

**AN ANALYSIS OF WAGE DIFFERENCE BETWEEN
GENDER IN MALAYSIA USING WEIGHTED
SAMPLE**



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UMS
UNIVERSITI MALAYSIA SABAH

**FACULTY OF SCIENCE AND NATURAL
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UNIVERSITI MALAYSIA SABAH
2022**

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BETWEEN GENDER IN MALAYSIA USING
WEIGHTED SAMPLE**

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THE REQUIREMENTS FOR THE DEGREE OF
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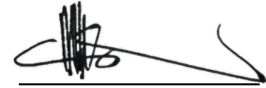
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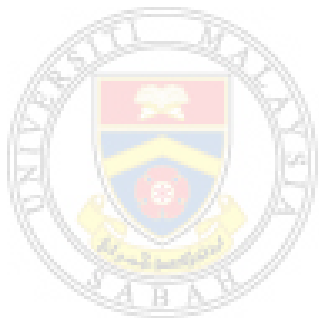
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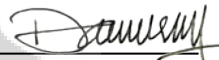
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ABSTRACT

The rapid economic development has changed the structure of the labour market especially in terms of composition of employment. Therefore, the development of a country that has been involved in economic change has brought a lot of transformations to the pattern of women's involvement in economic activity. Gender wage difference in labour market prevails all over the world where men tend to earn a wage rate higher than women. This study aims to analyse gender wage differential based on data of The Salaries & Wages Survey 2018 from Department of Statistics Malaysia (DOSM). The objective of this study is to analyse gender wage differences and identify factors of wage determinations between male and female workers in the Malaysian labour market. Three determinants factors are considered, namely demographic factors, human capital aspects and job characteristics. The analysis of the study takes into account the weighted samples from stratified sampling to provide an overview of recipients' income in Malaysia. The results of non-parametric mean comparison analysis showed that there were significant differences in the mean distribution for each category of variables studied. The results using wage model estimation revealed that demographic factors, human capital aspects and job characteristics play an important role in determining wage differences based on gender. In Malaysia, the salaries and wages of male workers are more dominant in determining the salaries and wages of overall recipients' income.

ABSTRAK

ANALISIS PERBEZAAN GAJI DI ANTARA JANTINA DI MALAYSIA MENGUNAKAN SAMPEL BERPEMBERAT

Kepesatan pembangunan negara dan perubahan landskap ekonomi ini telah mengubah struktur pasaran buruh khususnya dari segi komposisi pekerjaan termasuklah membawa perubahan terhadap penglibatan wanita di dalam bidang ekonomi. Perbezaan upah berdasarkan jantina dalam pasaran buruh wujud di seluruh dunia, lelaki cenderung memperoleh kadar upah yang lebih tinggi daripada wanita. Kajian ini menganalisis perbezaan upah berdasarkan jantina dengan menggunakan data Survei Gaji dan Upah, 2018 dari Jabatan Perangkaan Malaysia (DOSM). Objektif kajian ini adalah untuk menganalisis perbezaan upah berdasarkan jantina dan seterusnya mengenal pasti faktor-faktor penentu upah di antara pekerja lelaki dan wanita dalam pasaran buruh di Malaysia. Tiga faktor penentu dipertimbangkan iaitu faktor demografi, aspek modal insan dan ciri-ciri pekerjaan. Analisis kajian adalah dengan mengambil kira sampel berpemberat daripada pensampelan berstratum untuk memberi gambaran terhadap penerima pendapatan di Malaysia. Hasil analisis perbandingan min tidak berparametrik menunjukkan terdapat perbezaan taburan min yang signifikan bagi setiap kategori pemboleh ubah yang dikaji. Hasil kajian yang menggunakan penganggaran model upah juga menunjukkan bahawa faktor demografi, aspek modal insan dan ciri-ciri pekerjaan memainkan peranan penting dalam menentukan perbezaan upah berdasarkan jantina. Taburan gaji pekerja lelaki adalah lebih dominan dalam menentukan gaji penerima pendapatan di Malaysia.

