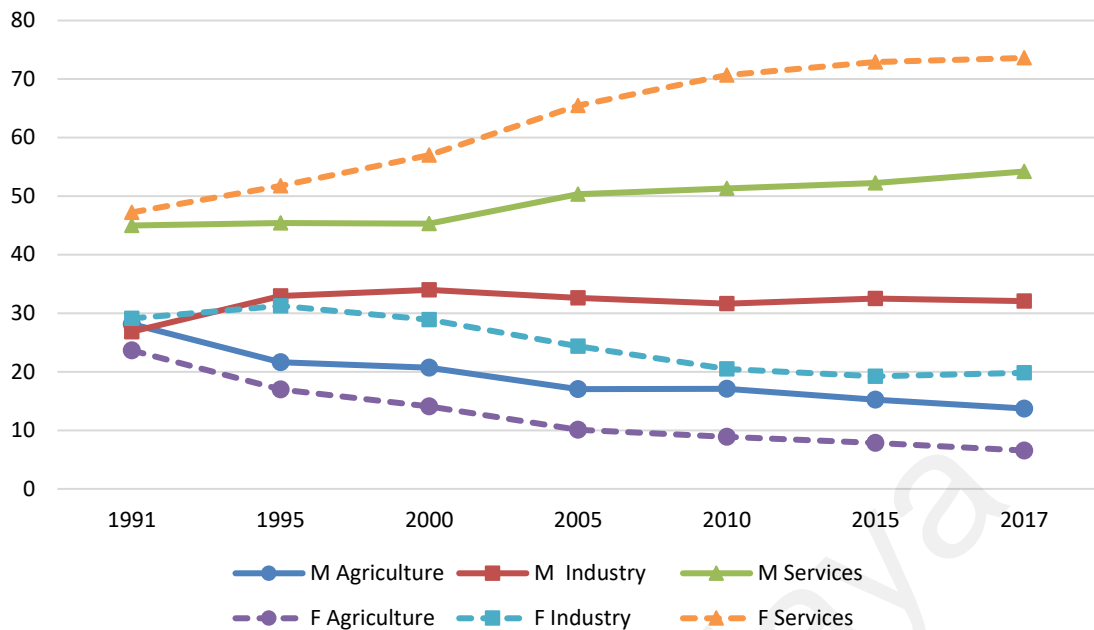
Figure 2.5 display employed persons based on gender and employment status. The proportion of women as unpaid family workers decreased from 22.6 percent in 1985 to 7.5 percent in 2018. Nevertheless, these figures are still higher than men at only 5.9 percent in 1985 and 2.3 percent in 2018. This suggests that the majority of unpaid household workers were women. Another point worth highlighting refers to the limited role of women as employers. Again, a significant gap can be observed, as 5.0 percent of employers in 2018 were men, whilst only 1.7 percent had been women for that same year.

With reference to employees, the variance in wage between male and female workers was also an issue in Malaysia, where male workers were typically paid more than female workers. For instance, in 2018, the mean value of the monthly salary was RM



3,174 for males but RM 2,959 for females (DOSM, 2019b). As a matter of fact, the wage difference appeared to be more substantial in educational attainment. In the same year, the mean value of monthly salary for men without formal education was RM 1,682, whereas RM 1,154 for women. Male employees with a tertiary level of education earned an average of RM 5,006, but their female counterpart only received an average of RM 4,124 (DOSM, 2019b). Notably, the difference in wage was nearly RM 900 for employees with a tertiary level of education.

In terms of occupational segregation, women's administrative and managerial occupations were less than one percent (EPU, 1991). However, the Sixth Malaysia Plan witnessed the advancement of women in higher-paying positions. The share of women in professional and technical jobs increased from 9.4 percent in 1990 to 13.5 percent in 1995 (EPU, 2001). A similar increasing trend was noted for administrative and managerial positions. From 2000 to 2005, a more substantial percentage of women became involved in high-paying jobs due to a higher standard of educational attainment (EPU, 2006). The national policy on women had successfully increased the representation of women in management positions from 18.8 percent in 2004 to 32.5 percent in 2014 within the public sector, while from 13.5 percent to 26.2 percent for the same period in the private sector (EPU, 2016).



**Source:** Author, based on data from World Development Indicators.

**Notes:** The agriculture sector consists of activities in agriculture, hunting, forestry, and fishing; the industry sector consists of mining and quarrying, manufacturing, construction, and public utilities; the services sector includes wholesale and retail trade and restaurants and hotels; transport, storage, and communications; financing, insurance, real estate, and business services; and community, social, and personal services.

**Figure 2.6: Employment in agriculture, industry, and services (% of male and female employment), 1991 - 2017**

As for the occupational structure, Figure 2. shows that the participation of men in the industry and services sectors was high and stable throughout the years. Most women were involved in the low-skilled agricultural sector or assumed low paying, semi-skilled roles in the industrial sector. The shift in the nature of employment among female employees in Malaysia is indeed evident. The proportion of women working in the agricultural sector decreased from 38.0 percent in 1975 to 6.8 percent in 2016 (DOSM, 2017; EPU, 2001). Women's participation in the agricultural sector slumped from 23.6 percent in 1991 to 6.5 percent in 2017. The export-oriented industrialisation initiated in the 1970s had benefited women more than men through the provision of employment opportunities in the manufacturing sector (Ahmad, 1998). The proportion of women in the services sector also increased from 47.2 percent in 1991 to 73.6 percent in 2017.

## 2.4 The Roles of Religion, Region, and Culture

The preceding section discussed the trends of labour force participation in Malaysia, particularly highlighting the persistent gender gap and the issue of labour market dropouts among women. This section aims to elaborate on the roles of religion, region, and culture by focusing on women's status. Malaysia is a country with a multicultural and multi-ethnic society comprised of three major ethnic groups; the Malays, the Chinese, and the Indians. Based on the Current Population Estimates (DOSM, 2018a), the total population in Malaysia stood at 32.4 million in 2018, of which the *Bumiputeras* (sons of soil) made up 69.1 percent of the total, followed by the Chinese (23.0 percent), the Indians (6.9 percent), and others (1.0 percent) (DOSM, 2018a)<sup>4</sup>. Islam is the national religion in Malaysia, and all Malays are Muslims. The majority of Chinese are Buddhists, while most Indians are Hindus. The diversity notwithstanding, the social customs specific to the Malays, who are predominantly Muslims, are depicted. Next, marriages and gender roles are discussed. Lastly, since Malaysia consists of 13 states<sup>5</sup> and three federal territories, regional variations in cultural practices, socio-demographic profiles, and economic indicators are presented separately.

### 2.4.1 The Malays, *Adat*, and Islam

For the Malays, the term *adat* denotes culture and tradition. *Adat* reflects an assortment of ideas, rules, and codes of behaviour, which refers to a unit formed as legitimate or right, applicable, or necessary (Karim, 1992, p. 14). It governs the values, norms, and behaviour of individuals. The Malay *adat* has been in existence long before

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<sup>4</sup> The Bumiputeras refers to sons of soil, are mainly made up of the Malays, whereas the Chinese and the Indians came to Malaysia as migrants before the country achieved independence.

<sup>5</sup> Malaysia is divided into West and East Malaysia. West Malaysia, also known as Peninsular Malaysia, consists of four regions namely the Northern Region: Perlis, Kedah, Penang, Perak; the East Coast Region: Kelantan, Terengganu, Pahang; the Central Region: Selangor, the Federal Territory of Kuala Lumpur and Putrajaya; and the Southern Region: Negeri Sembilan, Malacca, Johor. Meanwhile, East Malaysia consists of Sabah, Sarawak, and the Federal Territory of Labuan.

the arrival of Islam in Malaysia (Mutalib, 2008). Prior to the arrival of Islam, Hindu customs had influenced the *adat* (Nagata, 1974; Karim, 1992)<sup>6</sup>. Later, Islam influenced the practice of the Malay culture and the way the Malays live their life (Nagata, 1974).

As for language, the Malays speak the Malay language (*Bahasa Melayu*). However, in practice, different regions or states in Malaysia speak in different dialects and have varied cultural practices, as reflected in their architecture, traditional attire, cuisine, artistic expressions, and kinship system (Gomes, 1999). The Chinese, on the other hand, are not united in terms of religion. The establishment of various cultural associations and practices have led to the further diversification of the Chinese community. Meanwhile, the Indians are more diverse than the Chinese community in terms of culture and language (Gomes, 1999).

Theoretically, Islam may accelerate tensions within the bilateral mode, emphasising formal ideology and female exclusion. Nonetheless, since these variations are delivered to the eyes of the Malays through *adat* instead, its mode of shaping power and gender roles has been significantly more democratic than autocratic (Karim, 1992, p.57). Hence, Islam as a religion is viewed as a core component of the Malays' identity and a form of ethnic differentiation from the non-Malays (Gomes, 1999). The patriarchal descent of Islamic elements has been accepted and incorporated into the Malay bilateral kinship system in terms of marriages, property division, political selection, and religious functions (Kling, 1995). Along those lines, the Malay family structure disallows the typical patriarchal patterns of patrilineal descent, the patrilocal residence of newly married couples, and preference for male children (Hirschman, 2016). Therefore, Islam and *adat* serve as the foundation of Malay beliefs and ideologies (Kling, 1995).

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<sup>6</sup> For example, the act of which the bride and groom sit on a dais during the wedding ceremony (*bersanding*) (Nagata, 1974).

The variation among Malays in terms of the kinship system is composed of the well-known customary laws of *Adat Perpatih*<sup>7</sup> and *Adat Temenggung* (Gomes, 1999). *Adat Perpatih* refers to the customary law that governs the people in Negeri Sembilan, which centres on matrilineal tradition, while *Adat Temenggung* is the customary law that governs the Malay people in states other than Negeri Sembilan structured by patrilineal descent (Hirschman, 2016). It is noteworthy to highlight that in all other matters, *Adat Temenggung* is “significantly bilateral in principle and content” (Karim, 1987; Karim, 1992, p.62).

As for *Adat Perpatih*, the kinship system is matrilineal, where the customary land<sup>8</sup> is registered under the names of the women in the family, to be passed down matrilineally to the daughters. Upon marriage, the couple’s residence is matrilocal, whereby the husband would be expected to move into the wife’s family (Kassim, 1988; 1992). Inheritance of control of land under *Adat Temenggung* is transmitted to any individual actively involved in the cultivation and economic production of the land, regardless of gender (Karim, 1992, p.62).

Kassim (1988) asserted that during the peasant economies in Negeri Sembilan in the 1960s, women’s contribution towards family income and their control over customary land gave them an advantage over their husbands. This situation, however, changed in the 1980s in the village economy, as women were either unemployed or unpaid family workers. Most women were involved with housework or assumed care responsibilities towards their grandchildren and were economically dependent on their husbands. The

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<sup>7</sup> *Adat Perpatih* originates from Minangkabau migrants, Sumatera in the late sixteenth century (Kassim, 1992).

<sup>8</sup> The land is divided into customary and non-customary land. For customary land, the land is inherited by female members in the family (through *Adat Perpatih*), whilst the husband only has usufructuary rights towards it. The non-customary land is registered as Malay reservation land, which is transmitted according to Islamic law of inheritance that gives entitlement of inheritance to both men and women (Kassim, 1988).

integral position of fathers as *wali* (guardian) for their daughters' marriage in Islamic law further signifies their responsibility to take care of their families and children. This has then altered the norm (Kling, 1995)<sup>9</sup> and Islamic law is accepted as being favourable to men over women in terms of land succession (Karim, 1992, p.63). The socioeconomic changes that have taken place seemed to reduce the relevance of *adat*, thus leading to the loss of women's unique position and relative autonomy (Kassim, 1992).

Moving on from the kinship system for the Malays, Ong (1990) provided a lengthy discussion on the conflict between state policies and Islamic revivalism, which intensified gender inequality in Malay society. She added that in the *kampung* (village), prior to state intervention, Islamic laws defined a man's identity through his ability to prepare his sons to be independent of their households after marriage, to control the sexuality of the women in the family (wife and daughters), and to provide economically for the family.

In light of controlling the sexuality of women, strict restrictions were imposed on *Anak Dara* (unmarried women), whereby Islamic teaching emphasises the requirement for them to be modest, bashful, and cover their *aurah*<sup>10</sup>. The daughters were expected to stay close to home and observe cautious distance from kinsmen. Only sex between spouses was permitted, while *khalwat*<sup>11</sup> is banned under Islamic teachings.

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<sup>9</sup> Kling (1995) highlighted that Islamic codes take precedence over *adat*.

<sup>10</sup> *Aurah* refers to parts of the body that cannot be exposed to the public in accordance with the Islamic beliefs – According to the *Shafi'e mazhab* (the school of thought adhered to in Malaysia); all parts of women's body are *aurah* except for her face and both palms. Women are required to wear loose fitting clothes.

<sup>11</sup> Refers to Illicit sex outside wedlock.

On the other hand, the Malay *adat* allows adult women to move freely as petty traders, tend to the cash-crop garden, and become the network bridge between the kin and neighbours in the village (Ong, 1990). Despite the free movement of adult women, they were not allowed to sit in coffee shops or seek men's company. Although the Islamic teachings emphasise the husband's role in handling money, in the *adat*, the married women were in charge of managing money matters in the household (Ong, 1990). Both *adat* practice and kindred relations hindered the rigidity of male authority.

By the late 1970s, the industrialisation era (implemented via state policies) generated volumes of the industrial female labour force, which then defined themselves as not materially or morally dependent on parents or kinsmen (Ong, 1990). More employment opportunities were provisioned for women with the initiation of the NEP (Noor, 1999; Zin, 2014). As a result, this had unintentionally undermined the source of customary male power.

The Islamic resurgence or *dakwah* movement began to develop among the kampung-born and educated Malays due to the NEP. The ABIM<sup>12</sup> (*Angkatan Belia Islam Malaysia* or Islamic Youth Movement of Malaysia) was mainly supported by male and female youths who had migrated into the cities to seek employment and to further their studies (Ong, 1990). Although it was attested that Islamisation is a process of change, it should occur within the framework of guiding principles and traditions (Anwar, 1986). The ABIM members subscribed to the notion that wives should be obedient to their husbands, whereby their primary responsibility and duty must be towards their husbands. They urged for a more gender-stratified social system via more stringent adherence to Islamic values in the *ummah* (Ong, 1990). Through Islamic resurgence,

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<sup>12</sup> ABIM was established in 1971 at the Faculty of Islamic Studies, National University of Malaya and among the major groups leading the *Dakwah* movement in Malaysia. Retrieved from <http://www.abim.org.my/index.php/profil/sejarah-abim.html>

male authority was restored, and the primacy of the domestic domain for women as wives and mothers was reinforced.

The rise in women's participation in the labour force since independence (through industrialisation, urbanisation, and globalisation) had multiple effects. It gradually substituted the traditional family structure with a family structure of dual-earners (Noor, 2009a, p.1), the collapse of the extended family system (Noor, 2009b, p.23; Noor & Mahudin, 2019), increment in paid childcare services, delayed marriage, and decreased infertility (Jones, 2019b). The presence of extended family members was significant in terms of the division of household tasks or childcare activities. An upward trend was also observed in the average marrying age for women. According to Noor (2009b, p.19), the average marrying age for Malay women increased from 17.9 in 1957 to 24.1 in 2004<sup>13</sup>. In 2017, the average marrying age for Muslim women was 26 years old, while 28 for non-Muslim women (DOSM, 2018b).

Islamic resurgence had led to the decline in the divorce rate among Malays due to the insistence on the wife's obedience towards her husband (Ong, 1990). Nevertheless, the divorce rate was still higher amongst Muslims when compared to non-Muslims<sup>14</sup>. In 2017, the divorce rate for Muslim men was at 9.0 percent, but 10.0 percent for Muslim women. On the other hand, the divorce rates for non-Muslim men and women were at 3.2 percent and 3.5 percent, respectively (DOSM, 2018b). One reason contributing to the high divorce rate amidst the Malays was the women's economic independence and empowerment, whereby divorce applications were filed by working women who faced problematic and challenging marriages (Noor, 2009b, p.27).

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<sup>13</sup> The mean age of marriage for Chinese women increased from 22.1 in 1957 to 27.5 in 2004; whilst for Indian women the mean age of marriage increased from 17.9 to 26.8, respectively.

<sup>14</sup> For previous record, see for instance Noor (2009b) that reported the increase in divorce rate for Muslims between 2000 and 2004.



#### 2.4.2 Marriage Traditions and Gender Roles

Back in the 1950s, arranged marriages were the norm, in which the girl should not have any preference concerning the boy that she will marry, whereas the boy may have some say in his choice of wife (Jones, 1981). Arranged marriages were one reason for higher divorce rates for Malays in Kelantan, Terengganu, Kedah, and Perlis; along with other factors including the fact that these states had the most impoverished and rural population, the highest polygamy rate, the least educated, and marriage at an early age. These states were the least influenced by British colonialism, besides the loopholes found in the administration and registration of *talaq* (Jones, 1981).

Over time, arranged marriages were no longer the norm practised by Malay society. Arranged marriages turned rather uncommon, but when it occurs, the preference for ethnic and cultural homogeneity was reflected in the choice of spouse (Karim, 1992, p.133). Even marriages based on romantic attachments and personal choice adhered to similar religious homogeneity (Karim, 1992, p.134). Cross-ethnic marriages are uncommon in Malaysia due to the different religions practised (Jones, 2019b). Although many races live harmoniously in a single society, inter-marriages have not progressed into a common cultural practice (Jones, 2019a).

The number of Muslim inter-ethnic marriages declined from 6,240 to 5,665 (9.2 percent) from 2016 to 2017. Inter-ethnic marriage is high only when the *Bumiputeras* marrying spouses from the “others” group, with the Bumiputera being either the groom (37.8 percent) or the bride (45.1 percent) (DOSM, 2018b). It is noteworthy to highlight that the “others” group includes non-citizens. The probable reason for this stems from the spouse who practices the same religion despite having different nationality. Meanwhile, the percentage of marriages between a *Bumiputera* and a Chinese or Indian spouse is below 5.0 percent. This lower rate of inter-marriages among Malays is

attributed to the necessity of religious conversion in cases of Muslim-to-non-Muslim marriages (Hak, 2012). On the contrary, the more substantial diversity of ethnic groups in East Malaysia resulted in inter-marriages being common (Tey, 2007).

The challenges of inter-ethnic marriages arise due to social factors, including intervention from a third party within the family circle, stereotypes and prejudices held by mainstream society, and legislative and bureaucratic dilemmas. Besides, parents' negative reaction towards inter-ethnic marriage is based on the negative stereotypes linked with the partner's ethnicity (Pue and Sulaiman, 2013). The issue of stereotypes and prejudices towards partners hailing from a different state was asserted by Karim (1992, p.135), ascribed to the variation of *adat* in each state<sup>15</sup>. Those who enter into inter-ethnic marriages may face continuous misunderstanding, and eventually, divorce. This stems from intense social parental pressure, as stability can only be brought to the marriage after both the couple and the parents achieve mutual adjustment and compromise (Karim, 1992, p.134).

The Islamic family law provides laws that regulate marriage, divorce, division of property, alimony, and child custody for Muslims (Kling, 1995)<sup>16</sup>. On the other hand, the Law Reform (Marriage and Divorce) Act 1976 was imposed in 1982 to govern marriage-related matters for non-Muslims. Some provisions enacted to protect non-Muslim women were the abolishment of polygamy, the imposition of a minimum age of marriage, and compulsory marriage registration (Reddy, 1995; Siraj, 1994). Prior to this

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<sup>15</sup> In his book, Karim (1992) stated that stereotypes are commonly directed towards women, for instance, Perlis and Negeri Sembilan women are dominant and control household finance, Johor women are unapproachable and not very accommodating to the family of the husband, while Kelantan women are obsessed with jewellery and use spells and potions to keep her husband in tow and once she captures another man with more wealth or social standing, she will leave the husband. This is in view of the society from Mawang Village situated at the Seberang Perai – Kedah Border.

<sup>16</sup> The legal system in Malaysia is comprised of civil law and Islamic law (*Shariah*). The *Shariah* law only applies to Muslims as it is under the jurisdiction of the states, and the State Islamic Religious Council was established in each state. The *Shariah* law governs matters pertaining to mosques, offences on religious matters, and family law (Siraj, 1994).

legislation, polygamy was allowed in all other customary laws, except Christianity (Reddy, 1995). As such, the civil law was amended and repealed to move towards equality between men and women (Anwar, 2005, p.127).

Some studies have looked into the injustice and inequality faced by Muslim women under Islamic family law (Anwar, 2005; Anwar and Rumminger, 2007). The minimum age of marriage of 16 for women is lower than the age of 18 for men. Marriages under the minimum age are possible with the approval of the *shariah* judge. On the contrary, Section 10 of the Law Reform (Marriage and Divorce) Act 1976 for the non-Muslims stipulates the minimum age of marriage for both genders to be 18 years old, whereby girls over the age of 16 may request marriage authorisation from the chief minister. Regardless of age, a woman can only marry with her wali (guardian) consent, while no consent from anyone is required for a man to marry. In the absence of a *wali* by *nasab* or refusal of *wali* to give consent without sufficient reason, a *wali raja* may be appointed by the *shariah* judge. The *shariah* court has the right to instruct a man to provide maintenance to his wife or former wife except in the case of *nusyuz*.<sup>17</sup>

In conventional Islamic law, the practice of polygamy is viewed as a man's right, in which he can marry up to four wives. The requirement for a man to give fair and just treatment to his wives relies on the moral conscience of the husband but not imposed as a legal requirement (Jones, 1981; Noor, 2006). Under Section 19 of the Kelantan Islamic Family Law Enactment No. 1 of 1983, a man was only required to obtain written permission from a *Qadhi* or *Shariah* Judge for permission to enter into

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<sup>17</sup> *Nusyuz* refers to an action where the wife unreasonably refuses to obey the lawful wishes or commands of her husband. The wife will no longer be entitled to receive maintenance from the husband, when (i) she withholds her association with her husband, (ii) she leaves her husband's home against his will, or (iii) she refuses to move with him to another home or place.

polygamy<sup>18</sup>. This enactment has been criticised for its failure to require a man to inform his present wife/wives of his intention to marry and obtain their permission, failure to require a man to provide evidence of his financial capability to enter into a polygamous marriage (Siraj, 1994)<sup>19</sup>.

In light of the dissolution of marriage, a man can divorce his wife on his own without going through the court system. The Islamic law reckons the right of the husband to *talaq* (repudiation) (Noor, 2007). *Talaq*, once uttered by the husband, becomes valid, even without any just cause. Another way to dissolve a marriage is through *ta'liq*<sup>20</sup> or stipulation. Although women may apply to obtain *fasakh* (annulment), it was not easy to do so, as it requires specific conditions that must be satisfied before the *Qadhis* can grant the *fasakh*<sup>21</sup>. On the other hand, *khuluq* refers to “*tebus talak*” or divorce by redemption. This happens when the wife applies for a divorce from her husband by paying money or making payment in other forms of property.

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<sup>18</sup> Polygamy refers to a situation where a man is married to more than one wife at a time.

<sup>19</sup> In 2002, the law was amended so that the application of polygamy must fulfil at least five conditions: (i) the proposed marriage is "just and necessary", (ii) the applicant has the financial means to support his existing and future wives, (iii) the consent of the current wife, (iv) the applicant is capable of providing equal treatment to his wives as required under the Islamic law, and 5) the proposed marriage will not cause "darar syarie" (harm under shariah law) to the existing wife or wives [Section 26, Kelantan Islamic Family Law No. 6 of 2002].

<sup>20</sup> The Department of *Shariah* Judiciary Malaysia defined *ta'liq* as a promise expressed by the husband after the solemnisation of marriage in accordance with *Hukum syara'*. Stipulation can be made on the failure of a husband to provide maintenance (more than four months) and due to physical abuse suffered by the wife. If either of these conditions is breached, the wife can submit a request for divorce to the *Shariah* court, whereby if proven; the wife is entitled to one *talaq*.

<sup>21</sup> The conditions of *fasakh* are when: a) whereabouts of the husband are unknown for a period of more than a year, b) the husband has neglected or failed to provide for the wife's maintenance for a period of three months, c) the husband is sentenced to imprisonment for a period of three years or more, d) the husband has failed to perform, without reasonable cause, his marital obligations (*nafkah batin*) for a period of one year, e) the husband is impotent at the time of marriage and remains so and she is not aware at the time of the marriage that he is impotent, f) the husband is insane for a period of two years or is suffering from leprosy or vitiligo or is suffering from a venereal disease in a communicable form, g) the wife, having been given in marriage by her *wali Mujbir* before she attained the age of *baligh*, repudiated the marriage before attaining the age of eighteen years, the marriage not having been consummated, and h) in the case where husband treats the wife with cruelty [Section 53, Islamic Family Law (Federal Territory) Act 1984].

The patrilineal descent of Islam empowers a male to receive a larger share of the property than a female in terms of property division, as laid down by the rules of *faraid* (Islamic law of inheritance). The son of a deceased is entitled to receive more than the mother or wives of the deceased (Kling, 1995). As for the deceased children, the sons are entitled to receive double the share of the daughters (Ong, 1990; Razimi and Shahril, 2016<sup>22</sup>).

Women across Asian countries are strongly committed to family responsibilities assigned following gender roles (Abdullah et al., 2008). Asian cultures are found to be 'collective and familial', whereas women are seen as the ones responsible for the family, which means they carry a majority of household and child responsibilities (Hofstede and Bond, 1988). Moreover, Islam and Asadullah (2018) in comparative study of Malaysian, Indonesian, Pakistani and Bangladeshi school textbooks concluded that women characters were related largely with traditional and low-wage jobs and with more passive personality characteristics. Typically, the Malays are known to have a bilateral family structure, while the Chinese and Indians have a patriarchal family culture (Jones, 2019b; Teh et al., 2013). The strong presence of patriarchy among Malays is reinforced by Islamic orthodoxy (Jones, 2019b). Nevertheless, the bilateral feature of the family structure has allowed Malay women to maintain close ties with their own family.

As for traditional gender division in Malaysia, all Malays, Chinese, and Indians have long subscribed to men's responsibilities as the breadwinner for the family, and women should focus on nurturing children (Jones, 2019b). However, the Malays were more inclined to adhere to the traditional views on gender roles through the difference in

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<sup>22</sup> Razimi and Shahril (2016) provided the reasoning behind the larger entitlement of men to receive inheritance due to bigger responsibilities held by them, namely to give dowry for marriage, to provide living expenses to his wife and family, and to protect women from oppression.

child-rearing practices and their attitudes towards participation in the labour market (Aziz, 2011). The role of Malay men as the primary financial providers and the primary role of women to handle childcare and domestic responsibilities has never been questioned religiously and culturally (Noor, 2007). Thus, women's role in employment is perceived to be secondary to men (Noor, 1999). In the case of conflict between career and family, a woman's priority is always her family due to the stereotyped family-oriented role of women (Abdullah et al., 2008). Besides, the fertility rate for Malays has been the highest among other ethnicities<sup>23</sup>.

The labour market demographic in Malaysia changes with increased participation of married women, resulting in increased dual-earners partners (Ahmad, 2005). Higher economic need push both husband and wife to work due to financial burden. Furthermore, the collapse of the extended family system has caused problems among the young and dependents due to the lack of support from the family (Noor, 2009b, p.23; Noor and Mahudin, 2016). Working women continue to bear the primary responsibilities in handling household chores and care responsibilities (Noor, 2006). Hence, they are prone to experience conflict and stress due to the dual responsibilities they face (Noor, 2003). Ahmad (1997) highlighted that married working women in Malaysia encounter work-family conflict, which has been linked to decreased job and life satisfaction.

A study has shown that family support, particularly husband, plays a significant role in helping women managing multiple roles; however, men's role as the primary breadwinner justifies their lesser participation in household chores (Noor, 2006). Furthermore, women do not expect to share household chores with their husbands

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<sup>23</sup> In 2018, the fertility rate for the Malays was 2.4, followed by Indians at 1.2 and Chinese 1.1 (DOSM, 2019c).

(Yacob and Noor, 1993). Abdullah et al., (2008) found that Malay women subscribed to traditional cultural values even after five decades of independence, as they are expected to be strong as a mother and remain obedient as a wife, especially those residing in rural areas.

### **2.4.3 Regional Variation in Socio-Demographic, Economics, and Other Indicators in Malaysia**

The discussion in the previous section revolves around the Malays, as well as the role of *adat* and Islam as the way of life for this ethnic majority. It depicts the changes brought about by the industrialisation process to the position of women in the economy and changes in the family institutions. Marriages and gender roles across ethnicity are briefly discussed. All of the above have affected women's labour market participation decisions. Apart from Malaysia's heterogeneous population differences, this section explores the possible distinct variances across regions in various categories.

**Table 2.2: Socio-demographic, economic participation, and other indicators of Malaysia<sup>24</sup>**

Indicators		Kelantan	Terengganu	N.Sem- bilan	Pahang	Melaka	Perlis	Kedah	Johor	Selangor	P.Pi- nang	Perak	Sabah	Sarawak
Socio-demographic factors	Urban population (%) <sup>a</sup>	42.4	59.1	66.5	50.5	86.5	51.4	64.6	71.9	91.4	90.8	69.7	54.0	53.8
	Dependency Ratio <sup>h</sup>	57.2	55.7	44.4	48.0	44.8	49.8	47.9	43.9	39.7	38.5	46.8	36.9	44.0
	Fertility rate (per 1000 women aged 15-49 years) <sup>d</sup>	3.2	3.2	2.1	2.2	1.9	2.3	2.3	2.1	1.7	1.4	1.9	1.4	1.7
	Poverty Rate <sup>g</sup>	0.4	0.4	0.2	0.2	0.0	0.1	0.2	0.0	0.0	0.1	0.2	2.9	0.6
	Male aged 15 years and above with higher education (%) <sup>b*</sup>	72.0	69.3	67.7	67.5	67.5	75.4	69.8	71.9	70.4	67.9	62.4	55.6	52.8
	Female aged 15 years and above with higher education (%) <sup>b*</sup>	72.4	71.5	68.4	68.9	68.6	76.2	71.2	73.7	72.5	68.7	64.8	57.0	57.6
Economic Participation	Male labour force participation rate (%) <sup>c</sup>	74.2	75.6	77.4	81.3	76.7	78.4	76.4	81.8	82.5	79.5	76.0	85.0	82.6
	Female labour force participation rate (%) <sup>c</sup>	46.5	44.2	53.1	49.5	56.3	47.1	50.1	54.4	69.6	55.9	50.0	49.7	51.5
	Female Employment by type (%) <sup>c</sup>													
	1. Employer	1.0	2.5	1.3	2.1	1.7	3.9	1.2	1.4	2.3	1.3	1.4	1.8	0.9
	2. Employee	58.0	67.6	75.2	63.5	76.5	65.1	67.2	73.2	70.5	85.2	73.2	67.9	66.9
	3. Own-account worker	27.5	21.1	15.5	20.6	15.9	21.0	18.8	17.4	24.4	9.5	18.3	20.9	16.1
	4. Unpaid family worker	13.5	8.8	8.0	13.8	5.9	10.0	12.8	8.0	2.8	4.0	7.1	9.5	16.1
Male unemployment rate (%) <sup>i</sup>	3.2	4.7	2.6	2.2	0.7	2.6	2.8	2.8	2.7	2.4	2.7	5.3	3.0	
Female unemployment rate (%) <sup>i</sup>	5.3	4.9	3.5	3.3	1.6	4.7	3.1	3.3	2.9	1.9	4.2	6.7	3.5	

<sup>24</sup> Federal territories are excluded. Due to the small population size of Perlis (0.8 percent), it is excluded from the discussion.



Indicators	Kelantan	Terengganu	N.Sem-bilan	Pahang	Melaka	Perlis	Kedah	Johor	Selangor	P.Pi-nang	Perak	Sabah	Sarawak
Ethnic groups in Malaysia (%) <sup>h</sup>													
1. Bumiputera	96.0	97.1	62.8	80.5	68.8	89.1	79.8	59.9	59.6	46.2	59.1	83.7	75.5
2. Chinese	3.1	2.4	21.9	14.9	24.8	7.7	12.4	32.5	27.0	43.1	28.9	11.2	23.9
3. Indians	0.3	0.2	14.9	4.2	5.8	1.3	6.8	7.0	12.6	10.4	11.6	0.5	0.3
4. Others	0.6	0.3	0.4	0.4	0.6	1.9	1.0	0.6	0.8	0.3	0.4	4.5	0.3
Others													
Religion (%) <sup>a</sup>													
Islam	95.2	96.9	60.3	74.9	66.1	87.9	77.2	58.2	57.9	44.6	55.3	65.4	32.2
PAS parliamentary win (%) <sup>e</sup>													
1. 2013	64.3	75.0	0	7.1	0	0	6.7	0	13.6	0	4.2	0	0
2. 2018	64.3	75.0	0	0	0	0	20.0	0	0	0	0	0	0

**Sources:**

<sup>a</sup> Population Distribution and Basic Demographic Characteristics 2010.

<sup>b</sup> Education and Social Characteristics of the Population 2010. Note: Literacy rate is among Malaysian citizens aged 15-64. \* Includes PMR/SRP/LCE and above.

<sup>c</sup> Labour force survey report 2018.

<sup>d</sup> Vital Statistics Malaysia 2017.

<sup>e</sup> Election Commission of Malaysia. Note: Total parliamentary seats are 222.

<sup>g</sup> Household Income and Basic Amenities Survey 2016.

<sup>h</sup> Current Population Estimate 2018. Notes: Estimated value for 2018.

<sup>i</sup> Department of Statistic Malaysia, labour force survey time-series data, 2018.

Table 2.2 portrays the various indicators for Malaysia. Referring to the socio-demographic indicators for Peninsular Malaysia, Kelantan (42.4 percent), Pahang (50.1 percent), and Terengganu (59.1 percent) each had an urban population of below 60 percent. At the same time, Selangor (91.4 percent), Pulau Pinang (90.8 percent) and Melaka (86.5 percent) have the highest urban population rate. Furthermore, both Kelantan and Terengganu reported the highest poverty rate of 0.4 percent for Peninsular Malaysia. The two states also recorded the highest fertility rate at 3.2 and the highest dependency ratio<sup>25</sup> (61.1 percent in Kelantan and 59.2 percent in Terengganu). However, not much variation was noted across the regions for education<sup>26</sup>. As depicted in Section 2.2, Malaysia has substantially improved and achieved parity in terms of educational attainment.

In relation to economic participation, the male labour force participation for all states exceeded 70 percent. Although Malaysia's female labour force participation rate has been generally constant over time, a significant variation was observed for Kelantan and Terengganu. The rate of female labour force participation in Terengganu was at 44.2 percent in 2018, which was the lowest in Malaysia, and followed by Kelantan ranked at the second-lowest at 46.5 percent. The rate was far below Malaysia's female labour force participation rate of 55.2 percent for that same year<sup>27</sup>.

Selangor recorded the highest male (82.5 percent) and female (69.6 percent) labour force participation rates. This is attributed to the fact that Selangor has been the main driver of growth in Malaysia by being the major contributor to the national gross

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<sup>25</sup> Dependency ratio is the ratio of the number of persons below the age of 15 years and the number of persons aged 65 years and over to the number of persons aged 15–64 years (DOSM, 2010).

<sup>26</sup> The literacy rate is high in Malaysia (over 92.5 percent for all states).

<sup>27</sup> Both states recorded the highest female unemployment rate, with Kelantan being the highest at 5.3 percent and followed by Terengganu at 4.9 percent.

domestic products (GDP), which was recorded at 23.7 percent in 2018 (DOSM, 2019c). In the same year, Terengganu and Kelantan were among the lowest contributors to the national GDP at 2.6 percent and 1.8 percent, respectively. In fact, Kelantan recorded the lowest GDP per capita at RM13,668<sup>28</sup> in 2018 (DOSM, 2019c). Kelantan, Kedah, Terengganu and Pahang had the highest combination of women concentration as own-account workers and unpaid family workers.

Another salient feature displayed in Table 2.2 is the ethnicity distribution across the states in Malaysia. East Malaysia (Sabah and Sarawak) has a diverse population in terms of ethnicity. Sabah alone has 31 ethnic groups and over 80 spoken dialects (Gomes, 1999).<sup>29</sup> Similarly, Sarawak has various ethnic groups and diverse cultural practices. On the contrary, the population distribution shows that Kelantan and Terengganu had a high concentration of *Bumiputeras* at 96.0 percent and 97.1 percent, respectively, for 2018. The two states appeared homogenous in terms of ethnicity, with over 95 percent of the population are Muslims.<sup>30</sup>

The earlier discussion on Malaysia's economic development (Section 2.2), labour force trends (Section 2.3), and regional variation in this section shows that Malaysia's economy and society have undergone significant transformations. The changes also potentially contribute to the country's demographic shift. For instance, urbanization, strong economic growth, a lowering infant mortality rate, greater education and female employment participation, delaying marriage and childbirth, and increased contraceptive use resulted in the decline in Malaysia's fertility rate (Tey, 2020). The

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<sup>28</sup> The GDP per capita at national level was at RM 44, 682 (DOSM, 2019c).

<sup>29</sup> As mentioned in Section 2.2, *Bumiputera* refers to the sons of soil, for Peninsular Malaysia it is dominated by Malays, while East Malaysia encompasses the natives of Sabah and Sarawak, thus reflecting a more diverse population.

<sup>30</sup> The data for distribution on religion is for year 2010 (the latest available data based on Population Distribution and Basic Demographic Characteristics 2010). As mentioned earlier, a majority of *Bumiputera* in Peninsular Malaysia are Malays and therefore, Muslims.

total fertility rate for Malaysia has declined from 4.9 in 1970 to 1.8 in 2019 (DOSM, 2020).

However, in the case of Malaysia, the fertility rate differ across ethnicity, of which the Bumiputera's fertility rate falls gradually compared to the Chinese and Indian (Govindasamy and DaVanzo, 1992; Tey, 2020). Tey et al. (2011) concluded that the ethnic fertility disparities in Peninsular Malaysia are due to younger marriage ages and lesser contraception use among Malays compared to non-Malays. Moreover, previous studies found a negative relationship between fertility and female labour participation (Hartani et al., 2015; Shittu et al., 2019) with more significant adverse effects among Bumiputera women compared to non-Bumiputera (Lim, 2017). Therefore, from the data in Table 2.2, both Kelantan and Terengganu have the highest concentration of the Bumiputera. Thus, as expected, they have the highest fertility rate and lowest women labour force participation compared to other states.

Another indicator highlighted in Table 2.2 is the Islamic Party of Malaysia (PAS) parliamentary win. PAS has ruled Kelantan since the 1990s, while Terengganu from 1999 to 2004. In the recent 14<sup>th</sup> Malaysian general election held in 2018, PAS under *Gagasan Sejahtera* (GS)<sup>31</sup> coalition had successfully retained its power in Kelantan and had managed to recapture Terengganu. As a result, PAS won 9 out of 14 seats in Kelantan at the parliamentary level and 6 out of 8 seats in Terengganu during the 2018 general election. In addition to Kelantan and Terengganu, PAS also have gain power in Kedah.

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<sup>31</sup> *Gagasan Sejahtera* (GS) denotes a coalition between PAS with two other parties, IKATAN and BERJASA.

#### 2.4.4 The States of Kelantan and Terengganu

The discussion in the previous section highlights the regional variation in socio-demographic, economics, and other indicators in Malaysia, and it shows distinct features of Kelantan and Terengganu. Both states have the highest concentration of Bumiputera with over 95 percent of the population. It also has low urban population shares, the highest poverty rate, and the fertility rate. Additionally, as highlighted earlier, they have the lowest women's labour force participation rate.

Another unique characteristic of both Kelantan and Terengganu is that they are politically ruled by the Islamic Party of Malaysia (PAS). Being strongly committed to Islam, the people allied themselves with the Islamic party. PAS has been in pursuance of the formation of an Islamic State and the execution of *hudud* laws (Stark, 2004). Implementing a dress code for Muslim women in public places, segregating gender in public spaces and seating arrangements in a public event, discouraging Muslim women from working night shifts, and banning unisex saloons were among the rules implemented by PAS upon coming into power in Kelantan in 1990 (Othman, 2006). In fact, PAS has undertaken the implementation of dress code (covering *aurah*) rather seriously by enforcing “*Operasi Gempur Aurah*” (Operation *Aurah* Attack), as well as by imposing summons and notices for counselling sessions from time to time, especially among female workers and traders (Azhar and Habibu, 2014).

In 1993, the *Shariah* Criminal Code (II) bill was executed in Kelantan. The bill contained provisions on *hudud* punishment on *sariqah* (theft), *hirabah* (robbery), *zina* (adultery including sodomy), *qazaf* (unlawful accusation of adultery and sodomy), *syurb* (intoxication of liquor), *irtidad* or *riddah* (voluntary act or speech that affects or goes against the faith), and *Al-li'an* (accusation of adultery by the husband towards wife) (*Shariah* Criminal Code (II), 1993). In 2015, amendments were made to the code, where criminal offences by non-Muslims are only subjected to civil law, not to *hudud* law. The

*Shariah* Criminal Code was also implemented in Terengganu in 2002 to ensure that the lifestyle of Muslims adheres to the Islamic teachings (Anwar, 2005, p.123)<sup>32</sup>. The concept held by PAS on restructuring the community per Islamic state assumes the secondary role and the domestication of women while upholding the notion of male leadership (Karim, 1992, p.111).

The Kelantanese perceive their own cultural identity as being inseparably intertwined with Islam; hence Kelantan is reckoned for its conservative Islamic atmosphere in Peninsula Malaysia (Raybeck, 1980). The study highlighted the conflicts between the code of Islam and the indigenous culture of which the traditional Kelantanese promotes the high status of women, in contrast to orthodox Islam that limits women's rights compared to men. The tension was kept in check by executing several adaptive strategies. Nevertheless, studies highlighted the dominance of Kelantanese women in households (Mansor, 1994) and their high involvement in business activities (Firth, 1966; Idris and Shahadan, 1991; Idris, 2009; Mansor, 1994; Rudie, 1994). However, it is also highlighted that they are mainly in the informal and small business scales. For instance, Rudie (1994) found that kampung women in Kelantan mostly involved in traditional trade, consisting of three patterns at pasar or marketplace trade, small shops in the kampung and peddling among friends and neighbours. Mansor (1994) also stated that Kelantanese women's participation is not reflected in big corporations and government organisations but mainly in small businesses.

Additionally, the small impact left by British imperialists and the absence of in-migration from other regions had led to the preservation of such a distinctive culture in both Kelantan and Terengganu (Jones, 1981). Over 32 years (1969-2001), even though

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<sup>32</sup> Among the other offences punishable by the *Shariah* criminal law are consuming alcohol in public, homosexuality and lesbianism, eating in public during the month of Ramadhan, and cross-dressing (Anwar, 2005, p.123).

not as fervently as the earlier generations, strong adherence to Islam remains the most substantial characteristic shared in Kelantan (Raybeck and De Munck, 2010). Kelantan is also known to support a large number of *Sekolah Pondok* (advanced religious school) for boys and *madrrasah* for both genders (Raybeck, 1980).

Hence, due to the distinct features noted in Kelantan and Terengganu, such as the homogeneity of the population, the low female labour participation rate, and the attributed variances on Islamic values, these two states were selected as the main interest in this present study. This study explores if originating from these two states had an impact on the labour market participation decisions made by women.

## **2.5 Policies and Regulations on the Labour Market and the Development of Women**

Women's participation in the labour market is essential for economic growth in a rapidly developing country (Ismail and Sulaiman, 2014). Having that said, the government plays a vital function in initiating policies and pursuing agendas that empower women by enabling and encouraging their participation in the labour market. The government should implement policies and agendas that encourage women to remain in the labour market or re-enter it if they had worked in the past (Subramaniam et al., 2015).

Malaysia has achieved much progress in narrowing the gender gap in major socioeconomics aspects (Ahmad, 1997). Nonetheless, the well-being of working women has turned into a vital issue to be addressed as women's participation in the labour market continues to flourish. Therefore, multiple policies and agendas have been implemented to enhance female participation in the labour market and to retain them in the economy (see Table 2.3).

The Malaysian government is committed to improve the status of women by executing various policies and programs, mainly to meet this objective. First, Malaysia recognised the United Nations Decade for Women from 1975 to 1985, which raised awareness pertaining to gender gaps and gender inequalities at a global level.

**Table 2.3: National policies and provisions for women**

<b>Year</b>	<b>Policies/Agendas</b>	<b>Aims/Highlights of Policy</b>
1975 to 1985	Malaysia recognised the United Nations Women's Decade	To instil the need to value the role of women and elevate the status of women in society.
1975	National Advisory Council on the Integration of Women in Development (NACIWID)	To advise the government on female-related matters in development.
1983	The Women Affairs' Secretariat (HAWA)	To administer affairs related to women.
1989	National Policy on Women	(a) Ensuring equitable sharing of resources and development opportunities between men and women. (b) Integrate women into all sectors of development.
1991	Sixth Malaysia Plan (1990 – 1995)	Introduction of a full chapter on “Women in Development.”
1992	National Plan of Action for the Advancement of Women	(a) To strengthen national machinery for the advancement of women. (b) Raising public awareness and sensitising the government bureaucracy towards issues related to women. (c) Re-orientate the institutional process for planning, implementing, and monitoring of government policies and programs to accommodate women's concerns. (d) Increase the efficiency and effectiveness of socioeconomic programs through activation of NGOs. (e) To address problems of discrimination and promote affirmative action for the advancement of women in various fields.
1995	Beijing Declaration and the Platform for Action	Commitment to strengthen the implementation of the National Policy for women.
1995	Ratified the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW)	(a) Provision of national legislation to ban discrimination against women. (b) Recommended actions to modify social and cultural patterns that perpetuate discrimination against women.
1997	Revision of National Plan of Action for the Advancement of Women	(a) To strengthen national machinery for the advancement of women. (b) To address problems of discrimination and promote affirmative action for the advancement of women in various fields.
2001	Ministry of Women, Family and Community	To integrate the perspectives of women and society into the mainstream of national development, as



<b>Year</b>	<b>Policies/Agendas</b>	<b>Aims/Highlights of Policy</b>
	Development	well as to strengthen the family institution towards improving social welfare.
2004	Establishment of Cabinet Committee on Gender Equality	To give policy directions and monitor activities on women and family development.
2004	Policy on 30% of Women in Decision-making Positions in the Public Sector	Ensure at least 30% participation of women in decision-making positions at all levels in the public sector.
2009	National Policy on Women (revised)	To ensure an equitable sharing of resources and benefits of development for men and women.
2009	Review of the National Plan of Action for the Advancement of Women and the National Policy on Women 2009	To integrate women in all sectors of national development, to promote equality, and to empower women.
2011	Policy on 30% of Women in Decision-making Positions in the Corporate Sector	(a) Increase female composition to 30% in public and private sector decision-making positions. (b) For monitoring purposes, companies are required to include a gender index in their annual reports.
2011	National Family Policy Malaysia	To support and complement existing policies, such as the National Social Policy, the National Policy on Women, and the National Child Policy. This is a key policy that focuses on aspects of family well-being and development.

**Source:** Adopted and updated from Lim (2017).

In 1975, the NACIWID was set up to advise the government regarding female-related matters in development. The Secretariat took over the task of NACIWID for Women's Affairs (HAWA), established in the Prime Minister's Department in 1983. The NACIWID refers to a consultative and advisory body to the government on issues faced by women. Ng et al. (2006) claimed that the establishment of NACIWID signifies the lack of interest by the government in promoting women's potential. This is because; NACIWID only functions as an advisory body without any decision-making power. Its representatives, which mostly derive from the upper strata of the society, have less attachment or minimal concerns regarding the issues faced by ordinary women. The NACIWID was later restructured during the Eighth Malaysia Plan (2001-2005) in order to offer a better representation of the council.

The formulation of The National Policy on Women in 1989 provided the groundwork for subsequent government policies and programs related to women. The policy focused on integrating women in development to ascertain equitable sharing of resources and development opportunities between genders. It facilitated the participation of women in both the social and economic domains of Malaysia.

Gender issue as a development focus was initially mentioned in the Third Malaysia Plan (1976-1980). As a result, a full chapter entitled “Women in Development” was embedded into the Sixth Malaysia Plan (1990-1995). It depicted the progress and achievement of women in the economy and family development, women’s labour force participation, employment status, and education. It identified multiple government and non-government organisations established to integrate women into the mainstream of development (EPU, 1991, p. 420). The plan outlined concerns and constraints faced by working women, such as work-family conflicts, gender differentials in education, social norms and prejudice on women’s participation in the labour market, domestic violence, lack of opportunities to acquire new and marketable skills, lack of appropriate management training, professionalism, access to credit and information, and finally, the uncondusive working environment that makes it difficult for wives and mothers to sustain their employment.

The Action Plan for Advancement of Women was devised in 1992 and was later revised to embed strategies and programmes following the Beijing Declaration in 1995. The Beijing Declaration and the Platform for Action affirmed the commitment to attain greater equality and opportunities for women. The Action Plan for the advancement of women outlined programs and strategies to be executed by the government, the private sector, and the society (see Table 2.3 for aims of the Action Plan).

The Malaysian government had endorsed the United Nations Convention for the Elimination of All Forms of Discrimination against Women (CEDAW) in 1995. CEDAW refers to an international bill on women's rights. Its primary objective is to eliminate discrimination against women, as well as to set up an agenda for national action to be taken to eliminate such gender discrimination. No discrimination was reported against women in light of recruitment or remuneration in the public sector within the context of Malaysia (EPU, 1991). Nevertheless, for certain jobs that involved production in the private sector, male-female wage differentials continued to exist until the Seventh Malaysia Plan, but the gap was narrowed (EPU, 1996).

One of the critical milestones for female empowerment in Malaysia denotes the establishment of the Ministry of Women, Family, and Community Development (MWFCD) in 2001 (previously known as the Ministry of Women and Family Development). This ministry supports the efforts undertaken by the government to raise the status of women in Malaysia. To date, some objectives of MWFCD are to increase the participation and active role of women, families, and communities as contributors and beneficiaries of the development in this country; to preserve rights without discrimination; to provide equal opportunities to women and society in social, economic, and political aspects; as well as to strengthen the family institutions. The responsibility of MWFCD is mainly to promote and raise awareness concerning the significance of women and family roles in the development of the country. The five agencies under the jurisdiction of MWFCD are listed in the following:

1. Social Welfare Department of Malaysia
2. National Population and Family Development Board
3. Department for Women Development
4. Social Institute of Malaysia
5. NAM Institute for the Empowerment of Women

A range of training and retraining programmes for women were carried out under the Seventh Malaysia Plan (1996-2000) to re-enter the labour market (EPU, 2001). These training programmes encouraged women to participate in small businesses, besides identifying alternative jobs as they move away from agricultural activities. Following this, the Women Entrepreneurs Fund was initiated in 1998 to provide women with easy access to capital for setting up their businesses. The *Yayasan Tekun Nasional* (YTN), the *Majlis Amanah Rakyat* (MARA) Entrepreneur Programme, and the Agricultural Entrepreneurship Development Programme were established between 2001 and 2005, mainly to fully utilise the existing opportunities within the labour market (EPU, 2006). Efforts were also made to equip women with adequate skills and knowledge in information and communications technology (ICT).

The Cabinet Committee on Gender Equality was set up in 2004. To ensure the integration of the gender perspective in the formulation and execution of policies and programmes, as well as to avoid discrimination against women, gender focal points were appointed across all ministries and agencies. Moreover, in 2004, the government announced that women filled 30 percent of decision-making positions in the public sector. This reflected the continuous commitment displayed by the government to promote gender equality and women empowerment. Later in 2011, a similar target was fixed for the corporate sector.

The National Family Policy Malaysia was implemented in 2010 and was officially launched a year later. It refers to a policy that prioritises family perspective in all socioeconomic development efforts to ensure the quality of future generations. Among the rationale of this policy is to create high-quality human capital with integrity to boost the development of this country. It forms and strengthens the family institution so that each family member can be empowered to jointly and fairly perform their roles in light

of family relationships, economy, career, and lifestyle, so as to enjoy stability, harmony, and well-being (NPFDB, 2011). As this policy was implemented to support and complement the existing policies, it emphasised the rights and equality to ensure protection and security for the family and its members. Among the initiatives implemented under this policy are Parenting@work, which provides the opportunity to get vital parenting knowledge and skills in managing the family and career, time management, and making you a better parent.

In the Tenth Malaysia Plan (2010-2015), the government continued its efforts towards empowering women to enhance their economic contribution. The number of community-based nurseries and day-care centres under the Department of Social Welfare had been increased to aid women achieve work-life balance. This increased the participation of women in the labour market, especially amongst women with low income. Continuous efforts were made in the public sector to increase the representation of women in key decision-making positions in the parliament, state legislative assemblies, the judiciary, and ministries (EPU, 2011). During the Tenth Malaysia Plan, tax incentives were provided to encourage employers to train and re-employ women who have been out of the workforce, while grants were offered for renovating and furnishing childcare centres within government offices (EPU, 2016).

Under the Eleventh Malaysia Plan (2016-2020), enhancing the role of women in development appears to be one of the strategies adopted to empower communities in generating a productive and prosperous society. Its goal is to offer a more conducive working environment so that the female labour force participation can be increased, while intensifying the efforts to enhance the number of women in decision-making positions (EPU, 2016). Some of the measures implemented are promoting work-life balance, introducing flexible working arrangements and work-from-home concept,

making childcare services accessible, and promoting “back-to-work” for qualified women to re-enter the labour market after exiting due to family or other commitments. For instance, the Human Resources Development Fund (HRDF) launched the Housewives Enhancement and Reactivate Talent Scheme (Hearts) initiatives in order to train educated housewives in the latent workforce in specialized fields that would enable them to work from home or under the flexible working arrangement (Singh, 2019, November 13). This programme is targeting to assist 1,000 women yearly. Additionally, the Women@work initiatives for women who have stopped working to join the labour market again, both employers and employees will be given wage incentives.

Apart from the vast initiatives taken by the government, non-governmental organisations (NGOs) have also been actively involved in enhancing the status of women in Malaysia. The National Council of Women's Organisation Malaysia (NCWO) was set up in 1963 as the leading organisation for all women NGOs in Malaysia. NCWO refers to a consultative and advisory body to raise the status of women and to increase their participation in national development.

NGOs have introduced various activities and programmes to raise the status of women in light of politics, career, social status, religion, education, welfare, and sports. The promotion of a caring society by the government and NGOs enabled more women to join the workforce. The extended family system was promoted, thus encouraging the elderly to lend support to young couples by helping to care for their children (EPU, 1996). *Amanah Ikhtiar Malaysia*, for example, aided female-headed household involvement in small businesses and organised training programmes for women, including single mothers, to join the labour market.

## 2.6 Laws and Regulations Relating to Women and Employment in Malaysia

The Malaysian government is committed to increase women's participation in the economy as it seeks to attain the status of a 'developed country'. As such, various policies and regulations have been implemented to encourage women's participation in the labour market (see Table 2.4).

The Employment Act, 1955 (Amendment 1998 & 2010) was established to regulate employment-related matters, including maximum working hours, salary, and leave - the fundamental provisions covered by all labour statutes. Under this Act, due to safety concerns, women are prohibited from working during the night shift (10.00 p.m. to 5.00 a.m.) and also from participating in underground<sup>33</sup> work. The Code of Practice for the Prevention of Sexual Harassment at a Workplace was executed in 1999 by the Human Resources Ministry. This Code serves as an in-house guide to prevent sexual harassment and to address complaints related to sexual harassment. Although private companies need not implement the code, it offers a proper channel for companies to follow when handling sexual harassment complaints, which has been a major concern in the workplace. Sexual harassment victims may be less efficient at work, forced to take time off due to stress and ailment, or even leave the workplace to secure a new job elsewhere (Mallow, 2013).

**Table 2.4: Laws and regulations relating to women's employment in Malaysia**

<b>Year</b>	<b>Laws and regulations</b>	<b>Aims / Highlights</b>
1955	Employment Act 1955	Prohibition against night work for females between 10 pm and 5 am. Prohibition of underground working. Paid maternity leave of not less than 60 days.
1975	Income Tax Act 1967 Amendment 1975, (also amended 1978, 1991)	Option to allow married working women to submit separate tax assessment from their husbands.

<sup>33</sup> Operations conducted for the purpose of extracting any substance from below the surface of the earth, the ingress to, and egress from which is by means of shafts, adits or natural caves (The Employment Act, 1955).

<b>Year</b>	<b>Laws and regulations</b>	<b>Aims / Highlights</b>
1984	The Child Care Centre Act 1984 (Act 308)	Provide guidelines for the registration, control, and inspection of childcare centres in Malaysia.
1985	Budget 1985 child relief allowances	Child relief allowance deductions for tax purposes up to the fifth child.
1991	<i>Pekeliling Perkhidmatan* Bilangan 9, Tahun 1991</i>	Paternity leave provided for public sector employees up to three days.
1998	Employment Act 1955 - Amendment 1998	Paid maternity leave of not less than 60 days, for a maximum of up to five deliveries in the public sector. Ability to extend maternity leave for the extra of one month. Paternity leave of up to three days in the public sector. Provision for flexible working hours <i>inter alia</i> part-time work.
1999	Code of Practice for the Prevention of Sexual Harassment at a Workplace	Guidelines for employers to prevent sexual harassment in the workplace.
2002	<i>Pekeliling Perkhidmatan* Bilangan 9, Tahun 2002</i>	Paternity leave extended up to seven days.
2007	<i>Pekeliling Perkhidmatan* Bilangan 2, Tahun 2007</i>	Flexible working hours was introduced in the public sector. The staggering working hours enable the employees to choose the time of coming and leaving work from 3 available options: 7.30 a.m. to 4.30 p.m., 8.00 a.m. to 5.00 p.m., and 8.30 a.m. to 5.30 p.m.
2007	<i>Pekeliling Perkhidmatan* Bilangan 4, Tahun 2007</i>	Subsidy of RM 180 per child was given to public sector employees with a household income below RM 2,000 to subsidise childcare fees for children below 4 years old to be sent to the childcare centre at the workplace.
2007	<i>Pekeliling Perkhidmatan* Bilangan 15, Tahun 2007</i>	Working mothers can take up to 1825 days (5 years) of unpaid leave to take care of their children.
2010	<i>Pekeliling Perkhidmatan* Bilangan 14, Tahun 2010</i>	Female employees in the public sector are entitled to 300 days of paid maternity leave for the entire duration of service where they have the flexibility to choose between 60 and 90 days per child.
2010	Introduced Employment (Part-Time Employees) Regulations 2010	Set minimum standard for part-time employment in terms of hours of work, holidays, annual leave, sick leave, and rest days.
2012	Minimum Wage	Minimum wage set to RM900 in Peninsular Malaysia and RM800 in East Malaysia.
2013	<i>Pekeliling Perkhidmatan* Bilangan 38, Tahun 2013</i>	Subsidy of RM 180 per child was given to public sector employees with a household income below RM 5,000 to subsidise childcare fees for children below 4 years old to be sent to the childcare centre at the workplace.
2015	Revision of minimum wage	Minimum wage set to RM1,000 in Peninsular Malaysia and RM920 in East Malaysia.
2019	Revision of minimum wage	Minimum wage set to RM1,100 nationwide.

**Sources:** Adopted and updated from Lim (2017) and various *Pekeliling Perkhidmatan* issued by the Public Services Department.

**Note:** \**Pekeliling perkhidmatan* is only applicable to public sector employees.

In assuring a healthy work-life balance and for protecting working women from unjust treatment in respect of their employment, the Employment Act (1955) introduced



paid maternity leave for a period of not less than 60 consecutive days for each confinement, which also prohibits the termination of a female employee during the period of maternity leave that she is entitled to receive. The Employment Act, 1955 (Amendment 1998) on paid maternity is set for a maximum of five deliveries in the public sector. Female employees in the public sector can also extend their maternity leave for up to three months as unpaid leave.

In 2007, a policy was introduced to allow working mothers to take up to 1,825 days of unpaid leave to take care of their children (*Pekeliling Perkhidmatan Bilangan 15, Tahun 2007*). In 2010, female public sector workers were entitled to 300 days of paid maternity leave, in which they have the flexibility to choose between 60 and 90 days per child (*Pekeliling Perkhidmatan Bilangan 14, Tahun 2010*). In 1991, paternity leave was provided for public sector employees up to three days (*Pekeliling Perkhidmatan Bilangan 9, Tahun 1991*), and this was extended to a maximum of seven days in 2002 (*Pekeliling Perkhidmatan Bilangan 9, Tahun 2002*).

The Employment Act, 1955 (Amendment 1998) also offers flexible working hours and part-time work. In order to increase participation in the labour market, the Employment (Part-Time Employees) Regulations 2010 was implemented under the Employment Act 1955, as part of the government's efforts to provide flexible working arrangements, besides encouraging the participation of housewives, retirees, and disabled persons in the labour market. In order to protect this group of employees, the Employment (Part-Time Employees) Regulations 2010 sets the minimum standard for part-time employment in terms of hours of work, holidays, annual leave, sick leave, and rest days. The introduction of staggering working hours in 2007 encouraged a more flexible working environment within the public sector (*Pekeliling Perkhidmatan*

*Bilangan 2, Tahun 2007*), in which employees can choose one of the following three options: 7.30 a.m. to 4.30 p.m., 8.00 a.m. to 5.00 p.m., and 8.30 a.m. to 5.30 p.m.

Working mothers tend to depend on childcare centres to take care of their young children when they work. Besides the availability of childcare centres, parents are also worried about child safety and the quality of the childcare services provided. Therefore, the quality and safety of the childcare centres have a significant role in the parents' decision to place their children under the care of others to enable both the husband and wife to participate in the labour market. The Child Care Centre Act 1984 (Act 308) was established to legislate on several matters, including the registration, control, and inspection of childcare centres in Malaysia. This Act makes it compulsory for all childcare centres to be registered under the Department of Social Welfare. Under this Act, a childcare centre denotes a premise that looks after four or more children under the age of four years from more than one household in return for rewards.

The four categories of childcare centres in Malaysia are as follows: First, the institution-based childcare centres established under the initiative of the private sector or NGOs and normally receive 10 or more children to be placed under their care at any one time. Second, the workplace childcare centre normally receives 10 or more children to be placed under their care at any one time. This workplace childcare centre is established upon the initiative of the employers as a way for them to look after the welfare of their employees. Third, the MWFC established community-based childcare centres to provide low-income families in rural and urban areas quality childcare services. This community-based childcare centre receives funding from the Federal Government or the State Government and also looks after ten or more children at any one time. The last type of childcare centre is a home-based childcare centre operated at

the operator's own house. This childcare centre only receives four to nine children at any one time.

The Child Care Centre Act 1984 contains minimum standards, guidelines, and requirements to be met by the childcare centre operators. One of the requirements is to ensure that the ratio of the number of childcare providers with the children under their care. The Department of Social Welfare Malaysia provides guidelines on the minimum number of childcare providers for children under the care of childcare centres. The centre must provide a minimum of one childcare provider for every three children aged 0-1 year old. For children from 1-3 years old, a minimum of one childcare provider must be available for every five children. Meanwhile, a minimum of one childcare provider is required for every ten children aged between 3 and 4 years old.

Under the Sixth Malaysia Plan (1991-1995), tax exemption provision was introduced for employers who establish a childcare centre or a nursery near or at the workplace. As of October 2017, only 45 out of the 237 registered childcare centres at the workplace were run by the private sector (Department of Social Welfare, October 2017). Concerns on the lukewarm response from the private sector in reference to the incentive were highlighted by Noor and Mahudin (2016). In 2007, as a fiscal incentive by the government, a subsidy of RM 180 per child was given to the public sector employees with a household income of below RM 2,000 to subsidise childcare fees for children below four years old to be sent to childcare centre at the workplace (*Pekeliling Perkhidmatan Bilangan 4, Tahun 2007*). This incentive was later extended to those with a monthly household income of below RM 5,000 (*Pekeliling Perkhidmatan Bilangan 38, Tahun 2013*).

Other statutes, including the Juvenile Court Act 1947, the Child Protection Act 1991, and the Women and Girls Protection Act 1973 (Amended 1987), were initiated to

protect women and children in Malaysia, apart from strengthening their rights. Later, the Child Act 2001 was passed, consolidating the three former Acts mentioned above to protect children from mistreatment, neglect, abandonment, and exposure to harm. The main objective of the Child Act 2001 is to promote the children's best interest, following ratification by Malaysia of the United Nations Convention on the Rights of the Child.

Since 2002, to protect the rights and dignity of women, widows of civil servants who remarry could continue receiving pensions. In 2002, the Land Act (Group Settlement Areas) 1960 was revised to grant the wives of land settlers equal ownership of land provided to their husbands under land development schemes. The Income Tax Act 1967 (amended 1978) permitted women to submit separate tax assessments from their spouses for tax purposes. In the national budget for the year 1985, the government increased tax relief for up to five children from RM 3,000 to RM 3,800 (Hock, 2007). Under the Seventh Malaysia Plan, tax relief was provided to women whose husbands had no taxable income.

Under the Eighth Malaysia Plan (2001-2005), the Employees Provident Fund (EPF) enabled husbands to contribute to accounts under their wives' names as a measure to provide financial security to housewives. Recently in 2018, the EPF introduced the voluntary contribution *i-Suri* for housewives, widows, and single mothers, who are registered under the *e-Kasih*<sup>34</sup> programme. The contributors can contribute a minimum of RM 5 to their account on a monthly basis, thus entitling them to receive an incentive from the government amounting to up to RM 40 per month. Besides, *i-Suri* account holders will also receive the same benefits as other EPF contributors.

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<sup>34</sup> National Database on Poverty.

Next, the Domestic Violent Act 1994 was introduced to protect women against wife battering and other types of abuse. Prior to its implementation, domestic violence was considered a private matter, wherein the previous legislation had failed to protect women who faced this particular problem. Abdullah et al. (1995), who interviewed 1,221 individuals in 1990, discovered that only 30 percent of the respondents believed that women should report incidents of beating to the appropriate agencies. Limitation of the law, inadequate power to intervene, and lack of appropriate classification terms were listed as problems encountered by the police in domestic violence. Therefore, to raise awareness of domestic violence, the Women against Violence (WAVE) campaign was launched in 2002.

In order to protect all workers in Malaysia, the government implemented the minimum wage order. In 2012, the Malaysian government had set the minimum wage order at RM 900 for Peninsular Malaysia and RM 800 for East Malaysia. Later in 2015, the minimum wage was raised to RM 1,000 for employees in Peninsular Malaysia and RM 920 for employees in East Malaysia. The amounts were further increased in 2019, in which the minimum wage was fixed at RM1,100 nationwide.

Sections 2.5 and 2.6 highlight the efforts taken by the government to improve the status of women in Malaysia. Throughout the years, various policies and regulations were introduced to encourage women's participation and retain them in the labour market. In addition, some laws and regulations introduced were explicitly enacted to benefit working mothers, such as the provision of maternity leave, paternity leave, tax exemptions, and childcare subsidies. Despite the moderate improvements over the decades in female labour force participation in Malaysia, the rate is still low and well below the targeted figure set in the 11<sup>th</sup> Malaysia plan. This signifies that the reasons for

low female labour force participation may not merely be due to a lack of legislative provisions.

## **2.7 Summary**

This chapter described four aspects of the study context: (a) the pattern of structural change in the economy and the implications for women, (b) the trends in women's labour force participation, (c) the roles of ethnicity, culture, and geography in shaping the economic status of women, and lastly, (d) the policies and regulations to improve the status of women throughout the development process and in the labour market.

As depicted in Sections 2.2 and 2.3, economic development through the process of industrialisation has contributed towards the significant progress of women in Malaysia, particularly in terms of job opportunities. The creation of jobs in the manufacturing sector has helped to absorb more women to join the labour force. Employment has shifted to the services sector in more recent years, while the agriculture and industrial sectors have declined. The unemployment rate appears to remain low. However, women's overall participation in the labour market is relatively lower when compared to men, and a large fraction of working women tend to exit the labour market. Malaysia also lags in women labour force participation among ASEAN countries and currently ranked at 84<sup>th</sup> placed (out of 149) in the GGGI in terms of economic participation and opportunities. However, the labour market statistics did not display any change in this trend in recent years.

As pointed out in Section 2.4, major ethnic differences have been noted in the role of ethnicity, culture, and geography towards shaping the status of women in Malaysia. The Malay culture and the religion Islam, marriage traditions, and gender roles are scrutinised in comparison to the other two main ethnicities - Chinese and Indians.