LIST OF CONTENT

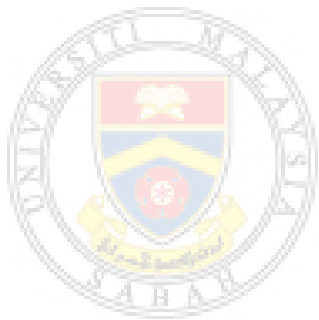
	Page
TITLE	i
DECLARATION	ii
CERTIFICATION	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	v
<i>ABSTRAK</i>	vi
LIST OF CONTENT	vii
LIST OF TABLES	viii
LIST OF FIGURE	ix
LIST OF ABBREVIATIONS	xii
CHAPTER 1: INTRODUCTION	
1.1 Introduction	1
1.2 Labour Force Participation and Gender Wage Difference in Malaysia	3
1.3 Problem Statement	5
1.4 Research Objectives	8
1.5 Scope of Study	9
1.6 Significance of Study	9
1.7 Organization of Study	11
CHAPTER 2: LITERATURE REVIEW	
2.1 Scenario of Wage Difference between Gender	12
2.2 Factors of Wage Difference between Gender	16
2.3 Methodology to Determine Gender Wage Difference	20
CHAPTER 3: METHODOLOGY	
3.1 Introduction	34
3.1.1 Data Sources	34
3.1.2 Scope and Coverage of Salaries & Wages Survey	35
3.2 Complex Sample	37
3.2.1 Weighting Concept	38
3.2.2 Sample Size	41
3.3 Variables	42

3.4	Statistical Analysis	45
3.4.1	Inferential Statistics	45
3.5	Linear Regression Model	51
3.5.1	Multiple Linear Regression	52
3.5.2	Multiple Linear Regression Assumption	53
3.5.3	Global Hypothesis Testing	54
3.5.4	Testing the significance of an independent variable	54
3.5.5	Model Specification	55
3.5.5	Model Comparison	58
3.5.6	Goodness of Fit	59
3.5.7	Quantile Regression	61
CHAPTER 4: RESULT		
4.1	Introduction	63
4.2	Profile of Respondents	63
4.3	Weight Sample	67
4.4	Normality Test Result	69
4.5	An Analysis of Salaries and Wages	71
4.5.1	Wage Distribution	71
4.5.2	Wage Mean Differences	81
4.6	Regression Result	83
4.6.1	Multiple Linear Regression	84
4.6.2	Quantile Regression	93
CHAPTER 5: DISCUSSION AND CONCLUSION		
5.1	Overview	98
5.2	Wage Distribution	98
5.3	Wage Determinant	100
5.3.1	Demographic Factors	100
5.3.2	Human Capital Aspect	102
5.3.3	Job Characteristics	103
5.4	Limitation of study and recommendation	105
5.5	Conclusion	107
REFERENCES		109

LIST OF TABLES

	Page
Table 1.1: Number of Salaries & Wages Recipients by Gender, Strata and Sector, Malaysian, 2013-2018	4
Table 1.2: Median monthly salaries & wages of employees by Gender, Strata and Sector, Malaysia, 2013–2018	4
Table 2.1: Summary of Previous Studies Related to Gender Wage Differences	25
Table 3.1: Numbers of Respondent by State and Gender	41
Table 3.2: Variable Detail	42
Table 3.3: Hypothesis of Mann-Whitney Test	49
Table 3.4: Hypothesis of Kruskal-Wallis Test	51
Table 3.5: Variables Details	56
Table 3.6: Wald Test Table	58
Table 4.1: Descriptive Analysis of Respondent Based on Gender	64
Table 4.2: Descriptive Analysis of Population Based on Gender	66
Table 4.3: Respondents of Salaries and Wages Survey, 2018	67
Table 4.4: Numbers of Weighted Sample by State	68
Table 4.5: The Result of Normality Test	69
Table 4.6: Mean Difference	79
Table 4.7: Mean Difference Based on Gender	80
Table 4.8: The Result of Mann-Whitney Test	82
Table 4.9: The Result of Kruskal-Wallis Test	83
Table 4.10: Result of the Regression Estimates for All Models	85
Table 4.11: Coefficient Test Result for All Models	86
Table 4.12: VIF Value for Each Variables	88