Female labour force participation appeared to be considerably lower among the Malay (*Bumiputera*) population when compared to the Chinese. This showcases the potential role of customs, beliefs, and values specific to ethnic groups. However, the ethnic profile of female labour force participation in Malaysia seems to overlap with major geographic differences in both institutional and political setup and the socio-economic background of the population, all of which contribute to labour force decisions. For instance, the high rate of female labour force participation in some states (Selangor and Pulau Pinang) and low rate in Kelantan and Terengganu reflect the regional divide in economic development – the west coast with higher female labour force participation is also economically prosperous, besides enjoying more modern norms and traditions. The eastern Peninsula states with low female labour force participation, on the other hand, are ruled by parties that promote traditional values, which are often rooted in religion. This influences the perceived norms pertaining to an ideal woman and potentially reinforces the existing patriarchal norms specific to Malay *Bumiputera* communities. The influence of such processes can persist over time, independent of the current location of residence. Women born and brought up in locations where politics, ethnicity, and religion combine to shape gender norms may pose as a disadvantage when they enter the labour market. For the ethnic majority of Malay women, the place of residence may serve as an integral structural determinant of labour market outcomes, besides being a potential proxy for the enduring influence of patriarchal customs and restrictive social norms governing women's lives.

As described in Sections 2.5 and 2.6, the government has taken proactive steps since the past decades to encourage women's participation in the labour market. Various policies have been implemented to include women in the development process. Notable instances include the establishment of NACIWID in 1975 and the inclusion of "Women in Development" chapter in the 6<sup>th</sup> MP in 1991. The Government has taken numerous

measures to help working women achieve a work-life balance, such as the execution of flexible working arrangements, part-time work, provision of childcare centres, and childcare subsidies. To date, the female labour force participation rate has not achieved the target fixed by the government. The modest growth of the female participation rate is a puzzling phenomenon given the various policy provision and improvements noted in many areas, such as economic development and education.

The variances in ethnicity-specific social and marriage norms, along with regional variation in socio-demographic, economics, and other indicators discussed in this chapter, has motivated the latter analysis of female labour force participation and exit decisions with a focus on the social determinants, such as the influence of customs and values transmitted through early life socialisation, which may vary considerably by place of birth.



## **CHAPTER 3: LITERATURE REVIEW**

### **3.1 Introduction**

Taking into consideration the three research questions identified in the first chapter, this current chapter offers a comprehensive overview of the relevant theoretical and empirical literature on women's labour force participation and exit decisions. This chapter discusses the theory of labour supply in the intensive and extensive labour markets (Section 3.2). Following that is the empirical literature on the determinants of women's labour market participation decisions (Section 3.3) and the determinants of exit decisions from the labour market among women (Section 3.4). Finally, the literature gap on Malaysia is outlined (Section 3.5), and the chapter is concluded with a conceptual framework of the research (Section 3.5).

### **3.2 Theories of Labour Supply**

Several theories have explained the female labour supply decisions in the existing literature. The existing theories in this literature focused on the extensive and intensive margin of labour supply, i.e., participation decisions and time spent at work. This section discusses the selection of these theories by reviewing the theoretical models on the intensity of work supplied by participants in the labour market, which is measured by hours of work per day, per month, or per year (Becker, 1965; Killingsworth and Heckman, 1986; Mincer, 1962). Following that is a discussion of the literature on the decision to enter the labour market (Borjas, 2010; Gronau, 1973; Killingsworth and Heckman, 1986).

Theoretical explanations in the literature on labour market participation include human capital theory (Mincer and Polachek, 1974), the U-shaped women labour force function with economic development (Goldin, 1995), preference theory (Hakim, 2000), culture (Fernandez et al., 2011; Guiso et al., 2006), norms (Elster, 1989; Goldin, 1995),

and discrimination among women in the labour market (Jacobsen, 2010). Based on the neoclassical theory of labour supply, it was assumed that the hours of labour of an individual were based on the allocation of time between market production and leisure to maximise an individual's utility. The utility function is denoted as follows:

$$U = f(C, L)$$

Where U defines utility as the measure of happiness and life satisfaction through the consumption of goods (denoted by C) and leisure (denoted by L), as stated by Borjas (2010, p. 39). However, time and income impose constraints on the consumption of goods and leisure for an individual. The following equation represents the budget constraint:

$$C = wh + V$$

Where the expenditure on goods (C), which is equal to wages (w) multiplied by hours of work (h), refers to labour earnings. Meanwhile, non-labour income (V) refers to a part of income, which is independent of the working hours for labour. Besides, the total available time (T) is equal to working hours (h) and time spent on leisure (L), which is as follows:

$$C = (wT + V) - wL$$

The budget constraint indicates that people are still able to consume goods at V values despite their unavailability for work. Furthermore, leisure price is the wage rate, where each hour of forgone leisure allows the consumption of more goods by the labour. Market production or paid work is an activity, which enables people to generate income and purchase consumer goods. At the same time, leisure refers to non-market activities assumed to provide utility to individuals. Accordingly, provided that leisure is

also assumed as normal goods, an increase in non-labour income when the wage is constant rises both consumption and leisure, consequently reducing work hours through income impacts.

In the case of changes in the wage rate, income effects would strengthen the demand for leisure, which reduces the hours of work. Substitution effects also occur when leisure becomes expensive with the increase in wage, which lengthens the working hour and reduces the labour supply (Blundell and MaCurdy, 1999; Borjas, 2010, p. 39). The above theory of simple static labour supply assumes that the decision among women to participate in the labour market is independent of labour supply from other individuals.

However, Mincer (1962) recognised that the labour supply analysis of labour compared to leisure time was the consumption of goods. However, this simplification was inadequate when applied to married women, highlighting the importance of the hours of working from home. Meanwhile, men were viewed to substitute their minimised leisure time with the wage increase, while the time for both leisure and housework was substituted for women (Killingsworth and Heckman, 1986). Therefore, the household production approach focuses on the labour supply in the family context. Provided that the unit of analysis denotes family in this approach, the income is pooled together. Household production and leisure are a family decision as the consumption among family members are based on preferences and positively related to income.

Becker (1965) extended the previous theory and presented the theory of the allocation of time between different activities, which highlights the importance of efficiency and allocation of non-working time. Provided that theory assumes that households are both consumers and producers, it is assumed that as producers, households would produce commodities by utilising the inputs of goods and time

(Becker, 1991). As stated by Killingsworth and Heckman (1986), the household production function is denoted by the following equation:

$$Z_i = f_i (C_{1i}, \dots, C_{zi}, L_{1i}, \dots, L_{mi})$$

Where  $Z_i$  refers to commodities or activities,  $C_{zi}$  denotes the amount of  $c$ -th consumer goods utilised to produce the  $i$ -th commodity, and  $L_{mi}$  represents the time when  $m$ -th family member is working on the production of  $Z_i$ . Similarly, the production of commodities or activities is subject to prices and the constraint of resources. Becker highlighted that resource constraint implies that full income consists of money income and forgone income which involves time and goods to obtain utility. This theory considers the different use of non-market time, which enables a more accurate analysis of a family member's non-market behaviour. Therefore, there is a difference between labour supply decisions between male and female, particularly among married women.

Generally, it was found that women had a comparative advantage in household production, while men had an advantage in market work (Becker, 1991; Jacobsen, 1998, p. 77). This is because women were customarily trained by family and society to perform non-market tasks, while men were involved continuously in market work due to higher earnings and discrimination towards women in the labour market (Jacobsen, 1998, p.77). Comparative advantage, which is also influenced by the relative wage and efficiency in household production (Gronau, 1973), proved that women display higher productivity in household work compared to men.

The static model of labour supply assumes that today's action does not affect tomorrow's economic conditions, omitting the accumulation of human and non-human wealth (Killingsworth and Heckman, 1986). Provided that the decision made today has

future consequences, the examination of the dynamic labour supply model is crucial, and human and non-human wealth should be taken into consideration.

Despite the focus of this research on the extensive margin of labour, it is vital to understand the backward bending labour supply model in the intensive margin. The model suggested that an increase in market wage will increase working hours due to a stronger substitution impact than the income impact. However, a further increase in market wage will reduce the number of working hours as the income impact is stronger than the substitution impact. Overall, the trade-off between labour and leisure supply for wage-earning individuals is the emphasis on market wage. Therefore, the previously discussed theory only focuses on the decision of individuals who are already in the labour market. However, it is also crucial to discuss the theory of participation, which leads to participation in the labour market. The participation decisions in the labour market depend on the reservation wage ( $W_R$ ) and market wage ( $W_M$ ), as shown in the following equation:

$$\text{Probability of participation} = f(W_R, W_M)$$

Reservation wage is the wage rate, which distinguishes between individuals who work and vice versa. Based on the equation above,  $W_M$  shows how much the employer is willing to pay for an hour, while  $W_R$  indicates how much the employee should be bribed into working for the first hour (Borjas, 2010, p. 10). Therefore, while individuals will participate in the labour market if  $W_M > W_R$ , they will not participate if  $W_M < W_R$ . The absence of income effect for the increase in wages for non-workers is present in the difference in participation, indicating that the price of leisure increases and consequently encourages participation in the labour market. Therefore, while participation is positively related to market wage when the reservation wage is constant, it could be negatively associated with reservation wage.

Nevertheless, it is essential to note that men and women have different reservation wages due to different time budgets. For instance, the trade-off for men only occurs between labour and leisure, while the trade-off for women requires time to perform unpaid work activities. As a result of the time spent for other purposes, women should be bribed more to encourage their participation in the labour market. For this reason, the reservation wage for women is typically higher than men, and the labour supply among women is more responsive to changes in wage compared to men (Borjas, 2010, p. 52).

The reservation wage is a function of non-labour income, technology, and children, with non-labour income referring to the function of transfer and husband's income. Therefore, the participation of women in the labour market should also factor in marriage into the equation. To illustrate, besides producing children, marriage would lead to spousal income, which determines whether women would participate in the labour market regardless of the market wage. The theory suggests that while married women's labour supply is negatively related to their husband's income, non-labour income, and presence of children, it is also positively related to wage (Becker, 1965; Gronau, 1973).

Individuals have to make choices based on evolutionary wage throughout their life cycles. The life cycle age-earnings profile implies that wage tends to be low for young workers. However, it increases with the workers' age and stabilises or declines afterwards (Borjas, 2010, p. 64). Therefore, despite the low wage, it could increase by accumulating skills and experiences; however, it decreases slightly when the worker gets older.

Human capital is an investment acquired through education, on-the-job training, and experience. The accumulation of human capital results in a potential increase in market wage. As suggested by the human capital theory, education is a form of investment and

a potential source of earnings, it significantly influences employment outcomes (Mincer and Polachek, 1974). Furthermore, this theory is related to the differences in schooling, training, earnings, and other assets (Becker, 1991). Higher educational attainment is identified as higher participation as it is viewed as a measure of earning capacity and enhances job opportunities. Individuals with higher educational attainment might have more skills, knowledge, and experience, making it necessary for them to participate in the labour market. However, women are more likely to invest in human capital with high non-market return and satisfaction of time spent in market work, non-market work, or leisure, while men tend to invest in human capital with high market return or high wages despite the slight increase in satisfaction (Jacobsen, 1998, p. 242).

Provided that the labour market participation increases with the high return to education and returns to experience, higher educational attainment and extension of work experience among women could be translated into higher earning potential, reducing the gender wage gap. However, women tend to have lower earnings profile due to work interruptions, which disrupt the accumulation of work experiences and depreciation of the existing stock of human capital (Jacobsen, 1998, p. 247). The depreciation of human-capital stock decreases earning power (Mincer and Polachek, 1974). The interruption in work could happen due to marriage, childbearing, and child-rearing activities, consequently contributing to the gender gap in market wage.

The gender gap in market wage exists due to discrimination towards women in the labour market. For instance, women are paid less despite having the same characteristics as men in terms of qualifications or positions, reducing the possibility of their participation in the labour market. The expectation of discrimination also reduces the probability of women investing in more human capital related to market work (Jacobsen, 2010, p. 250). Furthermore, Goldin (1990) highlighted that women are

treated as a group instead of individuals and assumed to have less probability of aspiring to certain positions nor remain in the labour market. Additionally, Becker's (1957) theory of discrimination emphasises employers' discrimination based on taste and preferences against hiring specific groups (e.g., women or minorities), which results in discriminatory wage differentials. These differentials could also exist due to occupational segregation, which leads to women "crowding" into a specific segment and lower wages (Bergmann, 1974).

Reservation wage among women tends to be higher with the presence of children, especially in the pre-school age. As a result, women are required to spend more time on care-related activities, causing them to shift away from the labour market. The presence of children also requires more time from women in non-market production, which would increase the reservation wage. In the life-cycle patterns of women, wage rate and labour supply are low, while the demand for leisure would increase rapidly during the childbearing and child-rearing ages (Killingsworth and Heckman, 1986). Therefore, a higher market wage would have to be offered as a bribe for women to participate in the labour market. As a solution, childcare services are developed to reduce the issues among working mothers regarding childbearing, which leads to higher labour market participation. The cost of childcare is a related issue, where higher costs lead to a decline in women's participation in the labour market.

The low participation among women is also due to the income effect of a high reservation wage, which occurs with the husband's high income. The increase in the husband's income or family income reduces the impact of the opportunity cost gained by women by not working and leads to a decline in labour market participation. In addition, the availability of a source of alternative income increases women's



reservation wage, which decreases the probability of labour market participation. Notably, marriage also increases reservation wage among women.

Alongside the impact of non-labour income and children, the impact of marriage has to be considered when studying women's decision on labour market participation. Marriage has long been recognised as a vital feature in women's lives and viewed as an economic behaviour, in which the family is considered an important economic institution and miniature economy. Therefore, the family institution itself is viewed as important (Hoffman and Averett, 2015, p. 51). Moreover, marriage creates a constraint for women to be in the labour market due to the assumed responsibilities and roles at home. Women expect that household chores and care responsibilities consume more of their time, which prevents their participation in the labour market.

Besides the individual and familial factors, the differences in social structure and economic development should be factored in to gain a broader view of gender in the labour market. Overall, taking these elements into account enables comparison across countries and among different societies. Fernández (2011) defined culture as '*difference in the distribution of social preferences and beliefs*' and emphasised its importance in the variation of economic outcomes, while Guiso et al. (2006) defined culture as "*customary beliefs and values that ethnic, religious and social groups transmit fairly unchanged from generation to generation*".

Reimers (1985) stated that the labour supply among married women might be affected either directly or indirectly by the attitudes towards gender roles. For example, gender attitudes could directly affect time allocation for paid work and the domestic responsibility of women from a uniform family structure and equal human capital resources. Meanwhile, the indirect effect of these attitudes took place through the decision made on education, fertility, and other choices, which consequently impacted

the value of work opportunity and staying at home. Therefore, women's role and participation in the labour market were restricted by culture and traditional view in some societies. However, this notion was not in line with the preference theory.

The preference theory highlights that women's choices contribute to the difference between family work and market work (Hakim, 2000). This theory also states that individual attitudes and preferences are the factors of the differences between women's participation decisions. It was also said that this theory offers a universal theory, which explains the cross-cultural variations and heterogeneity among women regarding their work, family choices, and responses to social policy in these realms (Rogers and Hakim, 2002). Furthermore, the preference theory highlights three categorisations of women based on their work-family preferences. First, home-centred women prefer to prioritise their family upon marriage. Having a large family, they avoid work involvement unless if the family is faced with financial difficulties. Second, work-centred women are more committed to work and work-related activities.

Provided that these women view work as their main priority in life, they are childless. Third, the majority of women fall under the adaptive category, and they prefer to incorporate employment and family responsibilities altogether. Moreover, they seek a work-life balance, as seen by women who are involved in part-time employment. Therefore, occupations with better work-life balance are preferred by these women.

Elster (1989, p. 105) defined the norm as "*the propensity to feel shame and to anticipate sanctions by others at the thought of behaving in certain, forbidden ways*". The social pressure to follow certain social norms instead of preferences has several implications on participation decisions. Based on the feminisation U-shaped hypothesis, there is a decline in women's labour force participation, which begins at a low level of economic development. Even though a rise in income leads to the shift of women's

labour from agriculture to manufacturing, their participation is reduced due to social and cultural norms, which leads to an overall decline in women's labour force participation. However, at a higher stage of economic development, the participation rises again, which indicates the structural shifts in the economy, an increase in women's education level, and more job opportunities (Goldin, 1995). The rise in female wages and availability of white-collar jobs would reverse the situation as women re-enter the labour market (Goldin 1995, Mammen and Paxson, 2000).

In conclusion, this section has presented the literature regarding the theory of labour supply in the intensive and extensive margins. However, this thesis specifically focuses on the extensive margin of labour supply. Following this section is the following two sections, which will present the empirical literature on two issues, namely the determinants of women's labour market participation decisions and the determinants of exit decisions from the labour market.

### **3.3 Empirical Evidence: Women's Participation Decisions in the Labour Market**

Previous empirical literature highlighted the presence of the gender gap in labour market participation (Chi and Li, 2014; Liu, 2012). Accordingly, various contributing factors of the gender gap in participation in the labour market and the factors of women's decisions in the labour market were highlighted. Examples of these factors include economic development, education, cultural and social norms, marriage, the responsibility of caring for the children and the elderly, and gender wage gap and discrimination. This section incorporates the works of literature on the gender gap in labour market participation by focusing on the factors affecting women's participation decisions in the labour market.

### 3.3.1 Economic development and education

One of the leading hypotheses discussed the U-shaped relationship between women's labour market participation and economic development. Various cross-country studies supported the U-shaped relationship between women's labour force participation and economic development (Tam, 2011<sup>35</sup>; Mammen and Paxson, 2000; Goldin, 1995). However, the recent panel analysis studies produced mixed results on this relationship (Gaddis and Klasen, 2014; Verick, 2014). To illustrate, despite the appearance of a U-shaped relationship between the GDP per capita and female labour force participation rate, the relationship was found to be weak in the country-level analysis (Verick, 2014).

Gaddis and Klasen (2014) highlighted the minor relevance of U-shaped transition under the course of economic development for most developing countries. However, Lahoti and Swaminathan (2016) found no relevance in the relationship between women's labour force participation and the level of domestic product on the state-level panel data analysis in India. Rather than providing opportunities, economic conditions could also become a push factor for women to participate due to economic necessity. This notion was proven in several studies, where women in the poorest households participated in the labour market due to economic necessities, such as survival (Azid et al., 2010; Bridges et al., 2011).

Furthermore, education has been recognised as a significant determinant of labour market participation among men and women (Contreras et al., 2011; Liu, 2012). The human capital theory suggests that education is a form of investment and a potential source of earning, which significantly influences employment outcomes (Mincer and

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<sup>35</sup> Tam (2011) argued that the cross-country analyses could lead to bias due to potential country specific effects that fail to hold up in a time series context. The panel data analysis, however, suggested that they are not likely to be a result of 'Kuznets fallacy' but showed the intertemporal relationship of the U-shaped pattern.

Polachek, 1974). Previous studies found a positive relationship between education and women's labour market participation (England et al., 2012; Contreras and Plaza, 2010). Furthermore, stronger income effect on women with higher education levels led to higher employment rates than women with lower education levels (England et al., 2012). Higher opportunity cost among educated women was argued to be a probable factor of higher labour market participation among the women compared to staying at home.

Several studies found a U-shaped relationship between educational attainment and women's labour market participation (Gunatilaka, 2013; Kanjilal-Bhaduri and Francesco, 2018; Klasen and Pieters, 2015; Sudarshan, 2014). Specifically, it was highlighted the U-shaped relationship emerged between women's education and labour market participation when the poorly educated individuals were forced to work, while the individuals with a higher education level had a higher tendency to work due to high wages and low restriction of social norms (Klasen and Pieters, 2012). A cross-section analysis found that the highest level of participation was present among the illiterate and women with tertiary education (Sudarshan, 2014).

Based on the National Sample Survey Office (NSSO) data from 1987 to 2005, Klasen and Pieters (2015) found that despite the availability of a robust U-shaped pattern in urban India, the impact of the increasing education levels and women's labour force participation was complex. It was concluded that the stigmas of women who worked in low-skilled sectors during education distribution and the decline in positive selection into higher education were moderated. These stigmas also reduced the increasing impact of women with graduate-level education. Moreover, a study for Bangladesh found an insignificant U-shaped relationship between education and female labour supply (Heintz et al., 2018). An increase was recorded in the labour supply

among women in the countries at the downward-sloping part of the U-shaped female labour supply curve. This finding was a result of a higher educational level among the women, which shifted the curve upward (Heath and Jayachandran, 2016).

Apart from that, education was found to be negatively related to women's labour market participation in India (Sorsa et al., 2015). The suggested factor of this situation was insufficient job opportunities for well-educated women. Similarly, Klasen and Pieter (2015) highlighted that the increasing issue of unemployment was the factor of low participation among women in India despite the significant growth and improvement in educational attainment. Therefore, despite the modest growth recorded in the labour force participation among women, this participation rate declined in some instances.

### **3.3.2 Cultural and social norms**

Studies found a vast and persistent gender gap for countries in the Middle East, North Africa, and South Asia despite increased educational attainment (Asadullah and Wahhaj, 2016; Chamlou et al., 2011; Nazier and Ramadhan, 2018). For example, a study in Pakistan found that the positive impact of education was restricted by cultural norms and discrimination, which prevented women's occupational choice from being responsive to education until they have about ten years of education (Aslam et al., 2008). Cultural norms were also argued to be the factors of the decline in women's participation in the labour market (Dildar, 2015; Göksel, 2013) and these norms determined the type of employment selection among women in several instances (Heintz et al., 2018).

Furthermore, a study in Egypt incorporated dummy variables of women who strongly agreed that a woman should be financially autonomous (Nazier and Ramadhan, 2018). These variables were included to identify the effects of cultural norms. A certain

percentage was also present for women who accepted that a man has the right to beat his wife for any reason at the governorate level. Notably, this aspect was significant and negatively related to women's labour market participation decisions.

Some studies concluded that cultural norms restricted women's labour market options, such as the choice for the type of employment. For instance, Heintz et al. (2018) conducted the Heckman two-step procedure through a pathway survey to identify the determinants of women's participation in Bangladesh, followed by the selection of the type of employment. It was then concluded that women who routinely wore the *pardah*<sup>36</sup> and supported the traditional gender roles<sup>37</sup> were more likely to be involved in work at home. Similarly, the cultural norm variable at the governorate, which three different probit models estimated, found that the factor significantly and positively impacted self-employment among Egypt's women (Nazier and Ramadhan, 2018). Additionally, the adverse impacts of cultural factors were more substantial than the effects of human capital (Contreras and Plaza, 2010). Ferrant et al. (2014) emphasised that the exclusion of unpaid care activities, which neglected the role of social norms on women's ability to enter and remain in the labour market, contribute to the persistent gap in labour force participation.

In relation to this, previous literature did not present any difference between culture and social norms. Elster (1989, p. 99) highlighted that the norms should be shared among individuals and partly sustained by approval and disapproval. Furthermore, it was highlighted that social norms also restrict the nature and degree of the women's

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<sup>36</sup> In patriarchal societies such as Bangladesh, *pardah* norms restrict women's mobility in public spheres (Kabeer, 2001).

<sup>37</sup> Heintz et al. (2018) constructed the gender norms index through a measure of agreement or disagreement on the following statements: (i) Women need an income of their own to be self-sufficient, (ii) women's work outside the home does not have a negative impact on their marriage, and (iii) husbands should help wives who work outside the home with housework.

movement in the public sphere (Asadullah and Wahhaj, 2019, 2016). In a study by Asadullah and Wahhaj (2019)<sup>38</sup> on female seclusion from paid work, the roles of culture were differentiated from social norms (e.g., social pressure) as the factors of women's decision to participate in paid work. Through instrumental variable approaches, the study concluded that social pressure presented by the practice of wearing the *purdah* harmed women's participation in paid work. Meanwhile, the cultural constraints presented by *purdah* rules in women's parental homes were insignificant determinants of participation decisions.

The studies on the role of culture and norms are inadequate, possibly due to the unavailability of data. Nationwide surveys, which usually recorded labour information, did not comprise the variables to identify the impacts of the norms. For instance, a study conducted by Bridges et al. (2011) examined the effects of cultural norms on the labour market decisions among women in Bangladesh. However, the interpretations of the results were based on the standard economic and demographic variables due to the absence of direct measures of cultural norms.

### 3.3.3 Gender roles, ethnicity and religion

Women were also faced with restrictions due to the traditional division of gender roles in the family. When women carried most of the responsibilities at home, the probability of participation in the labour market was lower, as illustrated by a survey on 5,000 women in Bangladesh, which concluded that the individuals who expressed support for traditional gender norms had a lower probability of participating in the labour market (Heintz et al., 2018). Furthermore, the negative impact of the presence of young children on the total hours of work was more significant among women with

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<sup>38</sup> The study identified the impact of both culture and social norms through the primary data collected in the Women's Life Choices and Attitude Survey (WiLCAS), which comprised rich information on female work participation.



traditional views than women with egalitarian ideology (Khoudja and Fleischmann, 2018).

Davis and Greenstein (2009) defined gender ideology as '*individuals' level of support for a division of paid work and family responsibilities that is based on the belief in gendered separate spheres*'. The traditional gender roles refer to the belief that men should be the breadwinner for the family, while childcare and domestic work are women's primary responsibilities. In contrast, the egalitarian gender ideology believes in the equal responsibilities of men and women in both paid and unpaid works. Studies found that women with more traditional views on gender roles were less likely to participate in the labour market (Chamlou et al., 2011; Contreras and Plaza; 2010; Khoudja and Platt, 2018) compared to women with egalitarian gender ideology. Furthermore, the men's role as the primary breadwinners justified their low involvement in domestic responsibilities (Cunningham, 2008). Accordingly, through three estimations, it was concluded that the participation of men in routine housework and women's egalitarian views positively contributed to the women's involvement in the labour market (Cunningham, 2008). In some cases, they also influenced the type of work, productivity, and earnings among women (Samman et al., 2016).

In contrast, the preference theory argues that women might choose the division of time between work and unpaid work based on their preferences (Hakim, 2000). However, women may not be able to make an independent decision between labour market participation, care responsibilities, and housework on their own. Moreover, provided that these decisions involve the husband and other household members, the views on gender roles could directly influence the allocation of time for paid work and household chores. For instance, parents' characteristics, such as education level and employment status, were found to be the significant determinants of women's

participation decisions (Nazier and Ramadhan, 2018). Additionally, parents-in-law could also contribute to the restricted women's participation in the labour force by enforcing the traditional gender role of women at home (Sorsa et al., 2015).

Furthermore, several studies presented evidence of the difference between the labour market participation between women of different ethnicities (Khoudja and Platt, 2018; Khoudja and Fleischmann, 2015). In terms of labour market participation, it was found that the customary beliefs and values of an ethnic group could influence the decisions on participation in the labour market and the type of jobs selected in the labour market.

Another non-economic factor found in women's participation was religion, which leads to different lifestyles and cultures. Besamusca et al. (2015) concluded in their cross-country analysis (involving 117 countries) that gender ideologies and religion were more important indicators of women's labour market participation than economic conditions and education. Similarly, based on separate logit models<sup>39</sup> performed by Alam et al. (2017) on married and single women from rural and urban areas in Indonesia, it was found that the religious differences between these women were significant, especially for married women. However, the studies aimed to highlight the differences among religious groups without elaborating on the factors of the differences.

Braunstein (2014), however, criticised that the role of religious affiliation (particularly Islam) as a proxy of patriarchal preferences contributed to misleading information. It was proven that the inclusion of control over the patriarchal institution in the estimations led to a decline in Islam's statistical and significant impacts. An analysis was performed by Guner and Uysal (2014) in Turkey regarding the impact of religion

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<sup>39</sup> In order to ensure robustness in the findings, the authors presented three specifications for each model to ensure robustness, namely the baseline for religion variable, the addition of individual specific control, and the added control variables of parents and spouse.

on female labour supply through the previous parental party votes in the women's province of origin as a proxy of parental religiosity<sup>40</sup>. It was concluded that female migrants from the province with a larger share of religious party votes in 1973 were less likely to participate in the labour market in 2008. Meanwhile, a study conducted in Afghanistan concluded that women who grew up in the province under the *Taliban* rule were less likely to be employed outside of the household, had a higher number of children, received a basic education, and younger age at the first marriage (Noury and Speciale, 2016)<sup>41</sup>.

In an investigation by Dildar (2015)<sup>42</sup> on the effects of patriarchal norms and religiosity<sup>43</sup> on an urban area in Turkey, it was found that both variables were significant and negatively related to women's participation in the labour force. Furthermore, religiosity was associated with a more traditional view of women's role, which negatively affected women's participation in the labour market (Dildar, 2015; Seguino, 2011). Meanwhile, Khoudja and Fleischmann (2015) found an insignificant relationship between religiosity and hours of work due to more traditional gender role attitudes among more religious women.

### 3.3.4 Marriage and care responsibilities

Earlier literature on women's labour market participation decision focused on the impacts of marriage, which was a life-changing event for women. As a result, the labour force participation decision among married women was subjected to debate. Based on

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<sup>40</sup> This refers to the votes on National Salvation Party (MSP), which brings forward Islamist agenda.

<sup>41</sup> Under the ruling of *Taliban* (e.g., radical Islamist group), the status of women was reduced due to the restriction of female rights and freedom (Noury and Speciale, 2016).

<sup>42</sup> The patriarchy norms in Dildar (2015) measured the internationalisation of patriarchal norms by women, while another study conducted in Turkey applied husband's conservatism as a determinant of women's participation in the labour market. Furthermore, the conservatism variable combined social norms and religion indexes (Göksel, 2013), which led to similar findings.

<sup>43</sup> Religiosity is indicated by the frequency of religious practices of women's prayers and fasting.

the previous section, women have often assumed responsibilities in domestic work, which included child-rearing and household tasks, while men were expected to be the primary breadwinners (Becker, 1991; Gronau, 1973; Mincer, 1962).

It was also found that marriage was negatively related to women's participation in the labour market (Blau et al., 2014; Euwals et al., 2011; Lee et al., 2008). Furthermore, married women had a lower possibility of participating in the labour market than single women (İkkaracan, 2012; Lee et al., 2008). Several studies argued that the constraints faced by married women were due to their assumed roles at home (Gunatilaka, 2013; Malhotra and Degraff, 2000). Additional household chores and childcare responsibilities reduced women's opportunities in the labour market.

İkkaracan (2012) highlighted that the internalisation of gender roles superseded the logistics of care. Widows and divorcees might have a different relationship in the labour force participation decisions among women. Following the rise in divorces in American families, a study was conducted to examine women's labour force participation by analysing the simultaneous models of future divorce probability and the current labour supply (Johnson and Skinner, 1986). As a result, it was found that divorced women increased their labour supply in the first three years of their separation. Other studies supported this finding, which suggested that marital separation was strongly associated with labour market entry (Jeon, 2008). In a study by Djuikom and Van de Walle (2018) in Africa, it was found that marital shocks significantly lowered the welfare of women in Africa, as indicated by their nutritional status. However, the adverse effects of these shocks were not universal for the country-specific estimation.

In addition to that, it was argued that marriage reduced the participation of women in the labour market due to the economic stability emerging from the husband's income (Brekke, 2013; Jeon, 2008; Morrisette and Hou, 2008) and depicted as the availability

and source of alternative income (Blau et al., 2014). However, Sorsa et al. (2015) found that the husband's income was positively related to women's participation. Additionally, although the presence of partners was found to be significant in the women's participation decisions, this was not the case in reference to the hours of work for working women (Khoudja and Fleischmann, 2015). However, the husband's employment status was found to be insignificant in labour market participation decisions among women in Egypt (Nazier and Ramadhan, 2018).

Fertility influences labour market participation decisions, while care responsibilities shouldered mostly by women would be the impediments for working women. Among the proxies of care responsibilities, which have been applied in studies, are the fertility rate and the number of children. Specifically, an inverse relationship was found between the total fertility rate and women's labour force participation rate (Bloom et al., 2009; Cáceres-Delpiano, 2012; Hartani et al., 2015; Mishra and Smyth, 2010). Furthermore, Bloom et al. (2009) found that a birth reduced almost two years of labour supply throughout the women's reproductive years. In contrast, the direct financial needs for child support contributed to the positive impacts of fertility in the labour supply among women. For instance, a study conducted in Indonesia found a positive effect of fertility on the female labour supply (Priebe, 2010).

Additionally, a higher number of children also reduced the probability of participation in the labour market among mothers (Contreras and Plaza, 2010; Contreras et al., 2010; Dildar, 2015; Heath, 2017). Additionally, despite the decreased participation probability, the hours of work increased for the individuals who participated in the labour market (Heath, 2017). A study implementing the Demographic and Health Surveys from 26 developing countries concluded that the presence of children was insignificant in participation decisions and the intensity of

work but affect the selection of types of work (Agüero and Marks, 2011). Meanwhile, the presence of children was found to be insignificant in men's labour supply (Heath, 2017).

Additionally, several studies found that the age of children influences the supply of labour for married women due to its negative relation to the presence of younger children below the school age (Azid et al., 2010; Contreras and Plaza, 2010; Faridi et al., 2009; İkkaracan, 2012). Meanwhile, children of older age were found to positively impact married women's labour supply (Angrist and Evan, 1996). Although an opposite impact was found in Pakistan, it was essential to note that the study separated the estimation for children above school age based on gender, with the significant and negative relations being concluded for the male children (Azid et al., 2010). In this case, the male children could be the resources for the family, which reduced the burden carried by the mothers.

All the factors mentioned above led to the discussion on childcare arrangement. In developing countries, time and budget constraints in child-rearing impacted women's labour supply (Padilla-Romo and Cabrera-Hernández, 2019)<sup>44</sup>. Therefore, childcare is a significant determinant of labour market participation decisions among women. Furthermore, the availability of childcare could alleviate the concern on childbearing among working women (Kimmel, 2006). In this case, formal childcare refers to paid and centre-based childcare activities, while informal childcare is present in the context of a family's relationship with the caregiver who assists a child, their partner, parent, or other family members. Therefore, the selection of childcare type is related to the costs involved in childbearing.

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<sup>44</sup> As the result of women's primary responsibilities on childrearing activities conforming to the traditional gender roles.

Most works of the literature indicated that childcare, which consisted of formal (Dang et al., 2019; Dujardin et al., 2018) and informal (Du and Dong, 2013; Li, 2017; Shen et al., 2016; Ogawa and Ermisch, 1996) services, resulted in higher participation in the labour market among mothers. The availability of childcare increased the participation of women in the labour market and contributed to a higher probability of participation in the formal job (Dang et al., 2019)<sup>45</sup>. However, several studies did not identify the significant relationship between childcare and women's labour supply. To illustrate, Li (2017)<sup>46</sup> found no significant impact of formal childcare on women's labour market participation. Overall, it was concluded from empirical literature that childcare costs have a negative relationship with women's participation in the labour market (Du and Dong, 2013).

Kawabata (2014) mentioned that adequate childcare provision for children under the age of three would increase the active participation of women in the labour market. Dujardin et al. (2018) applied the differences-in-differences approaches on panel data and developed the same conclusion based on the same age range for children. However, the increase in the mothers' participation in this market occurred at a lower degree, possibly due to the crowding-out effects. To illustrate, research on the effects of formal and informal childcare for urban China found that the possibility of participation among mothers increased by 26 percent with the availability of grandchild care, although the availability of formal childcare was not significant (Li, 2017)<sup>47</sup>. Similarly, it was concluded from the instrumental variable approach that co-residence with parents and coexistence in the same neighbourhood increased women's labour force participation

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<sup>45</sup> Probability of women having wage-earning job increased by 41 percent, and probability of having formal job increased by 26 percent.

<sup>46</sup> However, positive and significant impacts were found in Li (2017) for informal childcare provision.

<sup>47</sup> Li (2017) stated that the probable reason for China's reliance on informal childcare was due to the childcare reforms, which took place in the mid-1990s. These reforms led to the decrease in public childcare programs and increase in costly private care centres.

(Shen et al., 2016). Research also concluded that living together with parents in the same household significantly reduced a mother's involvement in childcare (Chen et al., 2000).

Provision of care does not only apply to children, but it also applies to the elderly (e.g., parents and parents-in-law). Although the time commitment associated with caring for the elderly may be similar to taking care of children, there might be differences in terms of decisions and the nature of elderly care provision (Ettner, 1995). Notably, caregiving responsibilities deter women from joining the labour force when the population of the elderly is increasing (Ettner, 1995). This notion was supported by previous findings that informal caregivers for the elderly had less attachment to the labour force (Nishimura and Oikawa, 2017; Van Houtven et al., 2013). Meanwhile, the findings from Van Houtven et al. (2013) suggested that female caregivers had a higher possibility to retire, have their working hours reduced, and consequently obtain a lower wage. Although informal elderly care was negatively related to female labour force participation (Nishimura and Oikawa, 2017)<sup>48</sup>, the panel data for 13 European countries recorded that the effects of the provision of unpaid care for the elderly on employment were negative despite being minor (Ciani, 2012). Similarly, the availability of formal care services for the elderly led to an increase in women's labour supply (Sugawara and Nakamura, 2014). Additionally, several studies found a small or insignificant impact of elderly care on the labour market participation among men (Nishimura and Oikawa, 2017; Van Houtven et al., 2013).

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<sup>48</sup> The study aims to examine the impact of government intervention on the supply side of elderly care market and shows that government intervention will be able to increase female labour due to their time spent for elderly care.



Governments have also introduced various family-friendly policies<sup>49</sup> to facilitate and encourage women's participation decisions, such as childcare subsidies, flexible working hours, parental leave, and tax reliefs. Notably, these policies contribute to the higher participation of women in the labour market (Winkler, 2016). To illustrate, the long-differences estimation in Mexico recorded that the impact of the shift from not full-time to full-time school (FTS) for all schools resulted in an increase in labour force participation among mothers by 5.5 percentage points, 1.8 working hours, and 410 Mexican pesos of earnings. Furthermore, the FTS programme is one of the government policies aimed towards the improvement in the participation of mothers in the labour market through the extension of school days (Padilla-Romo and Cabrera-Hernández, 2019). Similar policies of childcare subsidies<sup>50</sup> have also benefited other countries, mainly developed countries (Bauernschuster and Schlotter, 2015; Berthelon et al., 2015; Givord and Marbot, 2015; Martínez and Perticará, 2017). However, several studies also found that after-school care did not have an impact on the extensive margin, but it significantly impacted the intensive margin of mothers' employment (Felfe et al., 2016).

### **3.3.5 Gender wage gap and discriminations**

Despite the significant impact of wage in labour supply decisions highlighted in the literature (Blundell and MaCurdy, 1999), the incorporation of wage resulted in a methodological issue as it could only be observed for working samples. Therefore, few studies applied the selectivity corrected wage equation to estimate the expected wage for women. Subsequently, this aspect was identified as an independent variable in the labour force participation model (Klasen and Pieters, 2012, 2015; Pastore and

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<sup>49</sup> Detailed discussion on government policies in Malaysia was carried out in chapter 2.

<sup>50</sup> This type of childcare subsidies acts as an alternative childcare for children, with no costs (e.g. full-time-school, public kindergarten).

Verashchagina, 2008), which was estimated using the Heckman selection bias correction model (Heckman, 1976).

As a result of the unavailability of suitable variables, which could be incorporated as one of the identifying variables, Gunatilaka et al. (2013) sourced the wage data from a different dataset and calculated the expected wage gap. This process was in contrast to the previous findings, which calculated the expected wage gap from the same dataset while correcting the selection bias using the Heckman two-step procedure. Notably, the challenge in the use of Heckman procedure lies in the aspect of finding the variables, which do not possibly affect wages but influence the labour force participation decisions. The identifying variables applied for the wage equation are the presence of the elderly, the number of dependent children, the number of children under the age of five, and the woman's age when the first child was born (Pastore and Verashchagina, 2008).

Another factor of the gender gap exists in labour market participation is gender discrimination (Ganguli et al., 2014; Liu, 2012). In a study by Ganguli et al. (2014) on 40 countries in Asia, Europe, Africa, and Latin America, it was emphasised that a major part of labour force participation gap was left unexplained when education, marriage, and motherhood gaps were omitted. Various studies highlighted the presence of gender wage inequality, particularly in developing countries (Ahmed and Maitra, 2010; Chi and Li, 2014). It was found that the discrimination faced by women was in the form of wage inequality, and it was a significant factor contributing to wage differentials in other developing countries (Ahmed and Maitra, 2010; Meng, 1998).

Ahmed and Maitra (2010) accounted for the selectivity bias through the Heckman probit estimation. As a result, it was found that the wage gap was more prevalent in the urban areas of Bangladesh, with a significant part of the differentials attributed to

discrimination towards women. Moreover, employer discrimination towards the characteristics of men and women during the hiring process led to gender wage differentials among rural-urban migrants in China (Meng, 1998). Another study found that the gender wage gap narrowed considerably at the lower end compared to the upper end (Ahmed and McGillivray, 2015). Nevertheless, based on various perspectives, Seguino (2000) stated that gender wage inequality in Asian countries contributed to the rapid growth of the economy.

Empirical studies were performed to identify the regional variations in labour market participation between urban and rural areas. As a result, it was found that individuals who resided in urban areas had more opportunities to participate in the labour market compared to those residing in rural areas (Contreras et al., 2011; Faridi et al., 2009). This variation was possibly caused by the industrialisation process, which consequently led to more job opportunities concentrated in the urban area. On the other hand, a study on women's participation in China concluded that family factors had a more substantial influence on women's participation decisions in rural areas, while individual factors had a more significant impact on the women in urban areas (Chen et al., 2014).

### **3.3.6 Literature on women's labour market participation in Malaysia**

There was a limited number of studies on the gender gap and labour market participation in Malaysia. Specifically, only seven published studies were found on women's participation decisions in Malaysia, namely the studies by Amin et al. (2017), Amin et al. (2016), Amin and Alam (2008), Ismail and Sulaiman (2014), Nor and Said (2014, 2016), and Tan et al., (2015). Nor and Said (2016) estimated the participation decisions for men and women through logistic regression on the Labour Force Survey (LFS) in 2000, 2005, and 2010. Through the same data and timeline, Nor and Said (2014) examined the rural vis-à-vis urban variation. Despite the nationwide survey

conducted in both studies, only educational attainment, age groups, and marital status were identified as the independent variables. Additionally, previous studies emphasised specific groups, such as married women and educated married women (Amin et al., 2017; Amin et al., 2016; Ismail and Sulaiman, 2014)<sup>51</sup>.

In line with the human capital theory, higher educational attainment (e.g., tertiary education) increased the probability of labour market participation for women (Nor and Said, 2016, 2014)<sup>52</sup>. The likelihood of labour market participation among married women increased by 13.5 percent with an increase in schooling by one year (Ismail and Sulaiman, 2014), with a more substantial impact present among women in urban areas (Amin and Alam, 2008). Overall, a U-shaped relationship was present between age and women's participation decisions (Amin and Alam, 2008; Nor and Said, 2016)<sup>53</sup>.

While married women were less likely to participate in the labour market, divorcees had a higher probability of participating in the labour market (Nor and Said, 2016). Similarly, the highest probability of participation was present among married men. The number of children was also significant and negatively related to married women's participation in the labour market (Ismail and Sulaiman, 2014). A study conducted by Amin et al. (2016), which utilised the binary logistic regression analysis among educated, married women, found that a higher number of children and children below six years old negatively affected women's participation in the labour market. However, this result was probably biased due to the exclusion of other relevant variables<sup>54</sup>. According to Amin and Alam (2008), the number of children below the age of seven

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<sup>51</sup> For exception, see Amin and Alam (2008).

<sup>52</sup> Although the positive effect of education was recorded for men, the probability of participation in the labour market was higher for women (Nor and Said, 2016).

<sup>53</sup> A study performed by Nor and Said (2016) found that the probability of participation for women was the highest for individuals of the age group of 25 to 34, which declined afterwards.

<sup>54</sup> This study only examined the impact of number and age of children.

negatively affects married women's participation both in urban and rural areas. The study also recorded that the presence of another adult in the household increased the probability of participation among married women in urban areas.

It was also found that women made the decisions to support their family with the financial or non-financial matter. Thus, women's participation decisions were usually decided within the household. For instance, the study conducted by Tan et al. (2015) found that parents or their husbands influenced women's decisions to work if they were married. Additionally, the survey also found that women who were not currently working were discouraged by their preferences, while the women who never worked were discouraged by their parents and husband's preferences<sup>55</sup>. Concerning this finding, a husband with a higher level of education increased his wife's participation to the labour market due to lower prejudice towards working women (Amin and Alam, 2008). Although mothers were insignificant factors, a father with primary and secondary education contributed to a lower probability of participation among women (Amin and Alam, 2008).

Furthermore, women might choose to not work due to the impact of income from the high reservation wage when the husband's income was high (Amin and Alam, 2008). However, there was a case when the husband's wage, own wage, and non-labour income were insignificant in determining the labour market participation decisions among married women (Ismail and Sulaiman, 2014). Additionally, it could be concluded through the sequential logit approach that religion influences the labour

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<sup>55</sup> This is an exploratory study on 553 women on their decision to work.

market participation decisions and employment status (e.g., part-time or full-time) of women in Malaysia (Amin and Alam, 2008)<sup>56</sup>.

Additionally, several studies highlighted the issue of gender wage differentials in Malaysia (Goy and Johnes, 2015, 2012; Ismail and Jarji, 2012; Ismail, 2011; Ismail and Noor, 2005), which exists due to the variations of demographic factors, human capital factors, job characteristics, and type of industry (Ismail and Noor, 2005). For instance, the second Malaysia Family Life Survey (1988) analysis concluded that the unexplained variables contributed to 87.5 percent to 93.9 percent of the gender earning differentials (Nor, 1998). Other studies in Malaysia found that severe discriminatory practices in the labour market attributed to high unexplained variables of gender wage differentials, which might amount to over 70 percent (Ismail and Jarji, 2012; Ismail, 2011). In contrast, another study recorded an absence of discriminatory practices (Ismail and Noor, 2005)<sup>57</sup>.

In the case of occupational segregation<sup>58</sup>, a decomposition analysis recorded the possibility of wage discrimination in all occupations, with a larger unexplained residual variable in male-dominated occupations (Nor, 2000). A recent study by Ismail et al. (2017) found the existence of discrimination in intra-occupational segregation, although it was not present in inter-occupational segregation. Similarly, the study concluded that the inter-occupational gender wage differential in Malaysia was in favour of women

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<sup>56</sup> A study by Amin and Alam (2008) concluded that Muslim women in rural Malaysia, regardless of marital status, were less likely to participate in paid employment compared to Buddhists and Hindus. However, religion was found to be less influential in urban areas, in which Muslims were the majority.

<sup>57</sup> It is important to note that Ismail and Noor (2005) only utilised data from the manufacturing sector instead of aggregate data.

<sup>58</sup> Occupational segregation may be vertical (e.g., different status of occupation between genders) or horizontal (e.g., gender difference across occupations).

(Goy and Johnes, 2012)<sup>59</sup>. Goy and Johnes (2015) also found evidence that the gender wage differential was the most critical for women at the bottom of the distribution through the semiparametric estimation.

In sum, this section has discussed various factors of women's labour market participation, including individual and household characteristics, care-related factors, culture and social norms, marriages and care responsibilities, and the gender wage gap and discrimination. It has also highlighted the literature on women's labour market participation decisions in Malaysia. Moving forward, as highlighted in Section 1.2, apart from the low participation of women in the labour market, concern was also present regarding the withdrawal of working women from the labour market. Therefore, the next section will discuss the literature on the determinants of women's labour market exit decisions.

### **3.4 Empirical evidence: Women's Exit Decisions from the Labour Market**

As discussed in the earlier section, a vast body of literature focused on the determinants of women's participation in the labour market. The concern over the low, stagnant, and declining participation of women in the labour market led to the development of research in this area. However, it is noteworthy that a large proportion of women who are not involved labour market is made up of the individuals who have never participated in the labour market and the dropouts from the labour market. Furthermore, the occurrence of dropouts might also be a contributing factor towards the low labour force participation rate of women. Therefore, apart from the non-

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<sup>59</sup> Ismail et al. (2017) and Goy and Johnes (2012) highlighted the importance of the issue of sample selection bias in examining the gender wage differentials, and this issue was addressed in their studies using the multinomial logit model.

participation, it is also crucial to investigate the factors of the decision to leave the labour market.

Following the discussion on the determinants of participation, this section would specifically focus on the exit determinants<sup>60</sup> for the literature on dynamic labour force participation (e.g., the combination of both entry and exit through longitudinal data). Several studies found that women had a higher possibility to withdraw from the labour market compared to men (Long and Jones, 1980; Sarkar et al., 2019). Married women also had more likeliness to leave the labour market compared to single women (Hotchkiss et al., 2011).

Furthermore, it has been concluded that the presence of young children (e.g., below pre-school age), (Herrarte et al., 2012; Jeon, 2008; Khoudja and Fleischmann, 2018; Khoudja and Platt, 2018; Long and Jones, 1980; Sarkar et al., 2019) and arrival of a new-born (Herrarte et al., 2012; Jeon, 2008) are associated with the withdrawal of married women from the labour market. Furthermore, Liu et al. (2014) emphasised mothers' withdrawal from the labour market as childcare-related factors are common in urban areas. It shows that Marriage and childcare responsibilities could lead to potential change in women's focus from career to familial responsibilities. Additionally (Sarkar et al., 2019) concluded that the increase in number of elderly members was positively related to exit decisions among women, whereas presence of parents-in-laws which refers to co-residency in the same house reduced the probability of labour market exits among women.

Previous research has found that household income (Khoudja and Platt, 2018) and wealth (Sarkar et al., 2019) are both important and positively connected to women's

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<sup>60</sup> The literature on women's employment transitions from exit to re-entry was also excluded.



labour market withdrawal. Similarly, the alternative income, such as the husband's income, positively impacted women's exit decisions (Herrarte et al., 2012; Khoudja and Fleischmann, 2018). In contrast, another study found that the wages of the wife and husband were not significant in the exit decisions among women (Long and Jones, 1980).

As highlighted earlier in section 3.3.1, the human capital theory suggests that higher educational attainment depicts higher opportunity costs from the absence of work (Mincer and Polachek, 1974). Therefore, lower education contributes to a higher possibility of leaving the labour market (Liu et al., 2014), whereas higher educational attainment reduced the probability of leaving the labour market after childbirth (Hotchkiss et al., 2011). However, the inflexible work environment led to childcare issues, forcing educated women out of the labour market despite the high opportunity costs (Herr and Wolfram, 2012).

The exit decisions might also vary across ethnicity, as illustrated from the finding that women from an ethnic minority had a higher possibility to leave the labour market (Sarkar et al., 2019; Khoudja and Platt, 2018). In another study by Sarkar et al. (2019), it was found that women from backward caste were less likely to leave the labour market. Concerning the gender ideology, although it was concluded the woman's personal views and her spouse's traditional views on gender roles increased the probability for women to leave the market, a woman's views were found to be more significant than her spouse's views (Khoudja and Fleischmann, 2018).

In examining the entry and exit decisions, the concerns regarding the endogeneity issue of initial participation, which resulted in the potential sample selection bias, were raised (Heckman, 1976). The study applied the switching regression model to resolve the endogeneity issue, which included the inverse Mill ratio into the entry and exit

regressions (Sarkar et al., 2019)<sup>61</sup>. To be specific, following the estimation of both entry and exit decisions, the district level rainfall and district average growth rate of night lights were incorporated as the identifying variables to obtain the inverse Mill's ratio. The ratio was then included in the entry and exit decisions to correct the selectivity bias.

In summary, compared to the study of the dynamics of a labour market (e.g., both entry and exit decisions), there was an inadequate number of studies on exit decisions from the labour market. The available studies were conducted by Liu et al. (2014), Herrarte et al. (2012), Shafer (2011), and Hotchkiss et al. (2011). Using the longitudinal data, these studies focused on married women and the impact of the availability of childcare or the husband's job characteristics on women's labour market exit decisions. For instance, Liu et al. (2014) implemented a logistic regression model to investigate the effect of childcare-related factors on mothers' exit decisions. Accordingly, the study by Fragile Families and Child Wellbeing (FFCW) in the United States concluded that the decisions of labour market exit among mothers were commonly caused by childcare-related issues, such as childcare stability and multiple childcare.

Herrarte et al. (2012) examined the impact of having a newborn aged less than 12 months old and the husband's job characteristics on withdrawal decisions among women. As a result, an increase of 3.8 percent was found in the withdrawal decision of women with newborn babies while the conditional probability was taken into account. Furthermore, a husband with long working hours increased the wife's withdrawal decision by 1.5 percent. The probability of withdrawal increased by another 4 percent when the husband worked in a different region. Shafer (2011) also concluded that a wife

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<sup>61</sup> Switching regressions model also involved a two-step procedure similar to Heckman probit, in which the inverse mills ratio was estimated in the first step. This ration was then included in the second step.

with a husband who worked long hours had a higher possibility of leaving the labour market than a wife whose husband worked regular hours.

Additionally, a wife's higher relative wage also reduced the possibility to leave the labour market. Implementing the maximum likelihood probit regression, Hotchkiss et al. (2011) estimated the probability of a mother's withdrawal from the labour force after childbirth. The main findings from the research concluded that for both 'first birth' and 'subsequent birth', the probability of leaving the labour market was reduced with higher educational attainment (e.g., college degree), while marriage led to a higher probability of exit among women.

There are only two studies in Malaysia that examined women's labour market exit decisions. The first study by Subramaniam et al. (2010) was a preliminary work involving 80 respondents from Klang Valley, which presented descriptive findings on the impact of children and the decision for women to stop working. The second study is a qualitative research by Halim et al. (2016) which examined the effect of marriage and motherhood on women's participation decision, focusing on those with tertiary education.

### **3.5 Gaps in the literature on Malaysia**

There are several gaps that can be highlighted from the literature: compared to other developing countries, the literature on women's labour market participation is limited for Malaysia. Moreover, in the case of Malaysia, there is no existing study that takes into account the potential effects of social customs on the labour market participation decisions, whether directly or indirectly. Furthermore, despite several studies examining the presence of the gender wage gap, there was an inadequate number of studies focusing on the impact of the gender wage gap in labour market participation decisions.

Furthermore, the literature on women's exit decisions is scarce compared to the labour market participation decisions (Section 3.3). Moreover, with the exception of recent empirical research by Sarkar et al. (2019), the literature on exit decisions focused on developed countries. This is possibly due to the unavailability of comparable and nationwide data. Focusing on Malaysia, these are the gaps that were found. First, there are only two available studies on labour market exit decisions of which one is the preliminary descriptive research, and another one is a qualitative research; Second, none of the studies takes into account the exit and participation decisions simultaneously. Therefore, this research aims to fill the gap from the international and Malaysian literature by examining the labour market exit decisions among women.

## CHAPTER 4: DATA AND METHODOLOGY

### 4.1 Introduction

This chapter first discusses the conceptual framework of the research. Additionally, the next section outlines the available datasets containing labour market information in Malaysia and justifies the decision to use the Malaysian Population and Family Survey (MPFS). It also presents the instruments used in the study, describes the MPFS measurements, and discusses the methodology applied in the research. The methodological framework of this research is quantitative and based on a multivariate regression analysis of dichotomous labour market outcome variables.

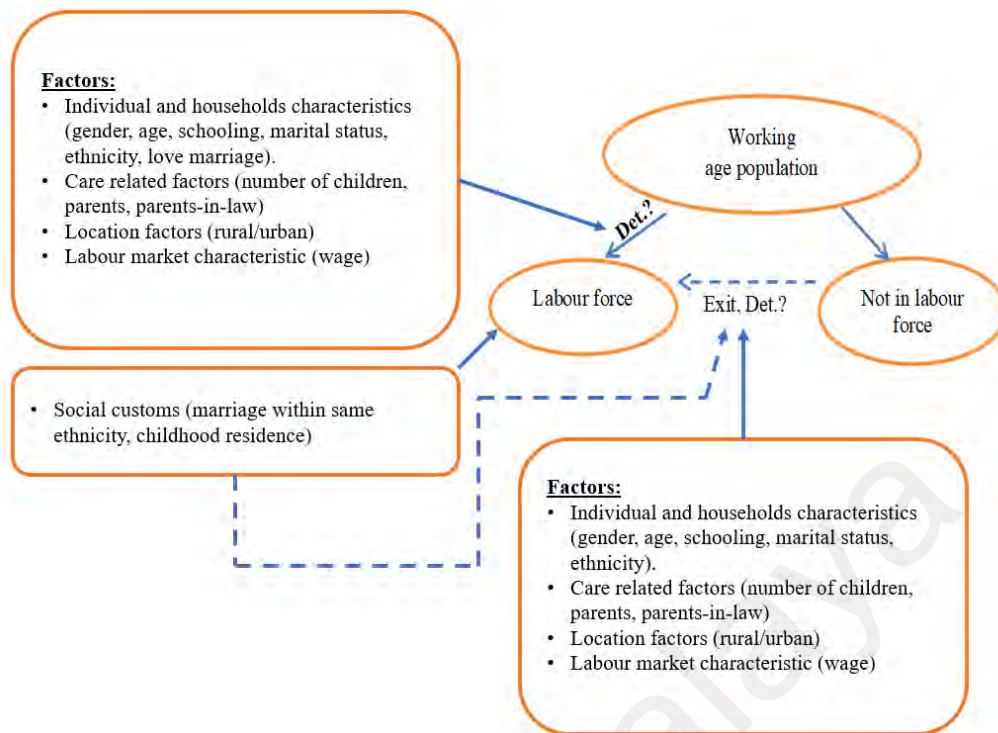
The methodological discussion is divided into two parts. Section 4.4 elaborates on the methodology applied to examine the gender gap and the determinants of labour market participation in Malaysia, followed by the discussion on methods applied to estimate the wage gap between the genders. Section 4.5 of this discussion examines the size of the gender gap in the labour market exit decisions and analyses the determinants of exit decisions among women.

### 4.2 Conceptual Framework

Based on the existing literature, this section outlines the conceptual framework to guide the empirical analysis of women's participation and exits decisions from the labour market<sup>62</sup>. The framework focuses on the general outcome of who participate (i.e., currently working) as well as the exit decisions (i.e., not working currently but have working experience) from the labour market.

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<sup>62</sup> Literature in Bahasa Malaysia is excluded from the discussion. Firstly, it is important to recognize the fact that there is an overlap between choices to participate or not participating in the labour market. Secondly, for those who are at work today, it does not mean that they will be at work tomorrow, and for those who are not in work today, does not mean that they were never in work.



**Figure 4.1: Proposed conceptual framework**

As discussed in section 3.2, factors affecting women's work can be conceptualized in two broad categories: economic and demographic. However, as highlighted by recent studies (e.g. Guner and Uysal, 2014; Noury and Speciale, 2016; Xiao and Asadullah, 2020), women's choices are shaped by social processes and constraints above and beyond the influence of economic and demographic factors. Therefore, we consider an extended conceptual framework where social influences are also accommodated alongside economic and demographic factors. The conceptual framework is summarized in Figure 3.1. The main economic factor is skills difference, gender bias in market wages (for theoretical support, see section 3.2). Other relevant economic factors are job availability in the local labour market and household poverty, but these are left out of the model<sup>63</sup>. The demographic variables in our framework include individuals and

<sup>63</sup> Job availability is left-out due to unavailability of the data, where household poverty is because it is endogenous.

households characteristic, care-related factors and location. Finally, the social factor is the place of childhood residence.

The main conceptual building block of the framework is the feminization u-shaped theory by Goldin (1995). The theory posits a U-shaped relationship between economic development and female labour force participation rate, i.e., the female labour force participation first declines with the development and increases at the advanced economic development stage. The theory suggests that the decline portion of the U-shaped is due to the constraints faced by women due to social and cultural norms which restrict them from participation in the labour market despite the growth in manufacturing sectors.

Starting with social factors, we conceptualize social constraints associated with one's place of childhood residence. Regions vary in terms of gender customs, and through early-life socialization, these customs and traditions are transmitted to women. We attempt to examine the potential effect of regional variation on female labour force participation decisions, i.e. between the states of Kelantan and Terengganu with other states. It is hypothesized that those who spend their childhood in Kelantan and Terengganu have been socialized to accept patriarchy and traditional gender roles governing women's lives in society, thus lowering the probability of women's market work participation in adulthood. Furthermore, social customs are expected to affect women's participation only through entry into the labour market – not in the exit decisions. Therefore, our framework does not require one's place of birth to influence their exit decision.

Turning to economic factors, the human capital theory suggested that education is a form of investment and a potential source of earnings income, thus significant influence of employment outcomes (Mincer & Polachek, 1974). Women with higher educational

attainment have higher opportunity costs of not working. Therefore, it is expected to have higher labour market participation and a lower probability of exit. In contrast, women with higher educational attainment will be less likely to withdraw from the labour market. Becker's (1957) discrimination theory highlighted the discrimination by employers that rewards the same productive skills differently based on the gender of the workers. Women were discriminated against even if they are supposed to have an equal endowment with men. Therefore, a larger wage differential compared to men can demotivate women from participating in the labour market. The value of staying at home will be higher than market work when women received lower endowment than men with the same characteristics. Thus, in the event of a higher wage differential, women are less likely to participate in the labour market.

Turning to demographic factors, previous studies highlighted the reasons for non-participation in the labour market among women are being married and the presence of children. Married women tend to rearrange their time allocation and reduced their labour supply since the familial responsibilities took a lot of time and efforts. Overall, it is expected that being married is negatively related to women labour force participation, and the double-burden syndrome push married women to drop-outs from the labour market<sup>64</sup>. On the other hand, widowed and divorced women are more likely to participate in the labour market and less likely to drop-outs for survival due to loss of dependency from husbands. Additionally, the presence of children is viewed as a possible constraint for women's labour supply due to higher reservation wage among women with children. Thus, a higher number of children is expected to lead to the non-

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<sup>64</sup> Husband's income also significantly affects women's labour supply decisions as the availability of an alternative source of income increases women's reservation wage, thus negatively affect their participation decisions (Becker, 1965; Gronau, 1973). However, this was not able to be captured in this research due to unavailability of the data on husband's income.



participation of women and higher dropouts among working women from the labour market.

Additionally, another aspect of care responsibility was also examined in terms of parental care. The effect may be twofold; the presence of parents or parents-in-law could affect the labour supply of women either positively or negatively. Firstly, their presence might lead to low participation and higher dropouts among women when the demand for care comes from them. In contrast, their presence can act as a substitute for childcare; it enables women to send their children under the care of their grandparents while working. In this research, the presence of their parents is expected to be the substitute for childcare which will positively affect participation and negatively affect the exit decisions among women. However, parents-in-law's presence might also negatively affect women's participation due to the restriction imposed on women due to their traditional view on gender roles.

Apart from that, this research also included age, ethnicity and current location (urban vs rural). Labour market participation is low among youngsters due to schooling and then rises with age upon completion of studies and declined during retirement. However, the probability of exit from the labour market is higher upon marriage and childbearing age for women. Thus, it is expected that there is a u-shaped relationship between age and women's participation. Furthermore, it is expected that the participation decisions will be different across ethnic groups. The Malays normally have more traditional views on gender roles, and thus Malay women are less likely to participate in the labour market and more likely to exit. On the other hand, Chinese women will be more likely to participate and less likely to withdraw from the labour market because their view is that women will also have to help the family through financial contributions. As for the location factor, those living in the urban area tend to

participate more in the labour market, most probably due to the availability of job opportunities compared to those in the rural areas.

In addition to conceptualizing the determinants of work participation, Figure 3.1 also conceptualizes the possibility that exit and entry decisions are jointly determined (as highlighted by the dashed lines). Exit decisions are only observed for women who had ever participated in the labour force; for those who did not, the probability of exit is censored. Our framework, therefore, accommodates distinct factors that affect entry decision but not exit decisions. These are the place of childhood residence, marriage decisions and the type of marriage. Marriage decisions are captured through participation in an arranged marriage or marriage by own choice (i.e. love marriage). Women who are in love marriage are viewed as having a greater say in their life choices. This is captured as the proxy of openness and progressive attitude among them. Thus, women who participated in love marriage are expected to have a higher probability of participation in the labour market. In reference to the type of marriage, it is highlighted in the study context, and mixed marriages are uncommon in Malaysia (Jones, 2019a, 2019b; Karim 1992). This research tries to capture the nonconformity of the customs, which is married with a spouse from different ethnicity. It is assumed that those who participate in mixed marriage also are viewed as a proxy of openness and progressive attitude and expose to a different culture in private life. Thus, they have a more open mindset and, therefore, less restrictive to traditional values. Thus, it is hypothesised that those involved in a marriage where will be more likely to participate in the labour market. It was also assumed that women who are involved in love marriage are provided with more freedom of expressing their opinions regarding their life choices. These characteristics were indicated by the proxy for openness and progressive attitude among them, which also contributed to higher participation in the labour market.

### 4.3 Data

There are a number of available datasets containing labour information in Malaysia. Several official surveys with labour supply information in Malaysia are present, which were conducted by the Department of Statistics Malaysia (DOSM). The potential datasets are the Households Income and Expenditure Survey (HIS), the Labour Force Survey (LFS), and the Salaries and Wages Survey (S&W).

For this research, MPFS 2014 was utilised as the primary dataset, which was conducted by the National Population and Family Development Board (NPFDB). The datasets are summarised in Table 4.1. The MPFS involved five groups of respondents, namely ever-married men, ever-married women, singles, adolescents, and senior citizens. The MPFS comprises a wide range of retrospective information regarding demography, migration, employment and income, marriage, childcare, and parental care.

The first dataset is the HIS, which provides detailed information on income distribution patterns for households. The second dataset is the Labour Force Survey (LFS), which provides data on the structure of the labour force, employment, and unemployment. It gathers information on the vital statistics of the labour force based on the selected demographic and socioeconomic characteristics, such as gender, age group, educational attainment, occupation, and industry, which altogether provide thorough data regarding employment.

The third dataset is the Salaries and Wages Survey (S&W), which gathered information on monthly salaries and wages from the principal occupation of paid employees. It presented the median and mean monthly salaries and wages based on demographic and socioeconomic characteristics, namely sex, age group, ethnic group,

educational attainment, highest certificate obtained, strata, state, occupation, and industry.

**Table 4.1: Comparison of HIS, LFS, S&W and MPFS datasets 2014**

Variables	HIS	LFS		S&W		MPFS	
	Total	Total	Female	Total	Female	Total	Female
LFPR	-	67.5	53.6	67.5	53.6	67.8	51.0
LFER	-	-	60.1	-	-	-	40.5
Status of employment							
Employer	0.82	3.8	1.5			3.7	4.5
Employee	29.1	75.1	74.9	-	-	68.3	68.5
Self-employed	8.2	16.5	15.3			27.1	26.7
Unpaid family workers	1.2	4.5	8.2			0.8	0.3
Strata							
Urban	68.2	75.3	78.1	79.9	82.7	63.6	62.9
Rural	31.8	24.7	21.9	20.1	17.3	36.4	37.1
Ethnic groups							
Malays	72.5	57.5	60.0	55.7	58.3	65.5	65.0
Others	27.5	42.5	40.0	44.3	41.7	34.5	35.0
Marital Status							
Married	-	63.7	61.8	60.9	58.6	82.4	84.2
Divorced/separated	-	1.7	3.0	1.6	3.1	3.3	4.2
Widowed	-	2.1	4.2	1.4	2.7	3.7	5.1
Single	-	32.5	31.1	36.1	35.6	10.7	6.4
Number of children	-	-	-	-	-	√	√
Childhood residence	-	-	-	-	-	√	√
Type of marriage	-	-	-	-	-	√	√
Husband's ethnicity	-	-	-	-	-	√	√
Number of observations ('000)		13,532.1	5,182.0	9,840.9	3,650.9	13.2	8.2

**Sources:** Author, based on HIS Report 2014, LFS Report 2014, S&W Survey 2014, and MPFS 2014.

**Notes:** LFPR and LFER refer to the labour force participation rate and the labour force exit rate. Ethnicity for LFS and S&W was calculated within Malaysian citizens only. The HIS report is not segregated by gender; thus, the information displayed is only for the total. The number of observations was within ('000). The data regarding the females for the three surveys were associated with gender, while the HIS data on the ethnic group were within the *Bumiputera*.

Table 4.1 shows that the MPFS dataset was comparable to other available datasets in terms of labour force participation rate, strata, and ethnicity distribution. Overall, the LFPR and female labour force participation rate within all the datasets were comparable by approximately 50 per cent. In addition, with reference to ethnicity, the MPFS segregation is 65.5 percent Malays, 12.1 percent Chinese, 7 percent Indian. Based on

the population census for 2010, there is 67.4 percent Bumiputera, 24.6 percent Chinese and 7.3 percent Indians (DOSM, 2011).

However, HIS, LFS, and S&W did not offer adequate information on marriage outcomes and care-related factors despite their potential impact on the labour market decisions among women. Besides, suitable variables which could be the proxies for social customs also were not available in the other surveys. Therefore, since the MPFS has information on the number of children, place of childhood residence, types of marriages, husband's ethnicity information, and other datasets do not, MPFS remains as the primary source of data. However, we also complement the data by combining the data from the HIS.