Table 4.13:	Result of Normality Test for Pooled Model Residuals	89
Table 4.14:	Result of the Quantile Regression Estimates for Male Wage Model	94
Table 4.15:	Result of the Quantile Regression Estimates for Female Wage Model	95



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LIST OF FIGURES

	Page
Figure 3.1: Illustration complex sampling design	37
Figure 4.1: Distribution Chart of Monthly Salaries and Wages of Workers by Gender	71
Figure 4.2: Distribution Chart of Monthly Salaries and Wages of Workers by State and Gender	72
Figure 4.3: Distribution Chart of Monthly Salaries and Wages of Workers by Strata and Gender	72
Figure 4.4: Distribution Chart of Monthly Salaries and Wages of Workers by Ethnic Group and Gender	73
Figure 4.5: Distribution Chart of Monthly Salaries and Wages of Workers by Marital Status and Gender	74
Figure 4.6: Distribution Chart of Monthly Salaries and Wages of Workers by Higher Certificate Obtained and Gender	75
Figure 4.7: Distribution Chart of Monthly Salaries and Wages of Workers by Field of Study and Gender	76
Figure 4.8: Distribution Chart of Monthly Salaries and Wages of Workers by Occupation Category and Gender	76
Figure 4.9: Mean and Median Monthly Salaries and Wages of Workers by Sector of Industry and Gender	77
Figure 4.10: Scatter Plot of Residuals for Pooled Model, Male Wage Model and Female Wage Model	90
Figure 4.11: Histogram of Distribution of Error for Pooled Model, Male Wage Model and Female Wage Model	91
Figure 4.12: Normal P-P Plot of Residuals for Pooled Model, Male Wage Model and Female Wage Model	92

LIST OF ABBREVIATIONS

ANOVA	-	Analysis of Variance
DOSM	-	Department of Statistics Malaysia
EB	-	Enumeration Block
EPU	-	Economic Planning Unit
GDP	-	Gross Domestic Product
ICT	-	Information Communication Technology
ILO	-	International Labour Organization
ISCED	-	International Standard Classification of Education
ISIC	-	International Standard Industrial Classification of All Economics Activities
JPAM	-	Malaysia Civil Defence Force (Jabatan Pertahanan Awam Malaysia)
LFS	-	Labour Force Survey
LQs	-	Living Quarter(s)
MASCO	-	Malaysia Standard Classification of Occupation
MLR	-	Multiple Linear Regression
MSIC	-	Malaysia Standard Industrial Classification
NEP	-	New Economic Policy
OLS	-	Ordinary Least Square
PSH	-	Daily Part-time Worker (Pekerja Sambilan Harian)
UN	-	United Nation
VIF	-	Variance Inflation Factors
WEF	-	World Economic Forum

CHAPTER 1

INTRODUCTION

1.1 Introduction

In today's fast-paced technological development, the job market is more dynamic and competitive. In fact, the problem of the gender wage gap still exists either in developing or developed countries (Nik Azma Wail et al., 2011). There has been explicit evidence of gender differences in labour market around the world where gender inequalities can be found in various dimension, such as participation in labour force, employment by economic sector, distribution of occupational and participation in decision making of organisation (Wye & Rahmah Ismail, 2012). The presence of a significant wage difference between male workers and female workers is a well-recorded stylized fact of modern labour markets.

A gender wage difference is an important issue in the labour market that has gotten a considerable attention and is being discussed at the highest-level forum including in the United Nation. According to empirical studies from 61 countries, the gender pay gap is still substantial, ranging from 23% in developed countries to 27% in developing economies (World Bank, 2001). The execution of equal pay legislation and the promotion of equal opportunity have been considered in Western industrial countries for several few years (Castagnetti & Giorgetti, 2018). Fast shift in the labour market have led to changes in relative wage rates for many workers that have indirectly impacted the balance of labour demand and supply (Nik Azma Wail et al., 2011).