#### **4.4 MPFS Instruments and Measurement of Labour Market Participation and Exit**

The MPFS complies with the definition<sup>65</sup> set by the DOSM in terms of working age, labour force, and employed individuals. Labour force refers to the individuals of the working-age, which ranges from 15 to 64 years old during the reference week (based on their last birthdays)<sup>66</sup> and the individuals who are either employed or unemployed. Meanwhile, employed individuals refer to all individuals who work for at least one hour for pay, profit, or family gain<sup>67</sup> at any time during the reference week. However, the limitation of the MPFS in terms of retrospective information was that the female respondents were more likely to underestimate their participation due to the implication of the word 'work' as any formal job. This perception was attributed to the question

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<sup>65</sup> The same definition applied to HIS, LFS and S&W.

<sup>66</sup> The age of 15 to 64 years old (in completed years at last birthday) is within the working age.

<sup>67</sup> The employers, employees, own-account workers, or unpaid family workers are considered as employed if they: (i) do not work during the reference week due to illness, injury, disability, bad weather, work leave, labour dispute, and social or religious reasons but have a job, farm, enterprise or other family enterprise to return to; (ii) are temporarily laid-off with pay and would definitely be called back to work; (iii) are employed for less than 30 hours during the reference week due to the nature of their work or insufficient work, and are able and willing to accept additional hours of work. This group is underemployed (DOSM).

‘have you worked before?’. Furthermore, the MPFS did not contain the wage and time calendar data, such as hours of work and leisure. It also did not have information on the type of employment i.e. part-time vs. full-time job.

#### 4.4.1 Dependent Variables

This research consisted of two parts, which focused on participation and exit decisions from the labour market. The MPFS presents detailed information on current employment and history, with the employment and income sections presenting information regarding the individuals who were currently working and the history of employment. Notably, the current employment information allowed the researchers to capture the participation decision, while the information on the history of employment allowed the research to identify the exit decisions from the labour market among respondents. Table 4.2 present the description of both the dependent and independent variables of this research<sup>68</sup>.

**Table 4.2: Description of the variables**

<b>Variables</b>	<b>Description of the variables</b>
<b>Dependent variables</b>	
Labour market participation	1 = Participate in the labour market 0 = Do not participate in the labour market
Labour market exit decision	1 = Worked before 0 = Never worked before
<b>Independent variables</b>	
Female	1 = Yes 0 = No
Age	The age of the respondents
Age square	The square of the age
Marital status	1 = Currently married 2 = Previously married (Divorced/separated; widowed)

<sup>68</sup> The summary statistics are presented in Appendix A.

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	3 = Never married
Schooling	Years of schooling
Schooling squared	The square for the years of schooling
Ethnicity	1 = Malay 2 = Chinese 3 = Indian 4 = Others
Number of children	Number of children
Parents alive	1 = Yes 0 = No
Parents-in-law alive	1 = Yes 0 = No
Childhood residence KLTN and TN <sup>69</sup>	1 = Kelantan + Terengganu 0 = Others
Mixed marriage (i.e. spouse from another ethnicity)	1 = Yes 0 = No
Love marriage	1 = Love marriage 0 = Arranged marriage
Rural	1 = Yes 0 = No
Income (MPFS)	Average income across individuals
Wages (HIS)	Individual wages

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**Source:** Author based on the Malaysian Population and Family Survey, 2014.

The labour market participation and exit decisions were measured with dummy variables, with the participants being identified using response to the question ‘are you working currently?’. Meanwhile, the currently active participation was defined as the participation in the labour market, while the inactive (i.e., currently not working) participants were presented with a question ‘have you ever worked before?’. The exit referred to the participants who were currently inactive but had a previous career, implying that they had gained previous working experience.

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<sup>69</sup> KLTN refers to Kelantan and TN refers to Terengganu.

#### 4.4.2 Independent Variables

The independent variables in this research included individual and household characteristics, care-related factors, social customs, location, and wages. The individual and household characteristics consisted of gender, age, years of schooling, marital status, and ethnicity<sup>70</sup>, while location comprised urban vis-à-vis rural.

The MPFS was advantageous in this research as it contained information, which could be a proxy of care-related factors for the children. This information was particularly useful in identifying the gaps in labour market participation and exit decision. The three variables, which were significant for women's participation decisions, consisted of 1) the number of children, 2) the presence of parents, and 3) the presence of parents-in-law. Both the information on the presence of parents and presence of parents-in-law is captured by the question on 'is your mother/father/mother-in-law/father-in-law still alive?'. The variable refers to the parents or parents-in-law being alive; it is not the indication of staying at the same place, i.e., co-residence.

Apart from that, the second objective of the research aims examine the impact of the gender wages gap in the labour force participation decision. Noting the limitation of the MPFS where it does not have the wages variables, therefore, to first motivate the research the average income variable was utilized from the MPFS. However, the preferred estimate comes from the second dataset from the HIS, which have the data on wages at the district level. The wages data from the HIS is chosen as it comes from a more representative survey and available at the district level.

Notably, the MPFS also comprised a considerable amount of retrospective information on marriage, which addressed the years of marriage and its arrangements. It

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<sup>70</sup> The categorization is summarized in table 4.2.



also presented information on the husband's background, including age and ethnicity. Following the information concerning the husband, a dummy variable for participation in a mixed marriage was developed based on the question 'what is your husband/ex-husband's ethnicity?', while a similar question was presented to the male respondent about his wife. Therefore, the difference in ethnicity between the spouse and respondent indicated that the respondent participated in a mixed marriage. However, similar ethnicity would suggest otherwise. According to this information, this research attempted to identify the indirect proxy of nonconformity to social customs, which included marriage with a spouse from a different ethnicity.

Additionally, based on the detailed information on marriage, an additional variable was constructed as an individual characteristic by determining whether women were involved in an arranged marriage or married to a spouse of their own choice (i.e., love marriage). A dummy variable for participation in a love marriage was developed based on the question 'is this an arranged marriage/by yourself?'. It was also assumed that women involved in love marriage are provided with more freedom to express their opinions regarding their life choices, which were indicated by the proxy for openness and progressive attitude.

Although there was no direct question measuring social customs related to employment in the MPFS, the migration section contained retrospective information on respondent's birth and mobility, including information on the geographical location resided by an individual from birth to the age of 13. Therefore, this research utilised the data on childhood residence until the age of 13 as an indirect proxy for social custom. The "childhood residence KLTN and TN" variable was constructed from the question 'where did you mostly live and grow up till the age of 13?'. The data was coded as a dummy variable of 1 for the individuals staying in Kelantan and Terengganu and 0 for

individuals staying in other states. To illustrate this procedure, the religious homogeneity of the population, combined with the religious orientation of the ruling party governing these two states, possibly has shaped the social environment in which women's employment choices are defined. However, these demographic and institutional features were not simultaneously shared with any other administrative states in Malaysia. In this case, the influence of patriarchy was possibly reinforced in Kelantan and Terengganu, which impacted women through socially restrictive customs. Therefore, a comparison between women's choices in these two states was made.

#### **4.5 Methodology - Women's Participation in the Labour Market and Gender Wage Gaps**

This section discusses the methodology applied for participation, followed by exit decisions from the labour market. As discussed in the conceptual framework (Section 3.6), previous studies highlighted various determinants of labour market participation, which included individual and household characteristics, social customs, location, and care-related activities. Previous literature highlighted that marriage (Amador et al., 2013; Euwals et al., 2011; Ismail and Sulaiman, 2014; Nor and Said, 2016) and the number of children (Amin et al., 2016; Hartani et al., 2015; Ismail and Sulaiman, 2014; Mishra and Smyth, 2010) were the factors affecting the participation of women in the labour market. This phenomenon was indicated by an increase in work interruptions among women vis-à-vis men due to their primary responsibilities as the caretakers in the family. Furthermore, the presence of parents and parents-in-law might also affect their participation in the labour market. They can either played a role as the substitute for the formal childcare for the grandchildren (Du and Dong, 2013; Li, 2017) or they require care from their children (Nishimura and Oikawa, 2017; Sugawara and Nakamura, 2014).

This research aims to identify the determinants of labour market participation, but it first examined the presence of the gender gap in the labour market participation to motivate the study. The basic model of participation is  $P_i = \alpha_0 + \alpha_1 X_i + \mu_i$ . To measure the gender gap, a female dummy variable was included in the model, with the first model examining the probability of labour market participation<sup>71</sup> based on the following equation:

$$P_i (P = 1|X) = \alpha_0 + \theta F_i + \alpha_1 SC_i + \alpha_2 CC_i + \alpha_3 X_i + \alpha_4 L_i + \mu_i \quad (1)$$

Where,  $P_i$  refers to the probability of respondent  $i$  participating in the labour market, leading to 0/1 outcomes. Specifically, 1 represents an individual who is currently working, while 0 indicates otherwise. The dummy variable for females is represented by  $F$ , while  $\theta$  represents the estimated gender gap. Furthermore,  $SC_i$  refers to the indirect proxy of social customs for women's participation in the labour market, which was represented by the place of childhood residence (Kelantan and Terengganu in comparison to other states). The care-related factors represented by the number of children, the presence of parents, and the presence of parents-in-law is represented as  $CC_i$ . The  $X_i$  variables included individual and household characteristics, such as age, age square, schooling<sup>72</sup>, schooling squared, marital status (never married, currently married, and previously married), and ethnicity (Malay, Chinese, Indian, and others), while  $L_i$  refers to location factor (rural or urban). This is followed by  $\mu_i$ , which refers to the error term.

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<sup>71</sup> For a similar approach, see Asadullah and Wahhaj (2019, 2016); Klasen and Pieters (2012, 2015) - Probit regression was chosen to be consistent with the second part of the analysis on exit decisions as the Heckman two-steps procedure applied probit regression as the default.

<sup>72</sup> Years of schooling was selected instead of level of education to examine the presence of a u-shaped relationship between education and labour market participation. This was consistent with international literature (refer to Asadullah and Wahhaj 2016, 2019).

The estimation for Equation (1) was re-estimated for a subgroup of the location to examine the presence of any variations in the gap between rural and urban areas. This research aims to examine the differences in the factors of the labour market participation between men and women. Therefore, the estimation of the second model identified the aforementioned differences based on the following equation:

$$P_i(P = I|X) = \alpha_0 + \alpha_1 SC_i + \alpha_2 CC_i + \alpha_3 X_i + \alpha_4 L_i + \mu_i \quad (2)$$

Specification and choice of explanatory variables for Equation (2) are similar to that of Equation (1), with the exception of the exclusion of the female dummy variable. Furthermore, various studies concluded that children were the deterrent factors of the participation in the labour market among married women (Contreras and Plaza, 2010; Contreras et al., 2010; Heath, 2017; Ismail and Sulaiman, 2014). In contrast, the presence of children was found to be insignificant among men (Heath, 2017). The estimation of Equation (2) was repeated for the subgroup of married women to observe the impact of the increasing number of children on their labour market participation decisions.

Additionally, this research attempted to investigate the presence of an economic factor on the decision to participate in the labour market using the analysis of wage differentials between men and women in the local labour market. As previously stated, wages are the significant determinants of individual labour market participation. However, one of the limitations of the MPFS was the unavailability of the data on wages. Alternatively, the data on average monthly income was utilised as the second-best solution to capture the gender wage differential. The OLS Mincerian earning function was conducted to capture the wage differential as follows:

$$\ln \quad i = \alpha_0 + \gamma F_i + \beta_1 Exp_i + \beta_2 Exp_i^2 + \beta_3 Edu_i + \beta_4 X_i + \beta_5 L_i + \varepsilon_i \quad (3)$$

Where  $\ln w_i$  represents the log of average income, while  $F$  refers to the dummy variable for female and  $\gamma$  represents the estimated gender wage gap. Furthermore,  $Exp$  refers to work experience, which is typically measured by the difference between the current age and the years of schooling<sup>73</sup>, while  $Exp^2$  indicates the square of work experience. Since MPFS did not contain the data on work experience, the experience was identified as the difference between age and the years of schooling, which was subtracted by 6. In the case of the individuals who did not complete secondary schooling, the current age was subtracted by 16, assuming that 16 is the legal working age. This definition was consistent with the previous literature despite the absence of data on work experience (Asadullah and Xiao, 2019; Mishra and Smyth, 2015). Besides,  $Edu_i$  refers to education levels (lower secondary, secondary, higher secondary, tertiary). As highlighted, the human capital earnings function explained wage as a function of schooling and experience (Mincer, 1974). Furthermore,  $X_i$  refers to a vector of other individual characteristics, including marital status (currently married vs others), ethnicity (Malays vs others). Additionally,  $L_i$  refers to the location (urban vs rural), while  $\varepsilon_i$  represents the error term.

Lastly, this research modelled the gender wage penalty at the local labour market through the estimation of conditional OLS of the gender wage gap by administrative states. For this purpose, the log of annual wages data received by the men and women in the same district for the same year was used. The data was sourced from the Household Income Survey (HIS) in 2014. Similarly, due to the unavailability of wage data in the primary data (i.e. HIES) utilized by Gunatilaka (2013), the author sourced the wage data from another dataset in order to compute the expected wage function (i.e. LFS data).

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<sup>73</sup> In comparison with some studies in the literature which rely on a mis-specified model due to the exclusion of an important variable i.e. experience, such as Alshyab et al. (2018), our model is correctly specified.

$$P_i(P=I|X) = \alpha_0 + \alpha_1 SC_i + \alpha_2 CC_i + \alpha_3 X_i + \alpha_4 L_i + \alpha_5 \ln \quad i + \mu_i \quad (4)$$

The estimated regional gender wage gap  $\ln \quad i$  was then included as an explanatory variable of Equation (1), while the new Equation (4) was estimated.

#### 4.6 Methodology - Women's Exit Decisions from the Labour Market

As discussed earlier in Section 3.4, previous studies considered various factors as the determinants of the exit decision from the labour market. This research aims to analyse the determinants of exit decisions from the labour market. To be specific, the exit decision among married women was influenced by the presence of children (Hersch, 2013; Hotchkiss et al., 2010, 2011; Khoudja and Platt, 2016). Additionally, provided that parental care might also affect the labour market exit decisions among women (Sarkar et al., 2019), the number of children and dummy variables for the presence of parents and parents-in-law were incorporated in this research to determine the influence of care-responsibilities upon women. The basic model for exit decisions is as follows:

$$E_i = \alpha_0 + \theta F_i + \alpha_1 CC_i + \alpha_2 X_i + \alpha_3 L_i + \mu_i \quad (5)$$

Where  $E_i$  denotes the possibility of the respondent's labour market exit decision for  $i$ -th individuals. Whereas  $F_i$  refers to a dummy variable for the women, and  $\theta$  represents the estimated gender gap. Furthermore,  $CC_i$  refers to care-related factors, which were represented by the number of children, the presence of parents and parents-in-law. Additionally,  $X_i$  refers to individual and household variables, including age, gender, schooling and its square, ethnicity (Malay, Chinese, Indian, and others), and marital status (never married, currently married, and previously married). Meanwhile,  $L_i$  refers to the location factors, namely urban and rural. This is followed by  $\mu_i$ , which refers to the error term.

Among the methodological issues raised in the estimation of labour supply function was the sample selection or selectivity bias (Heckman, 1976) due to the research on women's resignation from (or retention in) the labour market. This issue became more complex as the decision to leave (or remain in) the market was only observed among the individuals who entered the labour force in the first instance. Therefore, the observation on the individuals who never participated in the labour market was omitted, leading to concerns over selective participation in the labour market.

The aforementioned methodological challenge was solved in this research by developing an empirical model, which simultaneously accounts for participation and exit decisions. Therefore, to examine the selection impact, the selection correcting the probit regression was estimated through the Heckman-Probit two-step procedure. The Heckman-Probit estimation was conducted to correct the selectivity bias from the sample selection. For the two-step approach, the first step represented the choice to be economically active, while the second step represented the decision to exit from the labour market on a condition of being economically active. This two-step estimation procedure was used to analyse the labour market outcomes in developing countries (Heintz et al., 2018; Nazier and Ramadhan, 2018)<sup>74</sup>.

Thus, the basic model of labour market exit (i.e. Equation 5) was extended to examine the participation in the labour market through a two-step procedure. If the estimate excluded the individuals who never entered the labour market, a potential problem for selection bias would be present due to the application of the results for the population. Therefore, the Heckman two-step procedure was applied to enable the

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<sup>74</sup> These studies examined the two-step approach, with the first step being the choice to be economically active, and the second being the choice of type of employment.

modelling of the labour market exit decisions and labour market participation. The population regression function of exit decision (5) was presented as follows:

$$E_{1i} = X_{1i} \alpha_1 + \mu_{1i} \quad (6)$$

Following that, the participation Equation (1) was represented as follows:

$$P_{2i} = X_{2i} \alpha_2 + \mu_{2i} \quad (7)$$

When the relationship between  $\mu_{1i}$  and  $\mu_{2i}$  amounted to other values besides zero, the subgroup regression function would be as follows:

$$E(E_{1i} | X_{1i}, P_{2i} \geq 0) = X_{1i} \alpha_1 + E(\mu_{1i} | \mu_{2i} \geq -X_{2i} \alpha_2) \quad (8)$$

Where, the selected sample regression function was based on  $X_{1i}$  and  $X_{2i}$ , leading to the following model:

$$E(\mu_{1i} | \mu_{2i} \geq -X_{2i} \alpha_2) = \frac{\sigma_{12}}{(\sigma_{22})^{\frac{1}{2}}} \lambda_i$$

$$E(\mu_{1i} | \mu_{2i} \geq -X_{2i} \alpha_2) = \frac{\sigma_{22}}{(\sigma_{22})^{\frac{1}{2}}} \lambda_i$$

Where,

$$\lambda_i = \frac{\phi Z_i}{1 - \phi Z_i} = \frac{\phi Z_i}{\phi(-Z_i)}$$

$$Z_i = -\frac{X_{2i} \alpha_2}{(\sigma_{22})^{\frac{1}{2}}}$$

Where,  $z_i$  refers to the selection equation, with  $\alpha$  indicating the parameter for the selection equation (Heckman, 1976). Following that, Equation (8) was jointly estimated with Equation (6) to determine the possibility for individuals to participate in the labour market with the exit decision. Therefore, the following equation was made:

$$E_i = \alpha_0 + \theta F_i + \alpha_1 CC_i + \alpha_2 X_i + \alpha_3 L_i + \rho \lambda_i + \mu_i \quad (9)$$



The inverse Mill's ratio was denoted as  $\lambda_i$ . One of the salient features of Heckman probit was the requirement of the inclusion of exclusion restrictions (i.e. identifying variables) to correct the selectivity bias of the sample. The selected identifying variables should have an impact on the participation decisions (i.e. selection equation) but were not included as the explanatory variables of the exit decisions (i.e. probit estimation).

In this research, three identifying variables were included in the determinants of labour market participation: participation in love marriage, participation in a mixed marriage, and place of childhood residence KLTN and TN. These variables were predicted to affect women's participation in the labour market through entry and not related to exit decisions. When the women were already being accepted and integrated into the labour market, marriage type and place of childhood residence were insignificant factors for determining her exit decisions.

In section 2.4.2, it was highlighted that mixed marriage is not a common practice in Malaysia (Jones, 2019a, 2019b; Karim, 1992), potentially due to different religious practice (2019b) where in cases of Muslim-to-non-Muslim marriages, conversion of religion is necessary (Hak, 2012). In relation to this, the research attempted to identify the indirect proxy of nonconformity to social customs, referring to marrying a spouse from a different ethnicity. We assumed that women that participated in the mixed marriage are more likely to participate in the labour market as they are more open and free to make choices. Therefore, this variable is chosen as one of the identifying variables because once they are already in the labour market, this will not be the reason for them to leave the labour market.

Similarly, arranged marriage is no longer a common practice in Malaysia (Karim, 1992). It was a common practice in Malaysia back in the 1950s and contributed to a higher divorce rate among Malays for some states in the country, including Kelantan,

Terengganu, Kedah, and Perlis (Jones, 1981). It was considered that women in a love marriage have greater freedom to voice their views about their life choices, as reflected by the proxy for openness and progressive attitudes. Thus, they are more likely to participate in the labour market. Similar to participation in a mixed marriage, this variable is also not related to the exit decisions. Once they are integrated into the labour market, they will not affect the exit decisions.

As mentioned in section 4.4.2, the place of childhood residence is identified as a proxy for social customs. This variable refers to the social environment in which women's career choices are defined that was probably shaped by the religious homogeneity of the public, together with the religious orientation of the ruling party that governs the state of Kelantan and Terengganu. It resulted in a lower probability of labour market participation among women from the two states. Similar interpretations have been used referring to the social influence of place of residence in other patriarchal settings (Guner and Uysul, 2014; Noury and Speciale, 2016). Social customs also only affect the participation decisions and not the exit decisions.

Additionally, two of the identifying variables, participation in mixed-marriage and place of childhood residence, were assumed to be exogenous variables, which may not be true as the women are subject to individual choice. Notably, this aspect is an important limitation of the empirical framework, which this research could not address directly.

## CHAPTER 5: RESULTS AND DISCUSSIONS

### 5.1 Introduction

As noted, the objectives of the study are: i) to estimate the size of the gender gap in the labour market participation with the place of childhood residence (i.e. proxy of social custom) as the focus, ii) to examine whether the gender wage gap contributed toward the participation decision of women's labour market, and iii) to estimate the size of the gender gap in labour market exit decisions and identify the determinants of exit decisions among women. This chapter presents the main findings and discussion of the estimation and analysis.

Section 5.2 deliberates on the main results and discusses probit regression estimates on labour market participation decisions, followed by a discussion on the subgroups of location, gender, and married women. Section 5.3 examines whether the gender wage gap affects the labour market participation among women. Section 5.5 presents the findings on the labour market exit decisions for both men and women before focusing on the determinants of exit decisions among the women through Heckman probit regression. Finally, Section 5.6 summarises the discussions for this chapter.

### 5.2 Results and Discussion - Labour Market Participation Decisions

#### 5.2.1 Gender Gap in the Labour Market Participation

First, Table 5.1 presents the probit estimation of the determinants of labour market participation based on the model specified in Equation (1). The main variable of interest is the dummy variable for female. Other control variables are age, education, marital status, ethnicity, number of children, presence of parents and parents-in-law, childhood residence of Kelantan and Terengganu (i.e. KLTN & TN), and current location. Column 1 refers to the pooled sample, while columns 2 and 3 refer to the subgroup of rural and urban.

**Table 5.1: Probit model estimate of the determinants of labour market participation**

Variables	(1)	(2)	(3)
	Pooled	Rural	Urban
Female	-0.435** (0.00736)	-0.476** (0.0123)	-0.412** (0.00922)
<b>Other controls:</b>			
Age	0.0688** (0.00363)	0.0707** (0.00600)	0.0681** (0.00459)
Age <sup>2</sup>	-0.000840** (4.41e-05)	-0.000824** (7.29e-05)	-0.000852** (5.58e-05)
Schooling	-0.0440** (0.00424)	-0.0437** (0.00664)	-0.0372** (0.00590)
Schooling <sup>2</sup>	0.00329** (0.000222)	0.00331** (0.000384)	0.00294** (0.000290)
<b>Marital Status:</b>			
Currently married	-0.0788** (0.0211)	-0.0567 (0.0379)	-0.0746** (0.0259)
Previously married	0.0812** (0.0244)	0.0700 (0.0434)	0.104** (0.0284)
<b>Ethnicity:</b>			
Chinese	-0.00394 (0.0149)	0.00159 (0.0375)	-0.00577 (0.0162)
Indians	-0.0527** (0.0187)	-0.0827+ (0.0489)	-0.0519* (0.0202)
Others	-0.00982 (0.0133)	0.0337+ (0.0193)	-0.0507** (0.0191)
Number of children	-0.0205** (0.00259)	-0.0173** (0.00394)	-0.0250** (0.00349)
Parents alive	0.0215+ (0.0118)	0.0172 (0.0196)	0.0221 (0.0148)
Parents-in-law alive	0.00473 (0.0111)	-0.00474 (0.0182)	0.00599 (0.0140)
Childhood residence in KLTN & TN	-0.0323* (0.0141)	-0.0477* (0.0223)	-0.0228 (0.0183)
Current location: Rural	0.00794 (0.00974)	-	-
Observations	13,194	4,809	8,385
Pseudo R <sup>2</sup>	0.222	0.225	0.226

**Notes:** (1) Dependent variable is labour market participation (1 if currently working; 0 otherwise). (2) Robust standard errors in parentheses. (3) \*\*, \* and + indicate statistically significant at 1%, 5% and 10% respectively. (4) Marginal effects are reported instead of the coefficient. (5) Reference categories for dummy variables: 'male' for gender, 'never married' for marital status, 'Malay' for ethnicity, 'parents no longer alive' for parents alive and 'parent's in-law no longer alive' for parents-in-law alive, 'other states' for childhood residence KLTN & TN, and 'urban' for current location, (6) The probit estimation report is presented in Appendix B.

In the pooled regression (column 1), the negative coefficient of the female dummy confirms a sizeable gender gap in the labour market participation. The gender gap in participation decisions exists even after controlling for differences in individual and

households, care-related and location factors. The findings show that being women decreases the probability of labour market participation by 43.5 percentage points.

In regard to the control variables, age appears to follow an inverted u-shaped pattern and is found to be significant. Schooling, on the other hand, follows a u-shaped pattern. Schooling was found to be negatively related at the initial stage but significant and positively associated with labour market participation at the higher education level.

In regard to marital status, being currently married decreases the probability of labour market participation. On the other hand, being out of marriage (e.g., widow, divorcee) increases the likelihood of participation. Another demographic factor that was found to contribute to the gender gap in labour force participation was ethnic identity, probably because the norms of work may be social group-specific, although the variation is not notable. The only marked finding is that Indians are 5.3 percent less likely to participate in the labour market compared to Malays. In terms of the number of children, the factor was found to be negatively related with labour market participation. The presence of parents was found to increase the probability of participation, while the presence of parents-in-law is not a significant factor in participation decisions. The effect of residency in a rural location was also found to be insignificant.

Nonetheless, the interest of the study was also in the differential effect of location on the observed gender gap in labour market participation. Towards this end, model (1) was re-estimated separately for the urban and rural subsamples. The findings from column 2 and 3 confirm a significant rural-urban divide in the gender gap - the estimated male-female participation gap is larger (47.6 percent) in the rural areas compared to the gap in the urban areas (41.2 percent). The findings reflect that women from urban areas have higher probabilities of labour market participation compared to those from rural areas. This finding is consistent with Nor and Said (2014) who also

found a higher labour force participation for both men and women in the urban areas (based on the LFS 2010 data)<sup>75</sup>. It is important to note that the estimates of the gender gap in labour market participation in models (2) and (3) already account for the differences in human capital endowments of the sampled respondents. Therefore, the residual gap in the urban locations partly captures a relative shortage of job opportunities in rural areas alongside lower wages and the unavailability of institutional provisions to substitute for care responsibilities.

### **5.2.2 Determinants of Labour Market Participation among Men and Women**

Our estimates of the gender gap in Table 5.1 assumes homogeneity in return to the observed characteristics across men and women. However, it is possible that some of the key control variables (such as social constraints relating to the presence of parents-in-law and the influence of childhood residence) affect women more than men or can be entirely specific to one group. Thus, Table 5.2 presents the probit estimation of the determinants of labour market participation by gender. The main objective of the estimate was to assess how the influence of age, education, marital status, ethnicity, number of children, presence of parents and parents-in-law, current location, and the place of childhood residence vary by gender. The underlying model is outlined in Equation (2).

Several findings are worth noting on the estimation of the gender-specific regression models in columns 4 and 5. First, the labour market participation of both genders appears to follow an inverted u-shaped pattern in terms of age, which is much higher for women. This finding captures the fact that women would leave the labour market after

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<sup>75</sup> Similarly, international literature suggested that men and women that who reside in the urban areas has more opportunities to participate in the labour market compared to those from the rural areas (Contreras et al., 2010; Faridi et al., 2009; Lisaniler and Bhatti, 2005).

marriage and/or during childrearing – resulting to single-peak in labour market participation among women.

**Table 5.2: Probit model estimate of the determinants of labour market participation by gender**

Variables	(4)	(5)
	Female	Male
Age	0.0727** (0.00478)	0.0263** (0.00321)
Age <sup>2</sup>	-0.000842** (5.85e-05)	-0.000380** (3.79e-05)
Schooling	-0.0599** (0.00530)	0.00182 (0.00381)
Schooling <sup>2</sup>	0.00459** (0.000281)	-1.98e-05 (0.000192)
<b>Marital Status:</b>		
Currently married	-0.297** (0.0289)	0.108** (0.0263)
Previously married	-0.0838* (0.0364)	0.0339* (0.0152)
<b>Ethnicity:</b>		
Chinese	-0.0138 (0.0194)	0.00727 (0.0112)
Indians	-0.0575* (0.0227)	-0.0369+ (0.0189)
Others	0.00359 (0.0172)	-0.0172 (0.0123)
Number of children	-0.0274** (0.00335)	-0.00134 (0.00221)
Parents alive	0.0258+ (0.0152)	0.00893 (0.00959)
Parents-in-law alive	-0.0183 (0.0142)	0.0269** (0.0100)
Childhood residence KLTN & TN	-0.0403* (0.0175)	-0.0215 (0.0134)
Current location: Rural	0.00161 (0.0127)	0.0171* (0.00790)
Observations	8,158	5,036
Pseudo R <sup>2</sup>	0.105	0.136

**Notes:** (1) Dependent variable is labour market participation (1 if currently working; 0 otherwise). (2) Robust standard errors in parentheses. (3) \*\*, \* and + indicate statistically significant at 1%, 5% and 10% respectively. (4) Marginal effects are reported instead of the coefficient. (5) Reference categories for dummy variables: ‘never married’ for marital status, ‘Malay’ for ethnicity, ‘parents no longer alive’ for parents alive and ‘parent’s in-law no longer alive’ for parents-in-law alive, ‘other states’ for childhood residence KLTN & TN, and ‘urban’ for current location, (6) The probit estimation report is presented in Appendix C.

Second, years of schooling appears to be a significant factor only for women with the u-shaped pattern, whereas among men, it is insignificant. The u-shaped work-schooling

profile for women suggests the presence of social customs facing distinct groups of women in that those with low schooling are engaged in menial work. The stigma associated with such work may be greater for secondary schooled women, compared to the income gains. This is due to the fact that the returns on education are marginal and low at lower levels of education. With an increase in educational levels, the returns grow dramatically. On the other hand, highly educated women have access to respectable jobs in human capital which can facilitate higher labour force participation<sup>76</sup>. The u-shaped relationship between labour market participation and schooling among women is also consistent with the studies conducted in other developing countries (Asadullah and Wahhaj, 2016, 2019; Gunatilaka, 2013; Kanjilal-Bhaduri and Francesco, 2018; Klasen and Pieters, 2015; Sudarshan, 2014).

Additionally, this research estimated the labour market participation probability by schooling and age for men and women by holding everything else constant (Appendix D). The estimate shows that educational attainment is a significant determinant of women's participation in the labour market; as years of schooling increases, the employment probability of women decreases at first and increases significantly with longer years of schooling (see Appendix D - Figure 6.1). In contrast, changes in years of schooling do not vary with the participation probabilities for men. The linear profile of labour force participation among men confirms that work is a norm for men in Malaysia. This finding also reflect that women are behind men in terms of schooling, and closing the gap requires longer years of education for women. As found in the previous studies, the labour market returns to education for women is low and insignificant for the lower level of education and increases with a higher level of education (Chamlou et al., 2010; Kanjilal-Bhaduri and Francesco, 2018).

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<sup>76</sup> This corroborates with the human capital theory (Mincer and Polachek, 1974) which stated that women with higher level of education are more likely to participate in the labour market due to higher opportunity costs of leisure.



Additionally, the probability of participation with respect to age shows that women participation increases at first but decline afterwards (see Appendix D – Figure 6.2) due to marriage and childcare activities. Whereas the participation level for men is mostly stable throughout the times and falls only upon approaching the retirement ages. It can also be seen that women participation is single peaked for Malaysia, thus indicating that once they leave, they will not re-enter the labour market. Furthermore, no matter at which age, labour market participation probabilities of men are higher than women hence contributes to the gender gap in labour market participation in Malaysia.

Third, being married was found to be a significant factor for labour market participation among men and women. Women who are currently married are 29.7 percent less likely to participate in the labour market in comparison to the never been married women. Whereas men who are currently married are 10.8 percent more likely to participate in the labour market compared to those who have never married. This finding suggests that the burden of marriage and other associated responsibilities such as childbirth and childrearing potentially have a higher impact on women. A study conducted by Nor and Said (2016) for Malaysia through the estimation of LFS 2010 data reported that married women were 73.6 percent less likely to participate in the labour market compared to single women. Another possible explanation for lower participation among married women is due availability of alternative income, for instance due to the stability of the husband's income (Blau et al., 2014; Brekke, 2013; Mehrorta and Parida, 2017). However, we were unable to analyse this effect due to the unavailability of data on the husband's income.

In contrast, labour market participation was found to be significantly higher among currently married men, a finding that is consistent with an earlier study in Malaysia (Nor and Said, 2016) and those in other developing countries (Bridges et al., 2011). The

probable reason for higher participation among married men is their primary responsibility as the breadwinner of the family.

Furthermore, women who were previously married were found to be less likely to participate in the labour market compared to those who have never been married. Yet, this probability is lower compared to married women (8.4 percent). Previous literature, however, concluded that marital separation is associated with labour market participation (Jeon, 2008). One possible explanation for this occurrence is that loss of dependency towards husband's income could have pushed the previously married women (i.e., divorced, widowed and separated) to work for survival. However, at the same time responsibilities towards children might restrict their ability to participate in the labour market.

Fourth, ethnicity was found to be an insignificant factor in determining labour market participation among both genders. The only notable finding is that Indian men and women are less likely to participate in the labour market compared to Malays. This finding is in contrast with the international literature, which highlights that ethnicity influences participation decisions through the difference in customary beliefs and values (Khoudja and Fleischmann, 2015; Khoudja and Platt, 2018). However, the findings reflect the consistency with the LFS data for Malaysia, of which both Indians men and women are less likely to participate in the labour market compared to the Malays<sup>77</sup>. The rate for Indians is 77.1 for men and 51.9 for women, whereas the Malays are at 78 percent and 52.7 percent, respectively (DOSM, 2019a).

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<sup>77</sup> To this end, as the significant difference for the Indians remains unexplained by the explanatory variables, we also estimated the interaction between ethnicity with education, however the findings shows that it is insignificant for the Indians (see appendix E).

Fifth, the finding also indicates that the number of children is a significant factor and negatively related with married women's participation in the labour market. However, it is insignificant for men. This finding conforms with the findings on married women's participation decisions in the study by Ismail and Sulaiman (2014), which indicates that the number of children is the main obstacle to participation. Similarly, educated married women were found to have 41.8 percent less probability of participation with a higher number of children (Amin et al., 2016)<sup>78</sup>. This finding implies that married women are normally exposed to the issue of work-family conflicts due to their main responsibilities of providing care towards children and family regardless of their educational attainment. Such responsibilities have impeded their participation in the labour market following the difficulty to juggle the time for work, care responsibilities, and household chores. Meanwhile, the presence of children was found to be an insignificant factor among married men following their role as the breadwinner of the family. The intrahousehold bargaining, which typically results in women reduction of own consumption and leisure, might attribute to men not increasing their work with the presence of more children (Heath, 2017)<sup>79</sup>.

The unavailability of family support for childcare and the shift to nuclear households has resulted in the increasing negative effect of having children on female labour market participation (Ikkacaran, 2010). Similarly, the changes in family models in Malaysia over the years have contributed to the difficulties of depending on extended family members for childcare needs (Noor and Mahudin, 2016). As such, the presence of parents is only marginally significant and contributed positively to labour market

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<sup>78</sup> Amin et al. (2016) also examined the impact of presence of children below six years old and concluded that women with children below the age of six were 32.9 percent less likely to participate in the labour market. Similarly, earlier study that estimated the number of children below the age of seven signified negative relationship with participation of women in Malaysia (Amin and Alam, 2008).

<sup>79</sup> In some cases (see for example Contreras et al., 2010), number of children is significant however with positive affect for men.

participation among women. The presence of parents increases the probability of labour market participation among women by 2.6 percentage points. In contrast, the factor is not significant for men. This finding suggests the possibility of parents being the substitute of childcare hence being able to assist women to participate in the labour market. Whereas the presence of parents-in-law is positively related to men's labour market participation, thus suggesting the responsibility of men as the breadwinner of the family.

In terms of location, men in rural areas have a higher probability of labour market participation compared to those in urban areas. In contrast, the locality was found not to be a significant determinant for women's participation decisions. This finding implies that women's participation in Malaysia is less sensitive to job availabilities; there may be important social constraints at play that restrict the participation of women in the rural and urban communities.

A proxy of social customs in our model is a dummy variable "childhood residence in KLTN and TN"<sup>80</sup>. For women, the coefficient on this variable is negative and statistically significant<sup>81</sup>. In contrast, the place of childhood residence is not significant for men. To be specific, women who are raised during their childhood in Kelantan and Terengganu states are 4.0 percent less likely to participate in the labour market compared to those raised in other states.

As discussed in Section 2.4.3, these states share a number of institutional, political, and demographic features, which, however, also separate those from other Malaysian

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<sup>80</sup> Gomez (2007) refers "Malay Heartland" as Kelantan, Terengganu and rural Kedah. To this end, we have also included Kedah in our estimation, however, there is no difference in our findings. Kelantan and Terengganu are also acknowledged to be Malay centre (Milner, 2008).

<sup>81</sup> To this end, we also test whether the impact is larger for women who both born and stay in Kelantan and Terengganu. The result shows that the impact is larger, where they are 76.5 percent more likely to participation (see appendix F).

states. Additionally, since our model already controls for ethnicity, this result cannot be attributed specifically to individual-specific Malay traditions and culture. Instead, the observed effect is likely to proxy for the enduring influence of patriarchal customs and restrictive social norms governing women's lives in Kelantan and Terengganu societies. This interpretation is consistent with the evidence of the social influence of place of residence in other patriarchal settings (Guner and Uysul, 2014; Noury and Speciale, 2016). Guner and Uysul (2014), for instance, concluded that migrant women from the province with a larger share of religious party votes in 1973 in Turkey (i.e. as a proxy of parental religiosity) have a lower probability of participation in the labour market. Similarly, Noury and Special (2016) found that women who grew up at the place under the Taliban ruling were less likely to be employed out from home due to the imposed restriction of female rights and freedom. As discussed in section 2.4.4, both states were ruled by the Islamic Party Malaysia (PAS) which has been in pursuance of the formation of an Islamic State and the execution of hudud laws (Stark, 2004). Additionally, Raybeck (1980) also highlighted the Kelantanese view their own cultural identity as inseparable from Islam, thus considered as a state that have conservative value in Peninsular Malaysia.

### **5.2.3 Determinants of Labour Market Participation among Married Women**

One of the highlights of the previous finding is that social customs and care-related factors are the significant determinants of women's participation in the labour force. In relation to that, this research further examines the participation decisions among married women. Table 5.3 shows the estimation for the determinants of labour market participation among married women.

**Table 5.3: Probit model estimate of the determinants of labour market participation among married women**

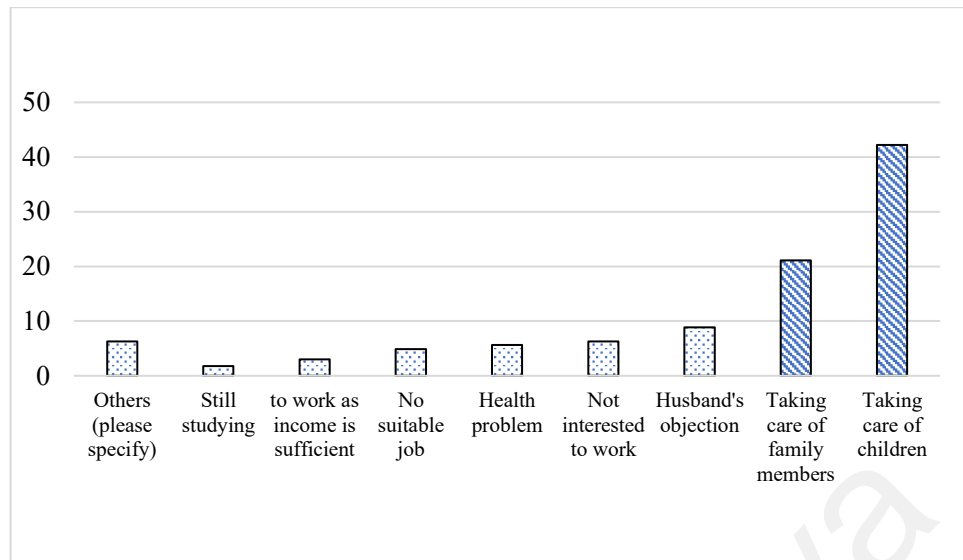
Variables	(6) Female (married)	
	Coefficient	Robust standard errors
Age	0.0754**	0.00507
Age <sup>2</sup>	-0.000872**	6.14e-05
Schooling	-0.0629**	0.00536
Schooling <sup>2</sup>	0.00482**	0.000288
<b>Ethnicity:</b>		
Chinese	-0.0214	0.0201
Indians	-0.0519*	0.0234
Other	-0.00314	0.0175
Children_1	-0.111**	0.0250
Children_2	-0.133**	0.0240
Children_3	-0.175**	0.0234
Children_4	-0.176**	0.0242
Children_5	-0.222**	0.0242
Children_6	-0.222**	0.0243
Previously married	0.223**	0.0194
Parents alive	0.0268+	0.0151
Parents-in-law alive	-0.0166	0.0141
Childhood residence KLTN & TN	-0.0388*	0.0178
Current location: Rural	0.00398	0.0129
Observations		7,631
Pseudo R <sup>2</sup>		0.0899

**Notes:** (1) Dependent variable is labour market participation (1 if currently working; 0 otherwise). (2) \*\*, \* and + indicate statistically significant at 1%, 5% and 10% respectively. (3) Marginal effects are reported instead of the coefficient. (4) Reference categories for dummy variables: ‘Malay’ for ethnicity, ‘parents no longer alive’ for parents alive and ‘parent’s in-law no longer alive’ for parents-in-law alive, ‘other states’ for childhood residence KLTN & TN, and ‘urban’ for current location.

The finding indicates that a higher number of children affects married women’s participation negatively with an increasing effect. The decrease in the probability of participation increases from 11.1 percent to 22.2 percent as the number of children increases, thus indicating that care-responsibilities are the significant obstacles among married women. Additionally, the presence of parents is only marginally significant in increasing married women’s labour market participation by 2.7 percent. Being previously married was found to increase the women participation in the labour force by 22.3 percent, thus indicating the probability of a push factor among the divorced, widowed, and separated women to work to survive. Childhood residence of KLTN and TN was also found to be significant and negatively related with married women’s labour market participation. Married women who were raised in these two states are 3.9 percent less likely to participate in the labour market.

Previous studies have highlighted that the availability of childcare facilities has contributed towards the improvement in women's labour market participation both in developed (Dujardin et al., 2018; Kawabata, 2014; Nollenberger and Rodríguez-Planas, 2015) and developing countries (Dang et al., 2019; Li, 2017). However, we did not have data on care responsibilities and time allocation across various household chores for men and women in the MPFS dataset. Therefore, we were unable to formally explore the role of care responsibilities in shaping labour market participation. We shall, however, discuss the importance of care responsibilities using self-reported data on reasons for labour force non-participation.

Figure 5.1 reports the self-reported reasons for non-participation in the labour market (i.e., never work) among women. The figure shows that nearly 65 percent of the women stated that the main reasons for not participating in the labour market were the provision of care to children and family member. This finding suggests that care responsibilities have negative impacts on women's labour market outcomes. A recent report by the Khazanah Research Institute (2019) concluded that every additional hour spent on unpaid care work resulted in less time for market work and less income earned. This consequently widens gender inequalities in the labour market, due to women's decisions to stay out of the labour market.



Source: Author, based on Fifth Malaysian Population and Family Survey (2014).

**Figure 5.1: Self-reported reason for non-participation in the labour force (women only)**

### 5.3 Results– The Gender Wage Gap in Malaysia

Our estimate of the gender gap in the labour market participation (Table 5.2) and the subsequent influence of childhood residence in KLTN and TN among married women (Table 5.3) shows the importance of social factors as a key explanation for women's low labour-force participation in Malaysia. However, it could be argued that economic factors drive the two results. Malaysian women may face greater market discrimination in general and in Kelantan and Terengganu in particular. Such discrimination could then drive the observed correlation between gender and labour force participation on the one hand, and women's labour force participation and childhood exposure to specific locations with traditional norms on the other. Regardless of its implication for female work participation decision, an analysis of the gender wage gap is important on its own right and is identified as the second objective of this research as stated earlier in section 1.4. Therefore, in this section, we explored the market discrimination hypothesis with a focus on local (i.e. state-specific) labour market.



To motivate the analysis, we first documented the extent of gender wage differentials in our data. As stated in Section 4.4, the MPFS does not have the data on wages. Thus, the data on average monthly income was utilised as the second-best solution to capture the wage differentials. The estimation was based on the OLS of the Mincerian earning function in which the main parameter of interest was the coefficient on the female dummy variable.

**Table 5.4: OLS regression estimate of the determinants of income (both genders included) (MPFS 2014 data)**

<b>Dependent variable:</b>	
<b>Variables</b>	<b>Log of monthly earnings</b>
Female	-0.404** (0.0150)
Observations	8,238
Adjusted R <sup>2</sup>	0.477

**Notes:** (1) Robust standard errors in parentheses. (2) \*\*, \* and + indicate statistically significant at 1%, 5% and 10% respectively. (3) Marginal effects are reported instead of the coefficient. (4) Estimation result for other control variables is in appendix G.

Table 5.4 presents the estimate of the coefficient on the female dummy income for both men and women. The purpose of the estimation was to examine whether there is an economic motive behind the non-participation of women in the labour market. This model reports the estimation of Equation (3) where the other important variables (such as experience, schooling, marital status, ethnicity, working sector, job status and current location) are included. The estimated negative coefficient for the female dummy confirms a sizeable gender gap in terms of income; which indicates that women received 40.4 percent lower income compared to men. Furthermore, the gap does not close over the life cycle or as we move from less educated to more educated women. The estimated age and schooling profiles of income confirm that women earn less than men, regardless of the former schooling attainment (see Appendix H – Figure 6.3). Furthermore, the gap widens alongside years of experience, which indicates that experience is rewarded more for men than for women (see Appendix H – Figure 6.4).

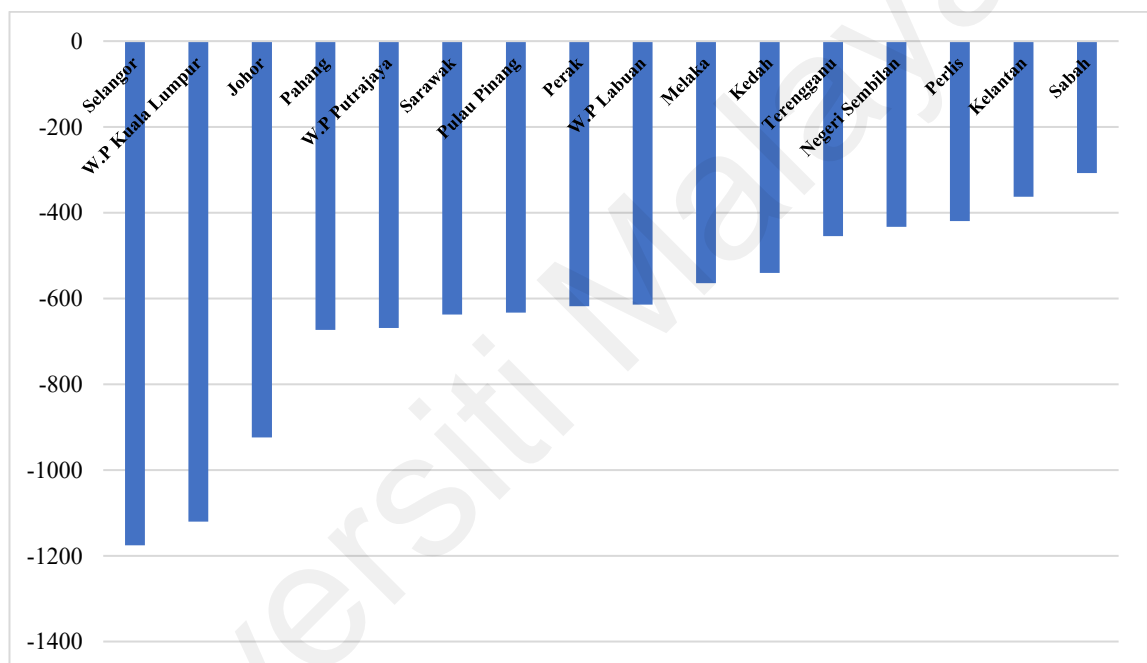
Therefore, the findings might reflect the existence of the gender wage gap in the local labour market, which might be due to the discrimination faced by women in the labour market.

The difference in the male-female earnings could be attributed to the difference in the hours of work and involvement in part-time work (Ñopo et al., 2012). Section 4.4 (page 110) highlighted the limitation of the MPFS data due to unavailability of the hours of work data and on part-time employment. We acknowledged that with the absence of the variable hours of work, the estimation on the gender income gaps is likely to be over-estimated. However, previous literature on Malaysia claimed that the incidence of part-time work is negligible (Milanovic, 2001). Studies also concluded that the earnings gaps reduced over time despite men working in longer hours than women (Milanovic, 2001). However, research does conclude that the wage gap between men and women mainly contributed by the differences within occupation (Ismail et al., 2017; Ismail and Jarji, 2012).

Previous literature in Malaysia has also highlighted the existence of gender discrimination where 76.3 percent (Ismail and Jarji, 2012) and 79.62 percent (Ismail et al., 2013) of the unexplained variables contributed to the male-female wage differentials. Furthermore, another study concluded that 89.2 percent of within-occupation wage-differentials was potentially due to unequal treatment between men and women (Ismail et al., 2017). Such impediment might demotivate women from joining the labour market.

Given the suggestive evidence of gender wage discrimination, we then examined the regional pattern in the estimated gender wage penalty. This is because the earnings gap might be one of the reasons for the women choosing not to participate in the labour market in Kelantan and Terengganu, particularly if their earnings are low despite having

characteristics comparable to men. The sizeable estimate of the conditional gender wage gap is a proxy for gender discrimination in the local labour market. To this end, the research estimates the conditional OLS estimate of the gender income gap by the administrative state utilizing the MPFS dataset. As indicated in the results (Figure 5.2), the estimated gender gap is highest in Klang Valley (i.e., Kuala Lumpur and Selangor), followed by other heavy industrial states such as Johor and Pulau Pinang. Kelantan and Terengganu have relatively smaller gender earnings penalties.

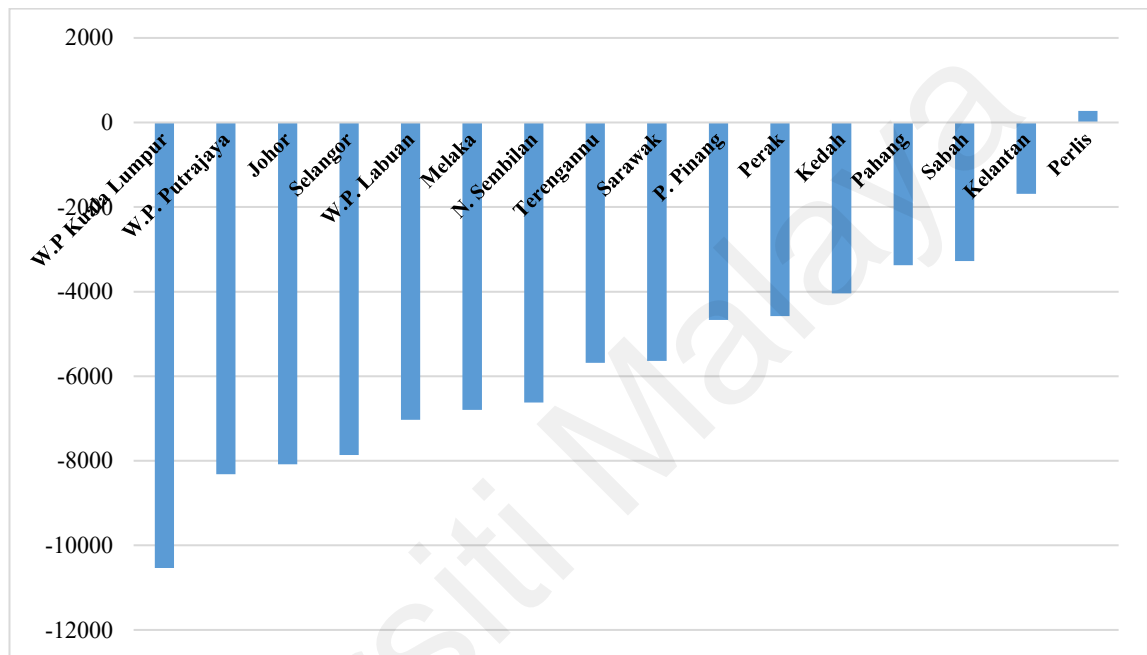


**Source:** Author, based on the Malaysian Population and Family Survey data 2014. **Notes:** Full estimates of the underlying regression model reported in Appendix I. The dependent variable is the monthly income. The sample comprises individuals aged 18-60 years old.

**Figure 5.2: Conditional OLS estimates of the state-specific gender income gap (MPFS 2014 data)**

The across-state differences in the estimated gender income gap could be owed to the way income data are captured in the MPFS survey. The data on income could also capture the non-labour income. Therefore, the research also incorporates the supplementary data on wages from a more representative survey (the HIS 2014). Compared to MPFS, the HIS dataset captures wages and salaries and comprises a state-specific sample of men and women, which is large enough to produce a reliable

estimate of the gender earnings gap. The conditional state-specific gender wage gap for the HIS data was estimated using the OLS framework based on a comparable Mincerian earning function. Apart from the female dummy variable to capture the wage differential, other important variables such as experience, education, marital status, ethnicity and current location were also included in the estimation.



**Source:** Author, based on the Households Income Survey data 2014.

**Notes:** Full estimates of the underlying regression model are reported in Appendix J. The dependent variable is annual wages. The sample comprises individuals aged 18-60 years old.

**Figure 5.3: Conditional OLS estimates of the state-specific gender wage gap (HIS 2014 data)**

Figure 5.3 shows that conditional on the demographic correlates of wages, the residual gender gap in wages is also significant and negative in the HIS data. Consistent with the MPFS, Kelantan and Terengganu were found to be not among the states that discriminate women most in terms of labour market earnings. In other words, while the employers in Kelantan and Terengganu do discriminate in the labour market pay, this is a bigger problem for women in other states where female labour force participation rate is higher. However, since there are other states with higher and lower estimates of gender wage discrimination, we further tested the impact of location-specific gender

wage gap as a regressor by augmenting the earlier model of labour market participation specific in Equation (1) with the gap measured at the district level. Since the MPFS does not have data representation at the local/district level, similarly, the more representative HIS with the wage data was utilized to capture the gender wage gap at the district level. Thus, Table 5.5 provides the result for the estimation using Equation (4). Columns 1a and 2a refer to the estimates with the additional “regional gender wage gap” regressor based on the subgroups of female and male.

The negative coefficient of the regional gender wage gap indicates that the gender wage differentials are significant and negatively related with female labour market participation (see column 1a) – which possibly suggest the possible occurrence of discrimination towards women in the local labour market. Nonetheless, it remains to be seen whether the estimated gender wage discrimination in the local market accounts for the observed wage penalty associated with childhood exposure to KLTN and TN. Towards this end, the research then estimated the interaction between the place of childhood residence of Kelantan and Terengganu with the regional gender wage gap (see columns 3b and 4b).

The interaction term is significant and negatively related to women, whereas it is insignificant for men. The result does confirm that women in Kelantan and Terengganu who live in a district with higher gender gap discrimination have lower labour market participation. However, controlling for this possibility does not statistically explain away the earlier result as to why the women residing in Kelantan and Terengganu have lower participation in the labour market.

**Table 5.5: Probit model estimate of the determinants of labour market participation with added control on regional gender wage gap (MPFS-HIS, 2014)**

Variables	(1a)	(2a)	(3b)	(4b)
	Female	Male	Female	Male
Age	0.0726** (0.00479)	0.0263** (0.00320)	0.0725** (0.00479)	0.0263** (0.00320)
Age2	-0.000841** (5.86e-05)	-0.000379** (3.78e-05)	-0.000839** (5.86e-05)	-0.000379** (3.79e-05)
Schooling	-0.0591** (0.00530)	0.00195 (0.00380)	-0.0590** (0.00530)	0.00194 (0.00380)
Schooling2	0.00453** (0.000282)	-3.25e-05 (0.000192)	0.00452** (0.000282)	-3.21e-05 (0.000192)
<b>Marital status:</b>				
Currently married	-0.302** (0.0288)	0.107** (0.0262)	-0.304** (0.0288)	0.107** (0.0262)
Previously married	-0.0883* (0.0364)	0.0338* (0.0152)	-0.0900* (0.0364)	0.0338* (0.0152)
<b>Ethnicity:</b>				
Chinese	-0.0168 (0.0194)	0.00627 (0.0113)	-0.0147 (0.0194)	0.00619 (0.0113)
Indians	-0.0625** (0.0227)	-0.0383* (0.0191)	-0.0599** (0.0227)	-0.0384* (0.0191)
Others	0.00674 (0.0172)	-0.0159 (0.0122)	0.00535 (0.0172)	-0.0158 (0.0122)
Number of children	-0.0268** (0.00335)	-0.00124 (0.00220)	-0.0265** (0.00335)	-0.00126 (0.00220)
Parents alive	0.0268+ (0.0152)	0.00886 (0.00956)	0.0262+ (0.0152)	0.00886 (0.00956)
Parents-in-law alive	-0.0174 (0.0142)	0.0272** (0.0100)	-0.0174 (0.0142)	0.0272** (0.0100)
Childhood residence KLTN & TN	-0.0301+ (0.0178)	-0.0181 (0.0132)	-0.0888** (0.0265)	-0.0159 (0.0194)
Current location: Rural	0.0176 (0.0133)	0.0208** (0.00807)	0.0182 (0.0133)	0.0207* (0.00808)
Regional gender wage gap	-7.72e-06** (1.84e-06)	-2.08e-06 (1.18e-06)	-5.65e-06** (1.98e-06)	-2.14e-06 (1.25e-06)
Childhood residence KLTN & TN*regional gender wage gap			-1.44e-05** (4.96e-06)	4.95e-07 (3.31e-06)
Observations	8,158	5,036	8,158	5,036
Pseudo R2	0.106	0.137	0.107	0.137

**Notes:** (1) Dependent variable is labour market participation (1 if currently working; 0 otherwise). (2) Robust standard errors in parentheses. (3) \*\*, \* and + indicate statistically significant at 1%, 5% and 10% respectively. (4) Marginal effects are reported instead of the coefficient. (5) Reference categories for dummy variables: 'male' for gender, 'never married' for marital status, 'Malay' for ethnicity, 'parents no longer alive' for parents alive and 'parent's in-law no longer alive' for parents-in-law alive, 'other states' for childhood residence KLTN & TN, and 'urban' for current location, (6) Regional gender wage gap based on HIS data and refers to "conditional Gender Wage Gap" at district level; the large coefficient is because it is the annual wages data. (7) Childhood residence\*regional gender wage gap refers to the interaction terms between the place of childhood residence of Kelantan and Terengganu with the regional gender wage gap.

A key finding based on the preceding analysis of male-female labour force participation gap is the importance of gender-differentiated social constraints. We argued that childhood residence in KLTN and TN is a good proxy for such constraints. Thus, in this section, we further elaborate on our interpretation, including findings from the robustness analysis.

Table 5.6 indicates that by adding control of the female teacher share, poverty, *Bumiputera* population share and the gender wage gap at the district level did not wash out the impact of place of childhood residence on the women's labour market participation decisions. All the additional controls are associated with female labour market participation, and the results are statistically significant with the expected signs, whereas it is insignificant for men. For instance, the female teacher share has a positive effect on female labour market participation. In contrast, poverty, the share of the *Bumiputera* population and regional gender wage gap have a negative impact on participation decisions among women. Additionally, the interaction terms between the place of childhood residence and regional gender wage gap are negative and significant only for women<sup>82</sup>.

Our interpretation of KLTN-TN childhood residency effect can be questioned for several reasons. First, there is a concern that the low female labour force participation in Kelantan and Terengganu might be due to the downward biased given that the female respondents may not identify themselves as working when they are involved in helping family business owned by the husband. However, the MPFS data is comparable with the Labour Force Survey (LFS) survey (see Table 2.3), which states that in 2018, the female

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<sup>82</sup> To this end, we conducted additional test to examine whether the wage level of men and women have impacts on the labour force participation. However, we found that the wage levels is not significant for both men and women (see appendix K).

labour force participation rate was the lowest for Kelantan and Terengganu at 46.5 percent and 44.2 percent, respectively.

**Table 5.6: Robustness test: Probit model estimate of the determinants of labour market participation with added controls on the regional gender wage gap, female teacher share, poverty and Bumiputera population share (MPFS-HIS, 2014)**

Variables	4(a) Female		5(a) Male	
	Coefficient	Standard Error	Coefficient	Standard Error
Age	0.0724**	(0.00480)	0.0263**	(0.00320)
Age2	-0.000839**	(5.87e-05)	-0.000379**	(3.79e-05)
Schooling	-0.0586**	(0.00532)	0.00190	(0.00380)
Schooling2	0.00448**	(0.000283)	-3.35e-05	(0.000192)
<b>Marital status:</b>				
Currently married	-0.304**	(0.0288)	0.107**	(0.0262)
Previously married	-0.0908*	(0.0364)	0.0336*	(0.0152)
<b>Ethnicity:</b>				
Chinese	-0.00738	(0.0197)	0.00724	(0.0114)
Indians	-0.0551*	(0.0230)	-0.0376*	(0.0192)
Other	0.0293	(0.0191)	-0.0130	(0.0134)
Number of children	-0.0261**	(0.00336)	-0.00119	(0.00221)
Parents alive	0.0255+	(0.0152)	0.00897	(0.00956)
Parents-in-law alive	-0.0186	(0.0142)	0.0271**	(0.0100)
Childhood residence KLTN & TN	-0.102**	(0.0276)	-0.0189	(0.0208)
Current location: Rural	0.0253+	(0.0142)	0.0209*	(0.00858)
Regional gender wage gap	-3.86e-06+	(2.24e-06)	-2.03e-06	(1.41e-06)
Childhood residence KLTN & TN*regional gender wage gap	-1.51e-05**	(4.98e-06)	3.47e-07	(3.33e-06)
<b>Added controls:</b>				
Female teacher share	0.267**	(0.0854)	0.0308	(0.0551)
Income poverty	-0.00732+	(0.00409)	-0.000751	(0.00265)
Bumiputera population share	-0.106*	(0.0454)	-0.0176	(0.0301)
Observations	8,158		5,036	
Pseudo R2	0.108		0.137	

**Notes:** (1) Dependent variable is labour market participation (1 if currently working; 0 otherwise). (2) \*\*, \* and + indicate statistically significant at 1%, 5% and 10% respectively. (3) Marginal effects are reported instead of the coefficient. (4) Reference categories for dummy variables: 'never married' for marital status, 'Malay' for ethnicity, 'other states' for childhood residence, and 'urban' for location. (5) Regional gender wage gap based on HIS data and refers to 'conditional Gender Wage Gap' at the district level; the large coefficient is because it is the annual wages data. (6) Female teacher share from State/District Data Bank; Poverty from Household Income Survey Report and Basic Amenities by State and Administrative District; Bumiputera population share from Population Distribution and Demographic Characteristics Survey – all at the district level. (7) Childhood residence\*regional gender wage gap refers to the interaction terms between the place of childhood residence of Kelantan and Terengganu with the regional gender wage gap.

Secondly, it may be argued that the effect of our proxy of social customs is associated with ethnicity. However, our estimate in Table 5.2 reflects that there is no variation in labour market participation by the ethnic identity of the respondents (i.e.



Malay vs Chinese) except for the Indians, which is consistent with the LFS data. Therefore, the finding suggests that in the Malaysian context, any observed difference in ethnicity is mediated through other factors controlled for in our model.

Thirdly, our analysis of social customs relies entirely on the cross-sectional variation that might be driven by other state-specific factors of women labour force participation. Therefore, we re-estimated the regression model by including four state-specific factors which are female teacher share, income poverty, Bumiputera population share and the regional gender wage gap.

Overall, the results confirm the robustness of our earlier finding specific to childhood residence in KL and TN – the Malay heartland states. The estimated effect reported earlier in Tables 5.2 and 5.5 is not washed out even after extensive control for state-specific factors that, in theory, affect the labour force participation rate. Therefore, this suggests the possibility of the influence of patriarchal customs and restrictive social norms governing women's lives in Kelantan and Terengganu societies, which is captured through the proxy of the place of childhood residence. Bumiputera share proxies for majority social rules and ensures that the result specific to Terengganu and Kelantan is not just explained by Malay-majority population. Whereas, poverty rate potentially proxies for poor local (district) labour market conditions (e.g. low average wage); hence the negative sign. Female teacher is expected to have positive impact on women's participation as the higher the number of women in prominence position, women are more likely to participate in the labour market. Whereas, the regional gender wage gap is expected to have negative impact on the participation as with possible occurrence of discrimination, women will be less likely to participate in the labour market.

## 5.4 Women's Exit Decisions from the Labour Market

### 5.4.1 Determinants of Exit Decisions from the Labour Market by Gender

Apart from the low-level market participation among women, the issue of dropouts from the labour market has also raised concern. Therefore, the study aimed to estimate the identify the determinants of women's labour market exit decisions.

Table 5.7 presents the probit and Heckman probit regressions estimate of the determinants of exit decisions for both men and women. As stated in Section 4.5, the Heckman probit regression requires the inclusion of exclusion restrictions, which are the identifying variables. The variables selected were included in the selection equation of participation but not in the exit decisions. The estimation of Heckman probit regression was able to improve model identification and therefore corrected the selectivity bias from the sample selection. Column 1 reports the estimation of the probit regression for Equation (5). Column 3 reports the Heckman probit regression for Equation (9) with the inclusion of participation in a mixed marriage, participation in love marriage, and place of childhood residence in Kelantan and Terengganu as the identifying variables in the selection equation of labour market participation in column 2.

**Table 5.7: Determinants of labour market exit decisions**

Variables	Full Sample		
	(1) Probit (Labour market exit)	(2) Selection (LFP participation)	(3) Heckman Probit (Labour market exit)
Female	0.392** (0.00725)	-0.773** (0.0446)	0.440*** (0.00740)
<b>Other controls:</b>			
Age	-0.0451** (0.00353)	0.194** (0.0128)	-0.0650*** (0.00408)
Age <sup>2</sup>	0.000503** (4.32e-05)	-0.00267** (0.000153)	0.000773*** (5.15e-05)
Schooling	0.0328** (0.00407)	-0.0866** (0.0153)	0.0404*** (0.00429)
Schooling <sup>2</sup>	-0.00273** (0.000212)	0.00513** (0.000852)	-0.00319*** (0.000224)
<b>Marital status:</b>			
Currently married	0.0711** (0.0193)	-0.145 (0.122)	0.0722*** (0.0215)

Previously married	-0.0523* (0.0230)	0.282* (0.136)	-0.0834*** (0.0244)
<b>Ethnicity:</b>			
Chinese	0.0203 (0.0142)	0.0850 (0.0594)	0.0112 (0.0149)
Indians	0.0581** (0.0180)	0.0328 (0.0725)	0.0574*** (0.0187)
Others	-0.0182 (0.0121)	-0.306** (0.0471)	0.00174 (0.0134)
Number of children	0.0187** (0.00296)	-0.0793** (0.0110)	0.0258*** (0.00315)
Parents alive	-0.0291* (0.0116)	-0.0377 (0.0408)	-0.0261** (0.0120)
Parents-in-law alive	-0.0105 (0.0107)	-0.0141 (0.0392)	-0.0105 (0.0112)
Current location: Rural	-0.0147 (0.00960)	0.0317 (0.0375)	-0.0189* (0.0102)
Love marriage		0.101** (0.0352)	
Mixed marriage		-0.00703 (0.0665)	
Childhood residence KL TN & TN		-0.180** (0.0477)	
Constant	1.207** (0.220)	-0.659* (0.279)	0.898** (0.280)
Anthro		1.214** (0.110)	
Observations	11,973	13,194	13,194

**Notes:** (1) Dependent variable is labour market exit decisions (1 if have worked before; 0 otherwise). (2) Robust standard errors in parentheses. (3) \*\*, \* and + indicate statistically significant at 1%, 5% and 10% respectively. (4) Marginal effects are reported instead of the coefficient. (5) Regional gender wage gap is included in the estimation. (6). Reference categories for dummy variables: ‘male’ for gender, ‘never married’ for marital status, ‘Malay’ for ethnicity, ‘other states’ for childhood residence KL TN & TN, and ‘urban’ for current location, ‘parents no longer alive’ for parents alive and ‘parent’s in-law no longer alive’ for parents-in-law alive, “participation in arranged marriage” for love marriage and “marriage within the same ethnicity” for a mixed marriage.