Wage differences occur when a person receives payments differently than other individuals for the same service offered. Becker (1967) through human capital theory states that employer discrimination exists when different wages are paid for individuals who have the same level of education and equal amount of productivity. In the context of gender, discrimination occurs when workers of opposite genders are paid in dissimilar wages, even though given the amount of productivity is the same and this situation often favours male workers are paid higher (Nik Azma Wail et al., 2011).

The gender wage difference refers to the gap between the wages earned by women and men. It is one of the aspects of gender disparities in the labour market and it often influences women's lives in various ways especially on impact on wealth and pension disparities, poverty risks, and household purchasing power (Piazzalunga & Di Tommaso, 2018). In fact, according to neoclassical theory, individual productivity determines employees' salaries, and women are considered to be less productive than males since they are more focused on certain jobs and less on human capital (Rahmah Ismail et al., 2013). Women are also said to be more involved in less demanding occupations and are overworked in some jobs (Rahmah Ismail & Idris Jajri, 2012).

There are various approaches for clarifying why individuals are paid various wages. Certain theories emphasize personal characteristics as the basis for wage determinant. Wages of an individual can likewise vary because of worker's contrast. Every worker enters the labour market with different qualities. Many studies have found that male workers are paying higher wages than female workers, even though they have the same set of skills and level of qualification. This is because most employers consider women as being less productive, have low mobility and may cause many problems to a working institution when taking frequent vacations such as maternity leave, let alone possessing less ability to be a leader (Darity & Mason, 1998). It is an evident and documented fact that men receive higher wages compared to women, even after checking both for observable characteristics related to their productivity and the overall wage structure (Blau & Kahn, 2007).

1.2 Labour Force Participation and Gender Wage Difference in Malaysia

Pragmatic macroeconomic policies introduced by the government during the Malaysia Second Outline Perspective Plan (1970-1990) have brought Malaysia to move on a platform of sustainable economic growth. New Economic Policy (NEP) outlines two strategies for poverty eradication and restructuring of the society which have been implemented and led Malaysia to grow and promotes economic stability. Malaysia Gross Domestic Product (GDP) grew by 6.7 percent from the effects of changes in economic structure driven by the NEP. In line with economic development, the labour market structure in Malaysia has also shifted especially in terms of the composition of employment.

Changing the focus of development from an agriculture-based country to an industrialized country has encouraged further economic growth to provide broad employment opportunities, especially in industrial fields. This situation has led to a change in the wage ratio between skills in favour of more skilled labour (Nik Azma Wail et al., 2011). Therefore, the development of a country that has been involved in economic change has brought a lot of changes to the pattern of women's involvement in economic activity (Nor Aini Idris et al., 1996). This reduces the gap between men and women's participation in labour force and the unemployment gap as well (Wye & Rahmah Ismail, 2012).

Based on previous studies, this phenomenon is triggered by several main variables including changes in economic structure and technological developments (Nik Azma Wail et al., 2011). Malaysia's sustained economic growth over the past three decades has been matched by a narrowing of gender differences in education enrolment and literacy and increase women labour force participation. Implementation of the NEP has brought female labour growth more rapidly than a men with 49.3 percent as compared to 38.3 percent (Schafgans, 2000).

Table 1.1: Number of Salaries & Wages Recipients by Gender, Strata and Sector, Malaysian, 2013-2018

Category	Year ('000)					
	2013	2014	2015	2016	2017	2018
Total(RM)	7,903.1	8,392.4	8,348.6	8,424.1	8,664.7	8,761.2
Strata						
Urban	6,202.4	6,937.1	6,788.0	6,964.7	7,288.3	7,382.2
Rural	1,700.7	1,455.3	1,560.6	1,459.4	1,376.4	1,379.1
Gender						
Male	4,784.2	5,070.7	5,049.4	5,034.4	5,143.8	5,209.8
Female	3,118.9	3,321.8	3,299.2	3,389.7	3,520.9	3,551.4
Sector						
Agriculture	232.6	237.6	246.2	212.5	197.7	216.8
Mining & Quarrying	68.2	70.5	93.5	99.8	82.6	82.0
Manufacturing	1497.8	1617.9	1514	1557.4	1654.6	1590.1
Construction	640.4	692.1	676	679.8	682.4	676.3
Services	5464	5774.2	5818.9	5874.5	6059.8	6196.1

Source: Department of Statistics Malaysia, 2019.

Table 1.2: Median monthly salaries & wages of employees by Gender, Strata and Sector, Malaysia, 2013–2018

Category	Year ('000)					
	2013	2014	2015	2016	2017	2018
Total (RM)	1,700	1,800	1,942	2,000	2,160	2,308
Strata						
Urban	1,850	2,000	2,000	2,115	2,260	2,415
Rural	1,150	1,200	1,300	1,350	1,400	1,481
Gender						
Male	1,800	1,888	2,000	2,000	2,170	2,342
Female	1,600	1,700	1,855	2,000	2,145	2,227
Sector						
Agriculture	900	1,044	1,130	1,200	1,350	1,392
Mining & Quarrying	2,800	3,500	3,600	3,690	3,700	3,703
Manufacturing	1,500	1,700	1,610	1,800	1,900	1,959
Construction	1,500	1,500	1,560	1,630	1,900	2,164
Services	1,814	2,000	2,000	2,165	2,260	2,431

Source: Department of Statistics Malaysia, 2019.

The past 10th Malaysia Plan has targeted the involvement of women labour force to 55 percent by 2015. Malaysia labour force increased by 2.0 percent in 2018 to nearly 15.3 million persons as compared to 2017 and the unemployment rate improved to 3.3 percent when compared to 3.4 percent in 2017 (Department of Statistics Malaysia, 2019). The number of recipients of monthly salaries and wages was increased by 1.0 percent to 8.8 million in a mere one year from 2017 to 2018.

In Malaysia, wage difference between genders has been examined in all major economic sectors, including manufacturing, agriculture and services. It is also commonly shown that male workers are in an advantageous role to receive higher wages compared to female workers. Dimension and perspective of gender wage differential are different across an economic sector where the gender wage differential is seen as serious in high top management in the manufacturing sector, while for the agricultural sector it is a big issue among general workers who are of low skilled and less educated (Wye & Rahmah Ismail, 2012).

1.3 Problem Statement

Since the United Nations hosted the First Women's Conference in Mexico in 1975, women's development issues began to be discussed in various forums globally. In the past, women were not able to fully participate in the development process and they were also prevented from enjoying development benefits (Shamsiah Abd. Kadir, 2018). The rapid changes in the use of the latest technology and the diversity of skills required by employers have triggered a more dynamic and competitive workplace (Nik Azma Wail et al., 2011). The current information and communication technology, digital economy and the industrial revolution 4.0 brings a new dimension in the labour market competition that demands more skilled workers in terms of multi-tasking, technical and vocational education, and training based.

Rapid changes in the labour market as due to technological improvements cause changes in relative wages, which have an indirect impact on the labour supply and demand balance. Essentially, the wage disparity between these skills can be explained by two major factors. The first is shift in relative labour supply as a result

of education or skill development. The second issue is that, as a result of technological advances, the demand for more educated and skilled workers is outnumbers the demand for less educated and skilled workers (Nik Azma Wail et al., 2011). This situation has created great competition between labour, especially that of between genders. The labour force has no choice but to accept the bounded offer given by the employer even though sometimes it may not be unsuitable for them due to different field of study and even their education level (Noorazeela Zainol Abidin et al., 2016).