First, the result in column 2 shows that the coefficient for *anthro* (i.e., inverse mills ratio) is positive and significant, thus indicating the existence of a selection issue in this model. The positive coefficient of the *anthro* signifies that the probit regression of labour market exit decisions would produce upwardly biased estimates. However, the selection issue was corrected using the Heckman probit regression. Thus, column 3 shows the robust result of labour market exit decisions, which consider the selection of labour market participation. The main interest of this result is on the female dummy variable. The positive coefficient of the female dummy indicates that women were 44 percent more likely to exit the labour market compared to men.

#### 5.4.2 Determinants of Exit Decisions from the Labour Market among Women

Our estimates on the determinants of exit decisions show that women are more likely to withdraw from the labour market. Therefore, further estimation was performed on the determinants of exit decisions among women through the probit and Heckman probit regression (see Table 5.8).

**Table 5.8: Determinants of labour market exit decisions among women**

	(4) Probit (Labour market exit)	(5) Selection (LFP participation)	(6) Heckman Probit (Labour market exit)
Age	-0.155** (0.0132)	0.169** (0.0140)	-0.0748*** (0.00485)
Age <sup>2</sup>	0.00169** (0.000162)	-0.00224** (0.000169)	0.000862*** (5.92e-05)
Schooling	0.142** (0.0145)	-0.0938** (0.0167)	0.0573*** (0.00532)
Schooling <sup>2</sup>	-0.0111** (0.000760)	0.00654** (0.000969)	-0.00443*** (0.000282)
<b>Marital Status:</b>			
Currently married	0.820** (0.0897)	-0.391** (0.0631)	0.302*** (0.0280)
Previously married	0.293** (0.101)	-0.103* (0.136)	0.0949*** (0.0345)
<b>Ethnicity:</b>			
Chinese	0.0537 (0.0510)	-0.00306 (0.0667)	0.0159 (0.0192)
Indians	0.158** (0.0603)	0.0133 (0.0803)	0.0607*** (0.0225)
Others	-0.101* (0.0459)	-0.357** (0.0531)	-0.0107 (0.0167)
Number of children	0.0706** (0.0107)	-0.00306 -0.0929**	0.0339*** (0.00395)
Parents alive	-0.0758+ (0.0414)	(0.0122) 0.0128	-0.0286* (0.0151)
Parents-in-law alive	0.0549 (0.0382)	(0.0447) 0.0305	0.0160 (0.0141)
Current location: Rural	-0.00318 (0.0340)	(0.0435) 0.00268	-0.0160 (0.0132)
Love marriage		0.153** (0.0381)	
Mixed marriage		-0.0442 (0.0682)	
Childhood residence KLTN & TN		-0.264** (0.0506)	
Constant	2.275** (0.261)	-1.041** (0.283)	3.046** (0.244)
Anthro		1.438**	

Observations	7,122	(0.150) 8,158	8,158
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**Notes:** (1) Dependent variable is labour market exit decisions (1 if have worked before; 0 otherwise). (2) Robust standard errors in parentheses. (3) \*\*, \* and + indicate statistically significant at 1%, 5% and 10% respectively. (4) Marginal effects are reported instead of the coefficient. (5) Regional gender wage gap is included in the estimation. (6) Reference categories for dummy variables: ‘never married’ for marital status, ‘Malay’ for ethnicity, ‘other states’ for childhood residence’, and ‘urban’ for location, ‘parents no longer alive’ for parents alive and “parent’s in-law no longer alive’ for parents-in-law alive, “participation in arranged marriage” for love marriage and “marriage within the same ethnicity” for a mixed marriage.

Similar to a previous result (i.e., full sample), the coefficient for *anthro* (column 5) for the regression among women is also positive and significant. Thus, it will be incorrect to ignore the issue of sample selection bias, and therefore, the Heckman probit regression was utilised to correct the selection issue. Column 4 reports the estimation of probit regression, and column 6 reports the robust result of exit decisions from the Heckman probit regressions.

Several findings are worth noting from the examination of the Heckman probit exit decision (column 6) and selection on participation (column 5). First, the age-specific pattern was noted with regard to labour market exit decisions among women. The negative coefficient of age and positive coefficient of age squared indicates that women at a younger age are less likely to exit the labour market. As they get older, they are more likely to leave the labour market. Similarly, at a younger age, women are more likely to participate in the labour market and are less likely to participate as they get older.

In terms of marital status, women who are currently married are less likely to participate and are more likely to exit from the labour market than those who have never been married. In addition, compared with other determinants, being married has the most significant impact on the labour market exit decisions among women. The probit regression in column 4, which was not corrected for sample selection bias, shows that the probability of exit among married women is 82 percent. The robust Heckman result

reduced the impact from 82 percent to 30.2 percent more than the double reduction from the probit estimation. Yet, being married still has the largest effects on the exit decisions of women. Being previously married was also found to have a positive relationship with exit among women but with a smaller impact than married women. This finding could be attributed to the inflexibility of their workplace, which can potentially become the push factor for them, particularly among those with children.

In contrast to the findings of several studies (for instance, see Khoudja and Fleischmann, 2015; Khoudja and Platt, 2018), not much variation is noted in terms of the labour market exit decisions in relation to ethnicity. Indian women were 6.1 percent more likely to exit the labour market than Malay women.

The nonlinear effect on education on women's participation was also found to remain valid, and the u-shaped relationship holds for the relationship with exit decisions from the labour market. This finding indicates that education initially leads to the women's dropout from the labour market and that those with higher educational attainment are more likely to be retained in the labour market. This finding is consistent with previous studies (Hotchkiss et al., 2011; Sarkar et al., 2019), possibly because of the higher opportunity cost of not working among educated women, which is in line with the human capital theory by Mincer and Polachek (1974).

The number of children was also found to be significant and negatively related to participation decisions and positively associated with labour market exit decisions among women. The impact is lower for the robust Heckman result: an increase in the number of children resulted in a 3.4 percent probability of women exiting the labour market, compared to the probit result at 7.1 percent. This finding indicates that the presence of children, the priority of the mother change to focus more on mother-related task compared to career advancement. Similarly, previous results have shown that

women withdrew from the labour market with the presence of young children (Herrarte et al., 2012; Jeon, 2008; Khoudja and Fleischmann, 2018; Khoudja and Platt, 2018; Long and Jones, 1980; Sarkar et al., 2019). another qualitative study for Malaysia concluded that despite obtaining higher education, mothers tend to drop out from the labour market to provide care for their children (Halim et al., 2016). The results also highlighted that childcare-related issues might be obstacles for women to continue working.

We also hypothesise the labour market exit decision in relation to the presence of parents and parents-in-law as a proxy of a care-related factor either as the substitute of care for children or demand for elderly care by themselves. The presence of parents was found to have a negative relationship with exit decisions; their presence decreases the probability of exit among women by 2.9 percent. Whereas the presence of parents-in-law was positively related to the probability of exit from the labour market, although the finding is not significant. This finding indicates the possibility that parents might assist in the caregiving activities for the grandchildren as a form of informal childcare.

Out of the three identifying variables, participation in the love marriage and place of childhood residence in Kelantan and Terengganu was found to be statistically significant. These findings indicate the validity of both variables as the exclusion restrictions in the selection equation. Women who make their own choice for marriage have a greater say in life, which serve as the proxy of openness and progressive attitudes. As expected, those who participated in the love marriage are more likely to participate in the labour market than those who participated in an arranged marriage. In this case, the estimate shows that they are 15.3 percent are more likely to participate in the labour market compared to those in an arranged marriage. On the other hand, those who spend their childhood in Kelantan and Terengganu are 26.4 percent less likely to

participate in the labour market. As explained earlier in the conceptual framework (section 3.6), participation decision among women might be restricted because of the expected stronger influence of patriarchy in both states.

The result from the above estimations on the labour market exit decisions shows that women are more likely to drop out of the labour market in Malaysia. The positive and large effect of marriage on the women’s exit decisions supports the claims that in the event of the occurrence of work-family conflict, women tend to leave the labour market due to their domestic and care responsibilities (Noor, 2006). Furthermore, the number of children also has a positive effect on women’s exit decisions. Thus, as a proxy of care-related factors, this finding suggests that children restrict the ability of women to continue their participation in the labour market.



Source: Author, based on Fifth Malaysian Population and Family Survey (2014).

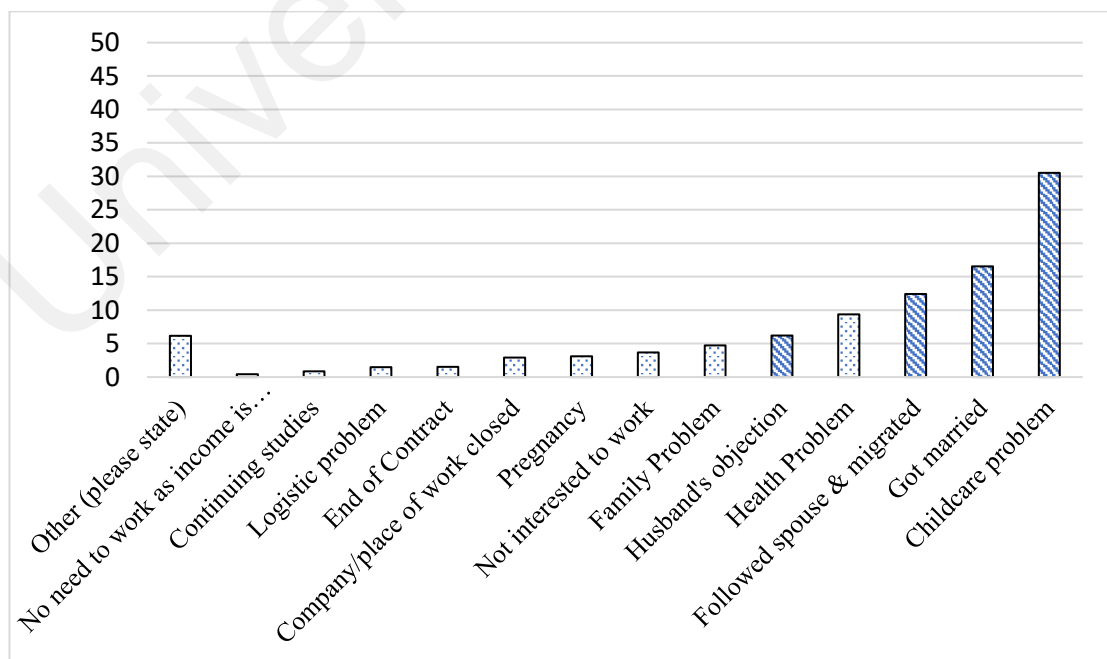
**Figure 5.4: Women’s employment status and history, 2014 (%)**

Figure 5.4 provides background information on women’s employment history based on the MPFS data. The figure shows that only 50.71 percent of women are currently working while another 49.29 percent are currently not working. However, in regard to the segregation of the “not working group,” only 8.8 percent of the women have never



been employed, and the remaining 40.49 percent of women were employed before they stopped working. This finding implies that apart from non-participation, the dropouts from the labour market is also a big challenge among working women. Our exit decisions estimates (Table 5.8) concluded that being married and the number of children increases the probability of exit among working women. Furthermore, as mentioned in Section 2.3, 60.2 percent of women in 2018 claimed that housework, family responsibilities, and community commitments were the reasons for their being outside the labour force. In contrast, only 3.6 percent of men gave the same reason (DOSM, 2019a).

Even though there are limited studies on the exit decisions in Malaysia, a preliminary study on the Klang Valley area found that 43.0 percent of the women stated taking care of children as the reason for their withdrawal from their work (Subramaniam et al., 2010). Additionally, Halim et al. (2016) found that motherhood influenced the exit decisions among female graduates more than their marital status. This finding is also confirmed by the self-reported reason for the dropout decisions in the MPFS data.

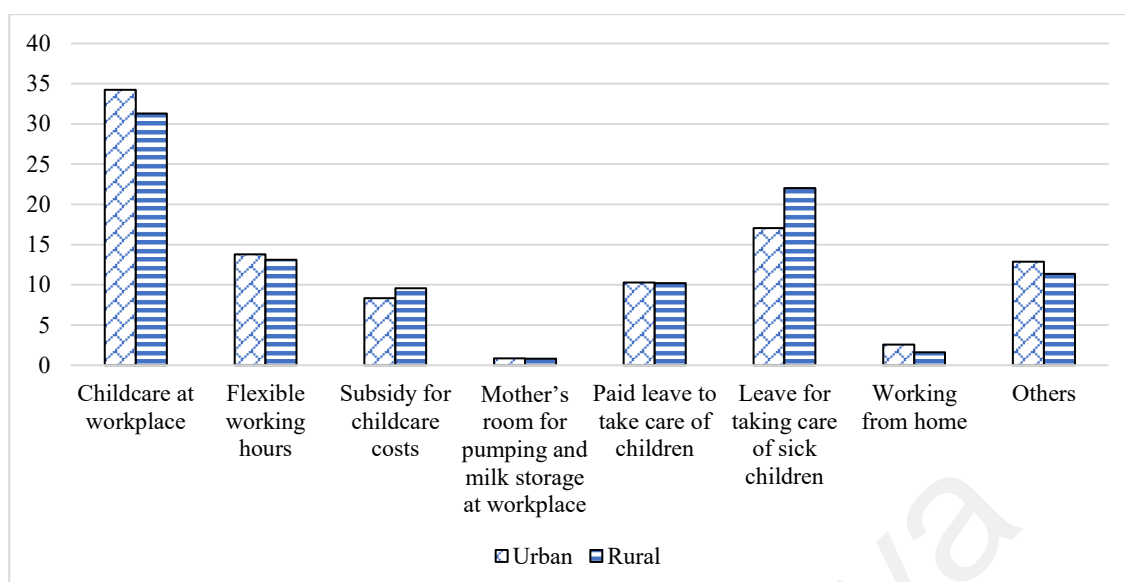


Source: Author, based on Fifth Malaysian Population and Family Survey (2014).

**Figure 5.5: Self-reported reason for dropouts from the labour force  
(women only)**

Figure 5.5 shows that nearly half of the reasons for women's exit decision came from either childcare issues or marriage-related matter. The main reason for their dropout from the labour market is their childcare problem (30.53 percent). This is followed by marriage (16.55 percent) and migration (in the case of following husband) (12.42 percent). This finding corresponds to the literature, which concluded that child-care-related exit decisions among working mothers are common due to the instability or multiplicity of childcare arrangements (Liu et al., 2014). The availability of childcare could be the support needed by working mothers to continue being in the labour market without disruptions. Our analysis found that the presence of parents reduces the probability of labour market exits among women, which potentially become a substitute for formal childcare arrangements. However, the landscape of Malaysian living arrangement is changing over the preference of nuclear over the extended arrangement. This, in turn, increases the need for support, particularly in relation to childcare.

We further emphasise the importance of providing the right childcare support and assistance through the self-reported data by the MPFS. It provides the backdrop on the type of support needed from employers (Figure 5.6) and the type of support supplied by employers (Figure 5.7) at the workplace.

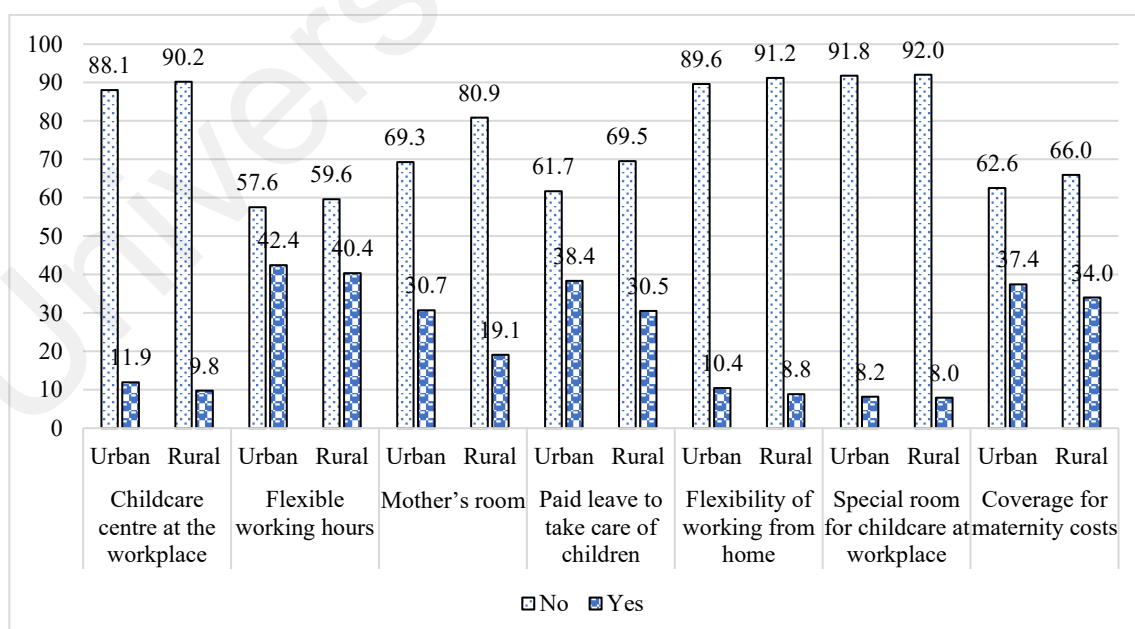


**Source:** Malaysian Population and family survey, 2014.

**Notes:** Based on non-missing values. Others include financial assistance, welfare assistance, scholarship, family insurance, longer break time to take care of children – both public and private.

**Figure 5.6: Type of childcare support needed from employers by location**

Figure 5.6 shows that the highest demand for support is in terms of “childcare at the workplace” (above 30 percent) for both urban and rural areas. This is followed by leave for taking care of sick children and flexible working hours.



**Source:** Malaysian Population and family survey, 2014.

**Notes:** Based on non-missing values.

**Figure 5.7: Type of childcare support provided by employers by location**

Whereas, Figure 5.7 demonstrates that the overall provision of support provided by the employers is still lacking. The highest provisional support is in terms of flexible working hours, yet it is still below 45 percent and followed by the provision of paid leave to take care of children which is also lower than 40 percent. Additionally, one of the highlights worth noting is that the provision of childcare centre (11.9 percent urban – 9.8 percent rural) and the special room for childcare at the workplace (8.2 percent urban – 8.0 percent rural) are among the lowest types of support provided by the employers. This implies a mismatch between the type of childcare support needed with the availability of support provided by the employers, both in urban and rural areas. Previous studies have also found that the inflexibility of the workplace has become the push factor of women to leave the labour market at motherhood (Herr and Wolfram, 2012). Furthermore, the availability of childcare services lowers the probability of labour market withdrawal among women (Del Boca et al., 2019; Herrarte et al., 2012).

## **5.5 Summary**

This chapter presented the findings with regard to the gender gap in participation, wages, and exit decisions. Among the main findings, women were 43.5 percent less likely to participate in the labour market than men. The main determinant of participation was the place of one's childhood residence. Women raised in these Kelantan and Terengganu are 4.0 percent less likely to participate in the labour market than women from other states. This finding is not explained by ethnicity, i.e. the Malay traditions and culture. It is also not accounted for by the difference in poverty and local gender wage differential. Instead, the lower probability of participation is likely a proxy of patriarchal customs and restrictive norms governing the women's lives in the two states.

Additionally, the findings also indicate the existence of gender wage differential in the local labour market, which affects participation decisions, implying potential discrimination faced by women in the labour market reduces their probability of participation.

Another finding worth noting is that marital status is a significant determinant for women's participation and exit decisions. Being married negatively affects participation decisions by nearly 30 percent, and the number of children also reduces the probability of participation among women. Marriage and children were also found to be strongly associated with the labour market withdrawal among women. This finding reflects the double-burden syndrome faced by working women, whose care responsibilities towards families lead to constraint in labour market activities. Further investigation on the subgroup of married women found that a higher number of children increases the negative effect of non-participation among women. Social constraints and care responsibilities are, therefore, significant in shaping women's market choices.

In conclusion, based on the preceding analysis of labour market participation and earnings, we can conclude that there are sizeable gender gaps in labour market participation as well as wage gap in Malaysia, with the latter influencing the former. This result is somewhat surprising, given the high level of schooling attainment among women in Malaysia. The sampled women were found to be less likely to participate in the labour market and earn less despite having the same level of education and experience as men. The result also confirms the concern over the issue of higher dropout possibilities among women.

## CHAPTER 6: CONCLUSION

### 6.1 Summary of Findings

Despite the economic growth, low poverty rate, and a high level of education in Malaysia, the female labour force participation rate is still unable to reach the targeted rate set by the government. This concern has motivated the research to examine women's participation and exit decisions from the labour market in Malaysia. This research was divided into two parts. The first part examined the size and sources of the gender gap in labour market participation, focusing on the role of place of childhood residence. Alongside that, it takes into account the effect of gender wage differentials in the participation decisions in the local labour market. The second part examined the gender gap and the determinants of labour market exit decisions among women.

The key findings from the first part of the analysis on the labour market participation are as follows: 1) Women are 43.5 percent less likely to participate in the labour market compared to men; those from the rural areas have a higher probability of nonparticipation; 2) The probit estimation on pooled sample showed that being married affects labour market participation among women negatively whereas it positively affects men's participation. 3) Place of childhood residence is a significant factor that contributes to nonparticipation among women possibly due to the influence of the patriarchal customs and restrictive social norms governing women's lives in Kelantan and Terengganu societies – the place of childhood residence is not a significant factor for men; 4) Number of children is a significant factor and is negatively related to married women's participation in the labour market – it is not significant for men; 5) Further analysis was conducted among married women concluded that higher number of children leads to higher probabilities of nonparticipation in the labour market.

Additionally, this research also found the existence of a gender wage gap. Women earn less than men despite having the same characteristics. This finding implies the possible existence of discrimination towards women, which might demotivate them to participate in the labour market.

The second part of the research examined the existence of a gender gap in the labour market exit decisions and the determinants of exit decisions among women. The key findings are as follows: 1) women are 44.0 percent more likely to exit the labour market compared to men; 2) being married currently has the most substantial positive effect on the exit decisions among women (30.2 percent); 3) the number of children positively affects exit decisions, whereas the presence of parents lowers the probability of exit among women.

Overall, the analysis confirms that women are disadvantaged vis-à-vis men, which can be observed from lower participation rates and higher rates of exits from the labour market. The significance of the place of childhood residence, being married and having children in participation decision highlight the social constraints and responsibilities that have shaped women's labour market choices in Malaysia. Furthermore, the finding also suggests that women faced labour market disadvantages due to gender wage differential despite having similar characteristics as men. Not only that, marriage and care responsibilities also become constraints for women to continue being in the labour market.

## **6.2 Policy Implications**

Our findings suggest that the social customs and restrictive norms governing the lives of females in the state of Kelantan and Terengganu have led to a lower likelihood to participate in the labour market. If true, reform initiatives that can change entrenched

social norms towards women would significantly improve women's employment, reducing the gender gap in participation.

The findings also pointed out the labour market constraints faced by women in relation to care responsibilities towards children. As highlighted previously, the difficulty of accessing care services has been identified as the barrier for women to realise their full economic potential (World Bank, 2019). Therefore, the most pressing issue is to design policies that could improve work-life balance to encourage women's labour market participation as well as to ensure their capabilities to continue working. The result indicates that the provision of maternity leave and childcare services currently available may be inadequate. Furthermore, Noor and Mahudin (2016) highlighted that despite the provision of tax exemptions on the establishment of childcare centres or nursery near or at the workplace that was introduced in the sixth Malaysia plan, the response from the private sector is low. Thus, an adequate public-private partnership regulation on the provision of childcare support is deemed essential to enable women to continue working and increase their productivity.

Thus, greater access to childcare services will be a considerable measure to promote women's employment, and the facility should also be extended for those working in the private sector. Childcare arrangement is likely to be a significant factor affecting women's participation as well as exit decisions. Our empirical analysis did not directly model access to childcare. However, we presented descriptive evidence on the mismatch between the type of demand for care support needed by employees and the supply of care support provided by the employers (section 5.4.2). Furthermore, the strong influence of children on married women's work participation decision also hints at the importance of access to care provision facilities. Childcare centres must be affordable and reliable with strengthened rules and regulations to ensure the safety of



children. Childcare subsidies can also lessen the burden on families and enable women to participate in the labour market. While the Malaysian government has provided such an incentive in *Pekeliling Perkhidmatan Bilangan 4* (2007) and *Pekeliling Perkhidmatan Bilangan 38* (2013), the amount might not be enough following the rising costs of childcare facilities and their availability only to the public sector.

The male population must also be considered in designing family-friendly policies. For instance, previous studies concluded that husbands' long working hours and work outside the region increase the probability of women's withdrawal from the labour market (Herrarte et al., 2012; Shafer, 2011). Women can share the burden of care responsibilities and households' chores with their partners, potentially improving their participation and retention rate in the labour market. Thus, the policy should focus on supporting the two-earners families either in-cash or in-kind.

The gender-wage differential would demotivate women from participating in the labour market. The focus should be given towards eliminating the discriminatory practices against women, particularly those who have the same qualification, experience, and job positions as men. Policies that can promote favourable attitudes towards female employment, particularly during the economic crisis, are particularly useful. The uninterrupted labour market attachment provides better opportunities for women to be in a higher rank position, which is suitable for their career advancement hence possible higher wages. In conclusion, the focus should be given not only on promoting the participation of women in the labour market but also on ensuring continuity and long-term attachment for the jobs.

### **6.3 Limitations and Suggestion for Future Research**

Despite the evidence presented and the gaps filled in the literature, this research has several limitations. First, while the influence of childhood residence in Kelantan and

Terengganu was attributed to local social customs that impacted socialization in early life, we did not directly test for the social customs effects. Our data has no information on gender norms and customs by state. Neither do we have questions on individual-level variation in gender attitudes. The interpretation of the influence of place of residence during childhood would benefit from further investigation, which is identified as an area for future research. This could also include a qualitative study examining the underlying factors related to social customs or gender norms across Malaysian states. Once again, such an endeavour was not made possible for this research due to time and cost limitations.

Equally, our research has alluded to the possibility of the influence of the Islamic political party, i.e., gender behaviour in Kelantan and Terengganu could be an outcome of the enduring influence of PAS, which led to the institutionalization of conservative Islamic traditions. Formally testing this would require a comparison of districts by PAS leadership. To this end, we gathered data on the election outcomes (vote shares by political parties) for the year 1986 and 2013 and the female representations. However, we were unable to match electoral constituency by administrative district. Thus, political characterization of the place of childhood residence is left out of the analysis, which we hope to pursue in our future work.

The findings from this research provide a clear picture of why marital status and childbearing are negatively associated with labour force participation and positively with exit decisions among women. The impact of the number of children on both labour market participation and exit decisions for women highlights the importance of childcare services. Once again, we have gathered the data on the availability of childcare centres in our sample districts in order to see the potential effect of childcare availability on women's labour market participation. However, we could only obtain

such data for the year 2017 from the JKM with 4083 childcare centre. Since MPFS data on women's labour market choice corresponds to the year 2014, it was not possible to merge data on childcare centres. Once again, this is left to future research, i.e. we intend to collect retrospective data on childcare centres through an institutional survey. A formal econometric test of childcare provisions is once again left out for future research in the absence of such data.

Lastly, this research has highlighted the roles of social customs, discrimination, and care responsibilities towards the labour market choice (i.e. the extensive margin of the labour market), although research on the intensive margin is equally essential. Still, such an endeavour was not made possible in this research due to the unavailability of time-use data in the MPFS dataset. The empirical findings on research that looks at the division of hours between work, unpaid work and leisure are crucial to providing insight for policymakers to boost women's participation in the labour market. In sum, beyond contributing new evidence, our findings have provided a detailed research agenda that can guide future researchers interested in women's economic participation in Malaysia.

## REFERENCES

- Abdullah, K., Noor, N. M., & Wok, S. (2008). The perceptions of women's roles and progress: A study of Malay women. *Social indicators research*, 89(3), 439-455.
- Abdullah, R., Raj-Hashim, R., & Schmitt, G. (1995). Battered women in Malaysia: prevalence problems and public attitudes. A summary report of Women's Aid Organisation. *Malaysia's National Research on Domestic Violence*.
- Agüero, J.M., & Marks, M.S. (2011). Motherhood and female labor supply in the developing world evidence from infertility shocks. *Journal of Human Resources*, 46(4), 800-826.
- Ahmad, A. (2005). The interface of work and family roles: A quest for balanced lives. *Penerbit UPM, Serdang*.
- Ahmad, A. (1998). *Women in Malaysia*. Asian Development Bank, Programs Department East.
- Ahmad, A. (1997). Work-Family conflict and social support: A study of female secretaries in Malaysia. *Pertanika Journal of Social Science and Humanities*, 5(2), 93-101.
- Ahmed, S., & Maitra, P. (2010). Gender wage discrimination in rural and urban labour markets of Bangladesh. *Oxford Development Studies*, 38(1), 83-112.
- Ahmed, S., & McGillivray, M. (2015). Human capital, discrimination, and the gender wage gap in Bangladesh. *World Development*, 67, 506-524.
- Alam, I. M., Amin, S., & McCormick, K. (2017). The effect of religion on women's labor force participation rates in Indonesia. *Journal of the Asia Pacific Economy*, 23(1), 31-50.
- Alshyab, N., Sandri, S., & Abu-Lila, Z. (2018). Differences in Returns to Education in Jordan: Gender and Public-private Sector Analysis. *Malaysian Journal of Economic Studies*, 55(1), 1-17.
- Amador, D., Bernal, R., & Pena, X. (2013). The rise in female participation in Colombia: Fertility, marital status or education?. *Ensayos Sobre Política Económica*, 31(71), 54-63.
- Amin, S., & Alam, I. (2008). Women's employment decisions in Malaysia: Does religion matter?. *The Journal of Socio-Economics*, 37(6), 2368-2379.
- Amin, S. M., Rameli, M. F. P., Hamid, M. A., Razak, A. Q. A., & Wahab, N. A. A. (2016). Labour supply among educated married women influenced by children. *Journal of Global Business and Social Entrepreneurship (GBSE)*, 2(4), 110-117.

- Amin, S. M., Rameli, M. F. P., Othman, A., Hasan, Z. A., & Ibrahim, K. (2017). Decision to work by educated married women. *Advanced Science Letters*, 23(8), 7702-7705
- Angrist, J., & Evans, W. (1998). Children and their parents' labor supply: Evidence from exogenous variation in family size. *American Economic Review*, 88(3), 450-477.
- Anwar, Z. (2005). Law-making in the name of Islam. Implications for democratic governance. In K. S. Nathan, & M. H. Kamali. (Eds.) *Islam in Southeast Asia: Political, social and strategic challenges for the 21st century*, Institute of Southeast Asian Studies.
- Anwar, I. (1986). Development, values and changing political ideas. *Sojourn: Journal of Social Issues in Southeast Asia*, 1(1), 1-7.
- Anwar, Z., & Rumminger, J. S. (2007). Justice and equity in Muslim family laws: challenges, possibilities, and strategies for reform. *Washington & Lee Law Review*, 64(1), 1529-1549.
- Asadullah, M. N., & Wahhaj, Z. (2019). *Female seclusion from paid work: A social norms of cultural preferences?*. ECARES working paper (No. 2019-10).
- Asadullah, M. N., & Wahhaj, Z. (2016). *Missing from the Market: Purdah Norm and Women's Paid Work Participation in Bangladesh*. GLO Discussion Paper Series 21, Global Labor Organization (GLO).
- Asadullah, M. N., & Xiao, S. (2019). Labor Market Returns to Education and English Language Skills in the People's Republic of China: An Update. *Asian Development Review*, 36(1), 80-111.
- Aslam, M., Kingdon, G., & Söderbom, M. (2008). Is female education a pathway to gender equality in the labor market? Some evidence from Pakistan. In *Girls' Education in the 21st Century: Gender Equality, Empowerment and Economic Growth*. Washington, DC: World Bank.
- Azhar, S., & Habibu, S. (2014, October 31). Kelantan cracks down with dress code, *The Star*. Retrieved from <https://www.thestar.com.my/news/nation/2014/10/31/notudung-no-business-kelantan-cracks-down-with-dress-code/>
- Azid, T., Khan, R.E.A., & Alamasi, A.M. (2010). Labor force participation of married women in Punjab (Pakistan). *International Journal of Social Economics*, 37(8), 592-612.
- Aziz, A. (2011). *Role demands and work-family balance experience in Malaysia: The different moderating effects of collectivism and gender role identity among diverse ethnic groups* (Doctoral dissertation). Queensland University of Technology, Queensland, Australia.

- Bandara, A. (2015). The economic cost of gender gaps in effective labor: Africa's missing growth reserve. *Feminist Economics*, 21(2), 162-186.
- Bauernschuster, S., & Schlotter, M. (2015). Public child care and mothers' labor supply—Evidence from two quasi-experiments. *Journal of Public Economics*, 123, 1-16.
- Becker, G. S. (1991). *A Treatise on the Family*. Harvard university press.
- Becker, G. S. (1965). A Theory of the Allocation of Time. *The Economic Journal*, 75(299), 493-517.
- Becker, G. S. (1957). *The Economics of Discrimination*. Chicago: University of Chicago Press.
- Bergmann, B. R. (1974). Occupational segregation, wages and profits when employers discriminate by race or sex. *Eastern Economic Journal*, 1(2), 103-110.
- Besamusca, J., Tijdens, K., Keune, M., & Steinmetz, S. (2015). Working women worldwide. Age effects in female labor force participation in 117 countries. *World Development*, 74, 123-141.
- Berthelon, M., Kruger, D. I., & Oyarzun, M. A. (2015). *The effects of longer school days on mothers' labor force participation*. IZA Discussion Paper (No. 9212).
- Blau, F.D., Ferber, M.A., & Winkler, A.E. (2014). *The Economics of women, men and work*, (7th edition). Pearson, Boston.
- Bloom, D. E., Canning, D., Fink, G., & Finlay, J. E. (2009). Fertility, female labor force participation, and the demographic dividend. *Journal of Economic Growth*, 14(2), 79-101.
- Blundell, R., & MaCurdy, T. (1999). *Labor supply: A review of alternative approaches*. In Ashenfelter, O., & Card, D. (eds). *Handbook of Labor Economics*. Elsevier, pp. 1559-1695.
- Boserup, E. (1970). *The role of women in economic development*. New York: St. Martin's.
- Borjas, G. J. (2010). *Labor economics* (6 Eds.) (pp. 346-382). Boston: McGraw-Hill.
- Braunstein, E. (2014). Patriarchy versus Islam: Gender and religion in economic growth. *Feminist Economics*, 20(4), 58-86.
- Brekke, I. (2013). How do husbands affect the labour market participation of majority and immigrant women?. *Journal of Ethnic and Migration Studies*, 39(10), 1639-1657.