Various studies have been conducted on wage differences between genders and found that there is significant gender gap in most industrialized countries. In the United States, the employment of women to population ratio aged 15 and above was 20 percent in the late 1800s and had risen to 60 percent at the turn of the century. However, in the increase of at least five decades, the employment rate of women in other European countries remained below 60 percent by the end of the 20th century, particularly in Mediterranean countries, where current female employment levels are similar to those seen in the United States or the United Kingdom in the 1970s (Olivetti, C., & Petrongolo, B., 2016).

Gender difference in occupation exists all over the world where men tend to earn a higher income than women. Since the 1970s, the facts that women typically earn less than men have spurred a lot of debate in developed countries. A series of research seeking to explain the magnitude and causes of the difference in wages between male and female workers have contributed to concerns about gender differences in wages (Dex et al., 2007)

The United Nation has launched a campaign to address the gender gap at the Women's Economic Empowerment Summit 2017 (United Nation, 2017). It affirms that on a global average, women only earn USD 0.77 per dollar earned by men (United Nation, 2017). Indeed, the International Labour Organization (ILO) warns that it will take 70 years to close the gender gap if no stronger measures are implemented (ILO, 2016). In fact, as women are paid on average 23 percent less than men, the United Nations has launched a high-profile network to call for equal work of equal value (United Nation, 2017).

The development of a country that has been involved in economic change has brought a lot of changes to the pattern of women's involvement in economic activity (Nor Aini Idris et al., 1996). Based on past studies conducted, this phenomenon is triggered by many key factors including changes in economic structure and technological developments (Nik Azma Wail et al., 2011). The interest of labour economist has long been drawn to gender wage differentials. However, some studies have recently centred on the gender gap in works that have higher wages or with higher educated as a potential reason of the continued existence of the gender wage differential (Hara, 2018).

The increase in female labour force participation reflects changes in women's social dimensions such as lifestyle, employer's perspective, education, health and so on (Norsiah, 2010). It is undeniable even that women's labour in Malaysia contributes significantly to the country's economic growth (Asri Selamat, 2009). However, the discrimination of employers in the tendency of paying higher wages to men than women can have a negative implication on the labour market. This discrimination practice can lead to dissatisfaction among women workers and consequently, they will not provide their skills optimally (Noorazeela Zainol Abidin et al., 2016).

According to the World Economic Forum's (WEF) 2017 Global Gender Gap Report, Malaysia is ranked 104th out of 144 nations, with an index score of 0.670. Malaysia was ranked 14th out of 18 nations in East Asia and the Pacific. The Malaysia Gender Gap Index (MGGI) is 0.697, or 69.7 percent based on the base population in 2017. The value of MGGI 2017 is contributed by the achievement of four other key indicators, namely Economic participation and opportunity with a score of 0.654, educational attainment with a score of 0.991, health and survival (0.977) and political empowerment (0.058). This illustrates the existence of gender disparity, with a margin of 0.303, a decrease from 0.692 in 2016. Malaysia climbed to 70th place out of 144 nations in the 2017 Global Gender Gap Report, according to MGGI 2017. Malaysia was rated 8th out of 18 nations in East Asia and the Pacific at the same time (Department of Statistics Malaysia, 2018).

Women are also more susceptible to economic fragility as the majority of women work in unskilled and semi-skilled jobs (Anas Alam Faizli, 2017). Based on

information from the 2014 Salary and Wage study, wage gaps between men and women are still widespread in Malaysia where women earn lower wages than men in all sectors of employment, especially in unskilled jobs with wages gaps of 10 to 40 percent less than men.

Therefore, it is imperative to measure the level of the gender wage difference between gender and to determine the factors that triggered the matter as a basis to the government to formulate policies including implementation of Wage Equality Law, which is embedded in the Labour Act. The fundamental justification for the execution of the current survey and the subsequent discussion of trends in this area derives from the improvement that can be found in the current literature on the accurate estimate of main wage model parameters (Kunze, 2000).