- Bridges, S., Lawson, D., & Begum, S. (2011). Labour market outcomes in Bangladesh: The role of poverty and gender norms. *The European Journal of Development Research*, 23(3), 459-487.
- Cáceres-Delpiano, J. (2012). Can we still learn something from the relationship between fertility and mother's employment? Evidence from developing countries. *Demography*, 49(1), 151-174.
- Chamlou, N. Muzi, S., & Ahmed, H. (2011). Understanding the determinants of female labor force participation in the Middle East and North Africa Region: The role of education and social norms in Amman, *AlmaLaurea Working Papers series*, 31.
- Chen, M. A. (2001). Women and informality: A global picture, the global movement. *Sais Review*, 21(1), 71-82.
- Chen, F., Short, S.E., & Entwisle, B. (2000). The impact of grandparental proximity on maternal childcare in China. *Population Research and Policy Review*, 19(6), 571-590.
- Chi, W., & Li, B. (2014). Trends in China's gender employment and pay gap: Estimating gender pay gaps with employment selection. *Journal of Comparative Economics*, 42(3), 708-725.
- Ciani, E. (2012). Informal adult care and caregivers' employment in Europe. *Labour Economics*, 19(2), 155-164.
- Contreras, D., De Mello, L., & Puentes, E. (2011). The determinants of labour force participation and employment in Chile. *Applied Economics*, 43(21), 2765-2776.
- Contreras, D., & Plaza, G. (2010). Cultural factors in women's labor force participation in Chile. *Feminist Economics*, 16(2), 27-46.
- Contreras, D., De Mello, L., & Puentes, E. (2010). The determinants of labour force participation and employment in Chile. *Applied Economics*, 43(21), 2765-2776.
- Cunningham, M. (2008). Influences of gender ideology and housework allocation on women's employment over the life course. *Social Science Research*, 37(1), 254-267.
- Dang, H-A. H., Hiraga, M., Nguyen, C. V. (2019). Childcare and maternal employment: Evidence from Vietnam. *GLO Discussion Paper* (No. 349). Global Labor Organization (GLO), Essen.
- Davis, S. N., & Greenstein, T. N. (2009). Gender ideology: Components, predictors, and consequences. *Annual review of Sociology*, 35, 87-105.
- Del Boca, D., Locatelli, M., & Pasqua, S. (2000). Employment decisions of married women: evidence and explanations. *Labour*, 14(1), 35-52.

- Department of Social Welfare, October 2017.
- Department of Statistics Malaysia. (2020). *Vital Statistics Malaysia 2020*. Putrajaya.
- Department of Statistics Malaysia. (2019a). *Labour Force Survey Report Malaysia 2018*. Putrajaya.
- Department of Statistics Malaysia. (2019b). *Salaries and Wages Survey Report Malaysia 2018*. Putrajaya
- Department of Statistics Malaysia. (2019c). *State Socioeconomic Report 2018*. Putrajaya.
- Department of Statistics Malaysia. (2018a). *Current Population Estimates Malaysia 2018*.
- Department of Statistics Malaysia. (2018b), *Marriage and Divorce Statistic*.
- Department of Statistics Malaysia. (2018c). *Vital Statistics Malaysia 2017*.
- Department of Statistics Malaysia. (2016). *Labour Force Survey Report Malaysia 2015*. Putrajaya.
- Department of Statistics Malaysia. (2017). *Labour Force Survey Report Malaysia 2016*. Putrajaya.
- Department of Statistics Malaysia. (2017b). *Household Income and Basic Amenities Survey 2016*.
- Department of Statistics Malaysia. (2013). *Education and social characteristics of the population 2010*.
- Department of Statistics Malaysia. (2011). *Population Distribution and Basic Demographic Characteristics 2010*.
- Department of Social Welfare Malaysia. (October, 2017). *Chilcare centres statistics of Malaysia*.
- Dildar, Y. (2015). Patriarchal norms, religion, and female labor supply: Evidence from Turkey. *World Development*, 76, 40-61.
- Djuikom, M. A., & Van de Walle, D. (2018). Marital Shocks and Women's Welfare in Africa. *The World Bank Policy Research Working Paper* (No. 8306).
- Du, F., & Dong, X.Y. (2013). Women's employment and child care choices in urban China during the economic transition. *Economic Development and Cultural Change*, 62(1), 131-155.



- Duncan, K.C., Prus, M.J. & Scandy, J.G. (1993). Marital status, children and women's labor market choices. *Journal of Socio-Economics*, 22(3), 277-288.
- Dujardin, C., Fonder, M., & Lejeune, B. (2018). Does formal child care availability for 0-3 year olds boost mothers' employment rate? Panel databased evidence from Belgium. *Annals of Economics and Statistics/Annales d'Économie et de Statistique*, (129), 103-126.
- Duflo, E. (2012). Women empowerment and economic development. *Journal of Economic literature*, 50(4), 1051-1079.
- Economic Planning Unit. (2016). *Eleventh Malaysia Plan 2016- 2020*. Putrajaya.
- Economic Planning Unit. (2011). *Tenth Malaysia Plan 2011-2015*. Putrajaya.
- Economic Planning Unit. (2006). *Ninth Malaysia Plan 2006-2010*. Putrajaya.
- Economic Planning Unit. (2001). *Eight Malaysia Plan 2001-2005*. Putrajaya.
- Economic Planning Unit. (1996). *Seventh Malaysia Plan 1996-2000*. National Printing Department. Kuala Lumpur, Malaysia.
- Economic Planning Unit. (1991). *Sixth Malaysia Plan 1991-1995*. National Printing Department. Kuala Lumpur, Malaysia.
- Economic Planning Unit. (1965). *First Malaysia Plan 1966-1970*. National Printing Department. Kuala Lumpur, Malaysia.
- Elster, J. (1989). *The cement of society: A survey of social order*. Cambridge university press.
- Ettner, S. L. (1995). The impact of "parent care" on female labor supply decisions. *Demography*, 32(1), 63-80.
- England, P., Gornick, J., & Shafer, E. F. (2012). Women's employment, education, and the gender gap in 17 countries. *Monthly Lab. Rev.*, 135(4), 3-12.
- Euwals, R, Knoef, M., & Van Vuuren, D. (2011). The trend in female labour force participation: What can be expected for the future?. *Empirical Economics*, 40(3), 729-753.
- Faridi, M. Z., Chaudhry, I. S., & Anwar, M. (2009). The socio-economic and demographic determinants of women work participation in Pakistan: Evidence from Bahawalpur District. *South Asian Studies*, 24(2), 353-369.
- Felfe, C., Lechner, M., & Thiemann, P. (2016). After-school care and parents' labor supply. *Labour Economics*, 42, 64-75.

- Ferrant, G., Pesando, L. M., & Nowacka, K. (2014). Unpaid care work: The missing link in the analysis of gender gaps in labour outcomes. *Centro de Desarrollo de la OCDE*, 5.
- Fernández, R. (2011). Does culture matter?. In *Handbook of social economics* (Vol. 1, pp. 481-510). North-Holland.
- Fernandez, J. L. (2009). Intra-occupational gender earnings gaps in Malaysia. *Jurnal Kemanusiaan*, (14), 20-36.
- Firth, Raymond. (1966). *Malay fisherman: Their peasant economy*. London: Routledge and Kegan Paul.
- Gaddis, I., & Klasen, S. (2014). Economic development, structural change, and women's labor force participation. *Journal of Population Economics*, 27(3), 639–681.
- Ganguli, I., Hausmann, R., & Viarengo, M. (2014). Closing the gender gap in education: What is the state of gaps in labour force participation for women, wives and mothers?. *International Labour Review*, 153(2), 173-207.
- Givord, P., & Marbot, C. (2015). Does the cost of child care affect female labor market participation? An evaluation of a French reform of childcare subsidies. *Labour Economics*, 36, 99-111.
- Göksel, I. (2013). Female labor force participation in Turkey: The role of conservatism. *Women's Studies International Forum*, 41(1), 45-54.
- Goldin, C. (1995). The U-shaped female labor force function in economic development and economic history. In T. Paul Schultz, (Ed.), *Investment in Women's Human Capital and Economic Development*, University of Chicago Press.
- Goldin, C. (1990). *Understanding the gender gap: An economic history of American women*. New York, NY: Oxford University Press.
- Gomes, A. (1999). Peoples and cultures. In *The shaping of Malaysia* (pp. 78-98). Palgrave Macmillan, London.
- Gomez, E. T. (Ed.). (2007). *Politics in Malaysia: the Malay dimension* (Vol. 3). Routledge.
- Govindasamy, P., & DaVanzo, J. (1992). Ethnicity and fertility differentials in Peninsular Malaysia: Do policies matter?. *Population and Development Review*, 243-267.
- Goy, S. C., & Johnes, G. (2015). Differences in decline: Quantile regression of male–female earnings differential in Malaysia. *The Singapore Economic Review*, 60(04), 1-20.

- Goy, S. C., & Johnes, G. (2012). Revisiting the impact of occupational segregation on the gender earnings gap in Malaysia. *Jurnal Ekonomi Malaysia*, 46(1), 13-25.
- Gronau, R. (1973). The intrafamily allocation of time: The value of the housewives' time. *The American Economic Review*, 63(4), 634-651.
- Guiso, L., Sapienza, P., & Zingales, L. (2006). Does culture affect economic outcomes?. *Journal of Economic perspectives*, 20(2), 23-48.
- Gunatilaka, R. (2013). *To work or not to work?: Factors holding women back from market work in Sri Lanka*. International Labour Organization, ILO DWT for South Asia and Country Office for India.
- Guner, D., & Uysal, G. (2014). Culture, religiosity and female labor supply. *IZA* (Discussion Paper No. 8132).
- Hak, N. A. (2012). Rights of a Wife in the Case of Conversion to Islam under Family Law in Malaysia. *Arab Law Quarterly*, 26(2), 227-239.
- Hakim, C. (2000). *Work–Lifestyle Choices in the 21<sup>st</sup> Century: Preference Theory*. Oxford: Oxford University Press.
- Halim, R. A., Aziz, N. N. A. & Samsudin, M. A. (2016). Malaysian female graduates: Marriage, motherhood and labour force participation. *International Journal of Multidisciplinary Research and Development*, 3(1), 109-114.
- Hartani, N. H., Bakar, N. A. A., & Haseeb, M. (2015). The nexus between female labor force participation and female total fertility rate in selected ASEAN countries: Panel cointegration approach. *Modern Applied Science*, 9(8), 29-39.
- Hazarika, G., Jha, C. K., & Sarangi, S. (2019). Ancestral ecological endowments and missing women. *Journal of Population Economics*, 32(4), 1101-1123.
- Hersch, J. (2013). Opting out among women with elite education. *Review of Economics of the Household*, 11(4), 469-506.
- Heath, R. (2017). Fertility at work: Children and women's labor market outcomes in urban Ghana. *Journal of Development Economics*, 126, 190-214.
- Heath, R., & Jayachandran, S. (2016). *The causes and consequences of increased female education and labor force participation in developing countries* (No. w22766). National Bureau of Economic Research.
- Heckman, J. J. (1976). The common structure of statistical models of truncation, sample selection and limited dependent variables and a simple estimator for such models. *Annals of Economic and Social Measurement*, 5(4), 475-492.

- Heintz, J., Kabeer, N., Mahmud, S. (2018). Cultural norms, economic incentives and women's labour market behaviour: Empirical insight from Bangladesh. *Oxford Development studies*, 46(2), 266-289.
- Herr, J. L., & Wolfram, C. D. (2012). Work environment and opt-out rates at motherhood across high-education career paths. *ILR Review*, 65(4), 928-950.
- Herrarte, A., Moral-Carcedo, J., & Sáez, F. (2012). The impact of childbirth on Spanish women's decisions to leave the labor market. *Review of Economics of the Household*, 10(3), 441-468.
- Hirschman, C. (2016). Gender, the status of women, and family structure in Malaysia. *Malaysian Journal of Economic Studies*, 53(1), 33-50.
- Hoffman, S. D., & Averett, S. L. (2015). *Women and the economy: Family, work and pay*. Macmillan International Higher Education.
- Hofstede, G., & Bond, M. H. (1988). The Confucius connection: From cultural roots to economic growth. *Organizational dynamics*, 16(4), 5-21.
- Hotchkiss, J. L., Pitts, M. M., & Walker, M. B. (2011). Labor force exit decisions of new mothers. *Rev Econ Household*, 9, 397-414.
- Idris, N. A. H. (2009). Women in the small marketplace: A case study of women small-scale traders in Kelantan. In J. Ariffin (Ed.) *Readings on Women Development in Malaysia, a sequel: Tracing Four Decades of Change*. Kuala Lumpur: MPH Group Publishing Sdn. Bhd.
- Idris, N. A. H., & Shahadan, F. (1991). The role of Muslim women traders in Kelantan. In Ariff, M. (Ed) *The Muslim private sector in Southeast Asia: Islam and the economic development of Southeast Asia*. Singapore: Institute of Southeast Asian Studies.
- İkkaracan, İ. (2012). Why so few women in the labor market in Turkey?. *Feminist Economics*, 18(1), 1-37.
- Islam, K. M. M., & Asadullah, M. N. (2018). Gender stereotypes and education: A comparative content analysis of Malaysian, Indonesian, Pakistani and Bangladeshi school textbooks. *PloS one*, 13(1).
- International Labour Organization. (2018). *World employment social outlook: Trend for women 2017*. Geneva.
- International Labour Organization. (2017). *World employment social outlook: Trend for women 2017*. Geneva.
- Ismail, R. (2011). Gender wage differentials in the Malaysian services sector. *African Journal of Business Management*, 5(19), 7781-7789.

- Ismail, R., Farhadi, M., & Wye, C. K. (2017). Occupational Segregation and Gender Wage Differentials: Evidence from Malaysia. *Asian Economic Journal*, 31(4), 381-401.
- Ismail, R., & Jajri, I. (2012). Gender wage differentials and discrimination in Malaysian labour market. *World Applied Sciences Journal*, 19(5), 719-728.
- Ismail, R., & Noor, Z. M. (2005). Gender wage differentials in the Malaysian manufacturing sector. *IIUM Journal of Economics and Management*, 13(2), 119-137.
- Ismail, R., & Sulaiman, N. (2014). Married women labour supply decisions in Malaysia. *Asian Social Science*, 10(3), 221 -231.
- Jacobsen, J. P. (1998). *The economics of gender*. Malden, MA: Blackwell.
- Jeon, S.H. (2008). The impact of lifecycle events on women's labour force transitions: A panel analysis. *Economic Record*, 84(s1), S83-S98.
- Jones, G. (2019a). Population-Development Nexus. In T. N. Peng., L. S. Li., & N. A. Ismail (Eds.), *Population Situation Analysis Malaysia 2018* (pp 1-31). Kuala Lumpur, KL: Population Studies Unit.
- Jones, G. (2019b). Family and Marriage in Malaysia. In T. N. Peng., L. S. Li., & N. A. Ismail (Eds.), *Population Situation Analysis Malaysia 2018* (pp 1-31). Kuala Lumpur, KL: Population Studies Unit.
- Jones, G. W. (1981). Malay marriage and divorce in Peninsular Malaysia: Three decades of change. *Population and Development Review*, 7(2), 255-278.
- Johnson, W. R., & Skinner, J. (1986). Labor supply and marital separation. *The American Economic Review*, 76(3), 455-469.
- Kabeer, N. (2012). Women's economic empowerment and inclusive growth: Labour markets and enterprise development. *SIG* (Working Paper No. 2012/1).
- Kabeer, N., Mahmud, S., & Tasneem, S. (2011). *Does paid work provide a pathway to women's empowerment? Empirical findings from Bangladesh*. IDS Working Paper (No. 2011/375). Brighton: IDS.
- Karim, W. J. (1992). *Women and culture: Between Malay adat and Islam*. Boulder, CO: Westview Press.
- Karim, W. J. (1987). The status of Malay women in Malaysia: From culture to Islam and industrialization. *International Journal of Sociology of the Family*, 17, 41-55.
- Kassim, A. (1992). Women in the matrilineal Adat Perpatih society in Malaysia: Continuity and change. *Indonesia Circle*, 20(57), 3-14.

- Kassim, A. (1988). Women, land and gender relations in Negeri Sembilan: Some preliminary findings. *Southeast Asian Studies*, 26(2), 132-149.
- Kawabata, M. (2014). Childcare Access and Employment: The Case of Women with Preschool-Aged Children in Tokyo. *Review of Urban & Regional Development Studies*, 26(1), 40-56.
- Kanjilal-Bhaduri, S., & Pastore, F. (2018). *Returns to Education and Female Work Force Participation Nexus: Evidence from India* (No. 162). GLO Discussion Paper.
- Khoudja, Y., & Fleischmann, F. (2018). Gender Ideology and Women's Labor Market Transitions Within Couples in the Netherlands. *Journal of Marriage and Family*, 80(5), 1087-1106.
- Khoudja, Y., & Platt, L. (2018). Labour market entries and exits of women from different origin countries in the UK. *Social science research*, 69, 1-18.
- Killingsworth, M. R., & Heckman, J. J. (1986). Female labor supply: A survey. *Handbook of labor economics*, 1, 103-204.
- Kimmel, J. (2006). Child care, female employment, and economic growth. *Community Development*, 37(2), 71-85.
- Khazanah Research Institute. (2019). *Time to care: Gender Inequality, Unpaid Care Work and Time-Use Survey*. Kuala Lumpur: Khazanah Research Institute.
- Klasen, S. (1999). Does Gender Inequality Reduce Growth and Development? Evidence from Cross-Country Regressions. Working Paper Series 7, Policy Research Report on Gender and Development, World Bank.
- Klasen, S., & Lamanna, F. (2015). What explains the stagnation of female labor force participation in urban India?. *The World Bank Economic Review*, 29(3), 449-478.
- Klasen, S., & Lamanna, F. (2009). The impact of gender inequality in education and employment on economic growth: new evidence for a panel of countries. *Feminist economics*, 15(3), 91-132.
- Klasen, S., & Pieters, J. (2015). *What explains the stagnation of female labor force participation in urban India?*. The World Bank (Policy Research Working Paper No. 7222).
- Klasen, S., & Pieters, J. (2012). Push or pull? Drivers of female labor force participation during india's economic boom. *IZA* (Discussion Paper No. 6395).
- Kling, Z. (1995). The Malay family: Beliefs and realities. *Journal of Comparative Family Studies*, 26(1), 43-66.

- Knowles, S., Paula K. L., & Owen, P. D. (2002). Are Educational Gender Gaps a Break on Economic Development? Some Cross-Country Empirical Evidence. *Oxford Economic Papers*, 54(1), 118–49.
- Lahoti, R., & Swaminathan, H. (2016). Economic development and women's labor force participation in India. *Feminist Economics*, 22(2), 168-195.
- Lee, B. S., Jang, S., & Sarkar, J. (2008). Women's labor force participation and marriage: The case of Korea. *Journal of Asian Economics*, 19(2), 138-154.
- Leete, R. (2007). *Malaysia: From Kampung to twin towers: 50 years of economic and social development*. Oxford Fajar.
- Li, Y. (2017). The effects of formal and informal child care on the mother's labor supply - Evidence from urban China. *China Economic Review*, 44, 227-240.
- Li, J., & Angerer, P. (2014). Work-family conflict and worker wellbeing in china. In *Psychosocial factors at work in the Asia Pacific* (pp. 309-321).
- Lim, F. Y. B. (2017). *The effects of education and fertility on female labour force participation in Malaysia* (Doctoral dissertation). University of Wollongong, Australia.
- Liu, Q. (2012). Unemployment and labor force participation in urban China. *China Economic Review*, 23(1), 18-33.
- Liu, M., Chen, M., & Anderson, S. G. (2014). Factors influencing child care-related maternal work exits. *Children and Youth Services Review*, 46, 168-176.
- Long, J. E., & Jones, E. B. (1980). Labor force entry and exit by married women: a longitudinal analysis. *The Review of Economics and Statistics*, LXII(1), 1-6.
- Malhotra, A., DeGraff, D. S. (2000). Daughters and wives: Marital status, poverty and young women's employment in Sri Lanka, In Garcia, B. (ed.), *Women, Poverty and Demographic Change*, Oxford: Oxford University Press.
- Mallow, M. S. (2013). Sexual harassment in the workplace: An overview over the international law and current law and practice in Malaysia. *International Journal of Humanities and Social Science*, 3(13), 75-84.
- Mammen, K., & Paxson, C. (2000). Women's work and economic development. *Journal of economic perspectives*, 14(4), 141-164.
- Mansor, N. (1994). *Women Managers in Malaysia: Their Mobility and Challenges*. In Nancy J. Adler and Dafna N. Izraeli (eds.). *Competitive Frontiers: Women Managers in a Global Economy*. Oxford, UK, and Cambridge, MA: Blackwell Publishing, 1994.

- Martínez, C., & Perticará, M. (2017). Childcare effects on maternal employment: Evidence from Chile. *Journal of Development Economics*, 126, 127-137.
- Meng, X. (1998). Male–female wage determination and gender wage discrimination in China's rural industrial sector. *Labour Economics*, 5(1), 67-89.
- Milanovic, B. (2001). *Inequality and determinants of Earnings in Malaysia, 1985-97*, paper presented at the Asia and Pacific Forum on Poverty: Reforming Policies and Institution for Poverty Reduction Asian Development Bank, Manila, 5-9 February.
- Milner, A. (2009). *the Malays*. John Wiley & Sons.
- Mincer, J. (1962). Labor force participation of married women: A study of labor supply. In *Aspects of labor economics* (pp. 63-105). Princeton University Press.
- Mincer, J., & Polachek, S. (1974). Family investments in human capital: Earnings of women. *Journal of Political Economy*, 82(2), S76-S108.
- Ministry of Women, Family and Community Development, MWFC. (2014). *Study to support the development of national policies and programmes to increase and retain the participation of women in the Malaysia labour force: Key findings and recommendations*. Putrajaya.
- Mishra, V., & Smyth, R. (2015). Estimating returns to schooling in urban China using conventional and heteroskedasticity-based instruments. *Economic Modelling*, 47, 166-173.
- Mishra, V., & Smyth, R. (2010). Female labor force participation and total fertility rates in the OECD: New evidence from panel cointegration and Granger causality testing. *Journal of Economics and Business*, 62(1), 48-64.
- Morissette, R., & Hou, F. (2008). Does the labour supply of wives respond to husbands' wages? Canadian evidence from micro data and grouped data. *Canadian Journal of Economics/Revue canadienne d'économique*, 41(4), 1185-1210.
- Mutalib, H. (2008). *Islam in Southeast Asia*. Singapore: Institute of Southeast Asian Studies.
- National Population and Family Development Board, NPFDB. (2011). *National Family Policy Malaysia*. Kuala Lumpur.
- Nagaraj, S., Goh, K. L., Cheong, K. C., Tey, N. P., & Jani, R. (2014). Gender imbalance in educational attainment and labour market dynamics: Evidence from Malaysia. *Malaysian Journal of Economic Studies*, 51(Special Issue), 127-145.
- Nagata, J. A. (1974). Adat in the city: Some perceptions and practices among urban Malays. *Bijdragen tot de Taal-, Land-en Volkenkunde*, 91-109.



- Nazier, H., & Ramadan, R. (2018). Ever married women's participation in labor market in Egypt: constraints and opportunities. *Middle East Development Journal*, 10(1), 119-151.
- Ng, C., Mohamad, M., & Hui, T.B. (2006). *Feminism and the Women's Movement in Malaysia: An Unsung (R) evolution*. London: Routledge.
- Nishimura, Y., & Oikawa, M. (2017). Effects of informal elderly care on labor supply: Exploitation of government intervention on the supply side of elderly care market. *HEDG, Department of Economics, University of York* (Working Paper No. 17/02).
- Nollenberger, N., & Rodríguez-Planas, N. (2015). Full-time universal childcare in a context of low maternal employment: Quasi-experimental evidence from Spain. *Labour Economics*, 36, 124-136.
- Noor, N. M. (2009a). Post-independence Malaysian women: Introduction. In N. M. Noor (Ed.) *An Insight into Post-Independence Malaysian Women's Well-Being* (pp. 1-11). Malaysia: IIUM Press.
- Noor, N. M. (2009b). Overview of changes and issues in family structure. In N. M. Noor (Ed.) *An Insight into Post-Independence Malaysian Women's Well-Being* (pp. 13-41). Malaysia: IIUM Press.
- Nor, L. M. (2000). Occupational sex segregation and discrimination in peninsular Malaysia. *Jurnal Pengurusan*, 19, 89-107.
- Noor, N. M. (2006). *Work, Family and Women's Well-Being in Malaysia: Striving for a Balance*. International Islamic Universiti Malaysia.
- Noor, N. M. (2003). Work- and family-role experiences, work-family conflict and women's well-being: Some observations. *Community, Work and Family*, 6, 297-319.
- Noor, N. M. (1999). Roles and women's well-being: Some preliminary findings from Malaysia. *Sex Roles*, 41(3/4), 123-145.
- Noor, N.M., & Mahudin, N.D.M. (2016). Work, family and women's well-being in Malaysia. In *Handbook on Well-Being of Working Women* (pp. 717-734). Springer: Netherlands.
- Nor, N. A. A. M., & Said, R. (2016). Determinants and changes of labour force participation in Malaysia: A gender perspective. *International Journal of Social Science Commerce and Humanities*, 4(4), 16-29.
- Nor A. A. M. N., & Said, R. (2014). Malaysia's labour force participation in rural and urban areas. *Asian Economic and Financial Review*, 4(10), 1461-1472.

- Ñopo, H., Daza, N., & Ramos, J. (2012). Gender earning gaps around the world: A study of 64 countries. *World Development Report 2012, Gender Equality and Development*. The World Bank.
- Noury, A. G., & Speciale, B. (2016). Social constraints and women's education: Evidence from Afghanistan under radical religious rule. *Journal of Comparative Economics*, 44(4), 821-841.
- Ogawa, N., & Ermisch, J. F. (1996). Family structure, home time demands, and the employment patterns of Japanese married women. *Journal of Labor Economics*, 14(4), 677-702.
- Ong, A. (1990). State versus Islam: Malay families, women's bodies, and the body politic in Malaysia. *American Ethnologist*, 17(2), 258-276.
- Othman, N. (2006). Muslim women and the challenge of Islamic fundamentalism/extremism: An overview of Southeast Asian Muslim women's struggle for human rights and gender equality. In *Women's Studies International Forum*, 29(4), pp. 339-353
- Padilla-Romo, M., & Cabrera-Hernández, F. (2019). Easing the constraints of motherhood: The effects of all-day schools on mothers' labor supply. *Economic Inquiry, Western Economic Association International*, 57(2), 890-909.
- Pastore, F., & Verashchagina, A. (2008). The determinants of female labour supply in Belarus. *IZA Discussion Papers* (No. 3457). Institute for the Study of Labor (IZA), Bonn.
- Pekeliling Perkhidmatan Bilangan 9, Tahun 1991. (1991). *Public Service Department of Malaysia*. Putrajaya: Government of Malaysia.
- Pekeliling Perkhidmatan Bilangan 9, Tahun 2002. (2002). *Public Service Department of Malaysia*. Putrajaya: Government of Malaysia.
- Pekeliling Perkhidmatan Bilangan 2, Tahun 2007. (2007). *Public Service Department of Malaysia*. Putrajaya: Government of Malaysia.
- Pekeliling Perkhidmatan Bilangan 4, Tahun 2007. (2007). *Public Service Department of Malaysia*. Putrajaya: Government of Malaysia.
- Pekeliling Perkhidmatan Bilangan 15, Tahun 2007. (2007). *Public Service Department of Malaysia*. Putrajaya: Government of Malaysia.
- Pekeliling Perkhidmatan Bilangan 14, Tahun 2010. (2010). *Public Service Department of Malaysia*. Putrajaya: Government of Malaysia.
- Pekeliling Perkhidmatan Bilangan 38, Tahun 2013. (2013). *Public Service Department of Malaysia*. Putrajaya: Government of Malaysia.

- Priebe, J. (2010). *Child costs and the causal effect of fertility on female labor supply: An investigation for Indonesia 1993-2008*. CRC-PEG Discussion Paper (No. 45).
- Pue, G. H., & Sulaiman, N. (2013). "Choose One!": Challenges of Inter-Ethnic Marriages in Malaysia. *Asian Social Science*, 9(17), 269-278.
- Raybeck, D. (1980). The ideal and the real: The status of women in Kelantan Malay society. *Women & Politics*, 1(4), 7-21.
- Raybeck, D., & De Munck, V. (2010). Values and change over a generation: Kelantan, Malaysia. *Cross-Cultural Research*, 44(2), 97-115.
- Razimi, A., & Shahril, M. (2016). Concept of Islamic inheritance law (faraid) in Malaysia: Issues and challenges. *Research Journal of Applied Sciences*, 11(12), 1460-1464.
- Reddy, R. (1995). Marriage and divorce regulation and recognition in Malaysia. *Family Law Quarterly*, 29(3), 613-625.
- Reimers, C. W. (1985). Cultural differences in labor force participation among married women. *The American Economic Review*, 75(2), 251-255.
- Rogers, J. K., & Hakim, C. (2002). Work-Lifestyle Choices in the 21st Century: Preference Theory. *Contemporary Sociology*, 31(2), 154.
- Rudie, I. (1994). *Visible Women in East Coast Malay Society: On the Reproduction of Gender in Ceremonial, School, and Market*. Norway: Scandinavian University Press.
- Samman et. al. (2016). Women's work: Mother's, children and childcare crisis. London: Overseas Development Institute.
- Sarkar, S., Sahoo, S., & Klasen, S. (2019). Employment transitions of women in India: A panel analysis. *World Development*, 115, 291-309.
- Seguino, S. (2011). Help or hindrance? Religion's impact on gender inequality in attitudes and outcomes. *World Development*, 39(8), 1308-1321.
- Seguino, S. (2000). Accounting for gender in Asian economic growth. *Feminist Economics*, 6(3), 27-58.
- Shafer, E. F. (2011). Wives' relative wages, husbands' paid work hours, and wives' labor-force exit. *Journal of Marriage and Family*, 73(1), 250-263.
- Shen, K., Yan, P., & Zeng, Y. (2016). Coresidence with elderly parents and female labor supply in China. *Demographic Research*, 35, 645-670.

- Shittu, W. O., Abdullah, N., & Umar, H. M. B. (2019). Does Fertility Affect Female Labour Participation Differently in Malaysia and Singapore?. *The Indian Journal of Labour Economics*, 62(2), 201-217.
- Singh, R. (2019, November 13). HRDF to train 1,000 women a year through housewife training programme. *The Sun Daily*. Retrieved from <https://www.thesundaily.my/local/hrdf-to-train-1-000-women-a-year-through-housewife-training-programme-BB1605726>
- Siraj, M. (1994). Women and the law: Significant developments in Malaysia. *Law and Society Review*, 28(3), 561-572.
- Sorsa, P., Mares, J., Didier, M., Guimaraes, C., Rabate, M., Tang, G., & Tuske, A. (2015). Determinants of the low female labour force participation in India. *OECD Economics Department Working Papers* (No. 1207), OECD Publishing, Paris.
- Stark, J. (2004). Constructing an Islamic model in two Malaysian states: PAS rule in Kelantan and Terengganu. *Sojourn: Journal of Social Issues in Southeast Asia*, 19(1), 51-75.
- Subramaniam, G., Iyer, M. G., Mohamed, S., & Nor, N. (2010). Children and women's decision not to work-A study in Klang Valley. *Malaysian Journal of Consumer and Family Economics*, 13(1), 17-31.
- Subramaniam, A.G., Overton, B.J., & Maniam, C.B. (2015). Flexible working arrangements, work life balance and women in Malaysia. *International Journal of Social Science and Humanity*, 5(1), 34-38.
- Sugawara, S., & Nakamura, J. (2014). Can formal elderly care stimulate female labor supply? The Japanese experience. *Journal of the Japanese and International Economies*, 34, 98-115.
- Sudarshan, R. M. (2014). *Enabling women's work*. International Labour Organization.
- Tam, H. (2011). U-shaped female labor participation with economic development: Some panel data evidence. *Economics Letters*, 110(2), 140-142.
- Tan, P-L., Baah, R., Subramaniam, G., & Iberahim, H. (2015). Exploring women's work decision in Malaysia. *Social and Management Research Journal*, 12(2), 54-65.
- Teh, J. K., Ng, S. T., Tey, N. P., & Ismail, S. N. (2013). Ethnicity and support for parents in Malaysia. *Asian Women*, 29(4), 51-71.
- Tey, N. P. (2020). Bracing for Low Fertility in Malaysia. *ISEAS Yusof Ishak Institute*, 28.
- Tey, N. P., (2007). Trends in delayed and non-marriage in Peninsular Malaysia. *Asian Population Studies*, 3(3), 243-261.

- Tey, N. P., Ng, S. T., & Yew, S. Y. (2011). *Proximate Determinants of Fertility in Peninsular Malaysia*. *Asia Pacific Journal of Public Health*, 24(3), 495–505.
- Van Houtven, C. H., Coe, N. B., & Skira, M. M. (2013). The effect of informal care on work and wages. *Journal of Health Economics*, 32(1), 240-252.
- Verick, S. (2014). Female labor force participation in developing countries. *IZA World of Labor*.
- Winkler, A.E. (2016). Women's labor force participation. IZA World of Labor 2016.
- World Bank. (2016). World Development Indicators.
- World Bank. (2012). *Malaysia economic monitor: Unlocking women's potential*.
- World Economic Forum, WEF. (2018). *The Global Gender Gap Report 2018*. Geneva.
- Wye, C.K., & Ismail, R. (2012). Labour market structure in Malaysia: Pre-and post-market gender comparison. *International Journal of Academic Research in Business and Social Sciences*, 2(10), 259-284.
- Xiao, S., & Asadullah, M. N. (2020). Social Norms and Gender Differences in Labor Force Participation in China. *Feminist Economics*, 1-35.
- Yacob, N.R.N., & Noor, S.M. (1993). Influences on women's lifestyle pattern on family roles. *Malaysian Management Review*, 28(4), 8-15.
- Yahaya, S. R. (2009). The Development Process and Women's Labour Force Participation: A Macro-Level Analysis of Patterns and Trends from the 1980s. In J. Ariffin (Ed.), *Readings on Women and Development in Malaysia: A Sequel*. Malaysia: MPH Group Publishing Sdn. Bhd.
- Zin, R.H.M. (2014). Malaysian development experience: Lessons for developing countries. *Institutions and Economies*, 6(1), 17-56.