Analysis of wage difference between gender has been widely conducted from both foreign and domestic scholars. Several models of study have also been introduced to identify the determining factors of wages to employees from various aspects. The most frequently adopted approach to assessing the level of gender wage difference is focused on the theory of wage determination based on human capital (Gardeazabal & Ugidos, 2005). The observed mean wage differential is usually separated into two parts in order to calculate the gender wage difference. These parts are: differences in personal characteristics, and differences in the return to these characteristics (Gardeazabal & Ugidos, 2005; Chang, 2012).

1.4 Research Objectives

Based on the scenario and the issues that were raised, the objectives of this study are as follows:

- i. To analyse the wage difference between genders based on demographic factors, human capital aspects and job characteristics.
- ii. To identify factors of wage determinant between male and female workers in the Malaysian labour market.

1.5 Scope of Study

This study utilized data from the Salaries and Wages Survey in 2018 conducted by the Department of Statistics Malaysia. Salaries and Wages Survey is one of the modules in the Labour Force Survey (LFS), which is carried out from January to December in respective years to provide statistics of salaries and wages at the national and state levels as well as urban and rural areas. The Salaries & Wages Survey population is identical to the LFS, which includes all administrative districts within all states in Malaysia, similarly including urban and rural areas.

This survey uses a personal interview method conducted by trained interviewers on selected living quarters using a questionnaire that is designed to gather the information related to demographic information on all members of the household and salaries and wages data of household members aged 15 and over. The reference period for the collection of Salary & Wage Survey information is the month before the interview session or data collection is conducted.

In achieving the objective of this study, three main groups of variables are considered, namely demographic factor, human capital aspect and job characteristics. Multiple regression analysis is performed to identify the determining factors of the wages in Malaysia labour market.

1.6 Significance of Study

Gender inequality not only has an impact on the well-being of discriminated individuals, but it can lead to negative impact to the economy as a whole in more extreme circumstances. This conviction is the foundation of policy actions aimed at fostering of equal pay laws and promoting gender equality in the context of economic, political, educational and health (Wolszczak-Derlacz, 2013; Castagnetti & Giorgetti, 2018).

The relationship between the economic growth and gender wage differences is complex issue as a result of direct and indirect factors. In order to design

appropriate policies to eliminate this gap, it is also very important to determine the different sources of the gender wage difference. This issues clearly demands concern and seriousness from policy maker and stakeholders in addressing gender wage differences and wage discrimination against women. In fact, over the past three decades, a great deal of effort has been made worldwide to eliminate gender differences that mostly operate to the detriment of women (Wye & Rahmah Ismail, 2012).

Although many studies on gender wage differences have been conducted in Malaysia, it is more focused on the role of education and training and partly concentrates on certain economic sector only (Rahmah Ismail & Idris Jajri, 2012). For example, Rahmah Ismail & Ragayah Mat Zin (2003), Rahmah Ismail & Zulridah Mohd. Noor (2005) and Rahmah Ismail et al. (2015) focus on the study of gender wage differences in the manufacturing sector. Meanwhile, Rahmah Ismail (2011) and Siang & Zulridah Mohd. Noor (2015) conducted a study on gender wage differences in services sector. In contrast, Rahmah Ismail et al. (2013) conduct this study on gender wage differences with a focus on the information and communication technology (ICT) sector.

Therefore, enhancement of this study will examine the issue of wage differences between gender in a more macro and comprehension aspect including across all sectors of the economy through labour force data in Malaysia. In fact, as already stated, that the data from the Salaries and Wages Survey covers all districts and states in Malaysia which represent urban and rural strata. Even the use of the weighting concept of sampling procedure in this study has given a more inclusive perspective in explaining the wage differential towards income recipient in Malaysia.

Reducing the gender wage gap will improve women's labour engagement and focus their earnings on the schooling and well-being of children and investing in future generations can create a more prosperous and effective future workforce which will benefit long-term growth (Wolszczak-Derlacz, 2013). Based on ample analytical research to explain that human capital has a substantial effect on wages, more focus needs to be paid by the government and stakeholders in formulating labour market law and policies (Rahmah Ismail et al., 2013).