International Journal of Business and Society, Vol. 23 No. 2, 2022, 1025-1041

GENDER DISCRIMINATION IN THE ABSENCE OF DISCRIMINATION LAWS: EVIDENCE FROM MALAYSIA

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ABSTRACT

This study aims to estimate gender discrimination in the labour market by using fictitious job applicants, carrying gender identifiable names at the top of the curriculum vitae. Fictitious job applications were sent to genuine vacancies in Malaysia. An audit experiment was conducted on new graduate employment in a labour market with no legislation against discrimination. We recorded if there was a significant difference in call-back interview rates. We estimated the extra amount of applications females would need to make to obtain the same number of interview calls as males. Results show a female bias in call-backs was evident only in broader markets that traditionally offer female employment.

Keywords: Gender, discrimination, job, field experiments, Malaysia.

Received: 23 July 2020
Accepted: 29 April 2022
https://doi.org/10.33736/ijbs.4856.2022

1. INTRODUCTION

Hiring or contracting is perceived as a venture under uncertainty. Screening theory (Stiglitz, 1975) and signalling theory (Spence, 1973) highlight that employer do not have sufficient information on candidates' distinctive productivity. Employers assess job candidates based on an array of personal characteristics (e.g., gender, ethnicity, job experience, educational credentials, etc.). Resume (curriculum vitae) audit studies have been used to inspect whether employers discriminate in employment and how do they react to the characteristics of job candidates (Kroft et al. 2013; Tholen, 2020; Nunley et al. 2017). Call of an interview does not essentially ensue through an assessment of absolute signs of skills or knowledge, but discrimination may take place by filtering some personal characteristics.

Gender inequality in Malaysia can be observed from a few indicators. The Malaysian Gender Gap Index (MGGI) captures gender disparities, and one of those thematic dimensions in there is educational attainment (Ministry of Women, Family and Community Development, 2007). The index is measured on a scale of 0 to 1. MGGI scored from 0.34 in 1980 to 0.25 in 2009 reflecting narrower gender inequality (Ministry of Women, Family and Community Development, 2019).

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Nonetheless, the improvement has not been sustainable. The average MGGI scores in 2018, 2019, and 2020 were 0.711, 0.709, and 0.714 respectively (Department of Statistics Malaysia, 2019, 2021), which suggests the equality gap between males and females was more than 70%, weighted by population. This implies gender inequality gap becomes more prominent. Among the four sub-indexes measuring MGGI, economic participation and opportunity (Score: 0.727) was ranked the second lowest after political empowerment (0.106). Five indicators under the economic participation and opportunity sub-index are: i) women over men's labour force participation; ii) wage equality between female and male for similar occupation (official data classifies occupations according to the Malaysian Standard Classification of Occupations (MASCO); iii) female over male estimated earned income; iv) female over male as senior officials, legislators, and managers; and v) female over male as professional and technical workers.

Female tertiary educational attainment has increased substantially (Poon, 2015). Tertiary enrolment in 2019 for males and females was 37.7% and 48.7%, respectively. The statistics on enrolment showed gender disparity in higher education, dominated by female. Women have exceeded men in educational attainment. Similarly, the Gender parity index for gross enrolment ratio in tertiary education shows a higher enrolment for females (e.g., 1.2 in 2019). This, again, revealed the trend of more females entering higher education than males.

Despite high enrolment numbers, the realities of gender inequality were observed, with female workforce participation rates was significantly lower than that of males. Labour force participation rate (LFPR) has stagnated for years (see Appendix for LFPR in Malaysia: male (above 80%) and female (around 55%)). LFPR for females has been lower than males. LFPR for those aged 15-24 also showed males are still dominating the labour market (see Table 1). LFPR for women aged 15-24 remains low at 35.1% in 2019. Moreover, the employment to population ratio, aged 15-24 for females, was approximately 30% compared to the males of 44.5% in 2019. Only 20% of the employment in the industry are females.

Table 1: Malaysia: Employment, Labour Force Participation Rate, and Tertiary Enrolment, 2011-2019

Series Name	2011	2012	2013	2014	2015	2016	2017	2018	2019
Employment in industry, female (% of female employment)	20.7	19.8	19.9	19.6	19.3	20.0	20.7	20.3	20.0
Employment to population ratio, ages 15-24, female (%)	29.6	29.3	29.9	30.6	29.6	30.5	30.5	30.7	30.4
Employment to population ratio, ages 15-24, male (%)	44.8	45.2	45.8	45.2	43.7	43.4	43.3	44.6	44.5
Employment to population ratio, 15+, female (%)	43.7	45.1	47.5	48.5	48.8	48.6	49.0	49.5	49.5
Employment to population ratio, 15+, male (%)	74.7	75.4	75.7	75.6	75.4	74.8	74.7	75.1	75.0
Labor force participation rate for ages 15-24, female (%)	33.1	32.8	33.9	34.5	33.7	34.6	34.9	35.4	35.1
Ratio of female to male labor force participation rate (%)	58.7	59.9	63.1	64.6	65.0	65.5	66.1	66.3	66.3
School enrollment, tertiary (gross), gender parity index (GPI)	1.2	1.3	1.3	1.3	1.2	1.1	1.1	1.2	1.2
School enrollment, tertiary, male (% gross)	31.2	32.2	33.2	33.9	39.8	43.2	40.5	40.7	37.7

School enrollment, tertiary, female (% gross)	41.4	43.3	45.2	45.4	51.7	50.6	47.1	49.9	48.7

Source: World Development Indicators, World Bank Group.

Given the differences in tertiary educational attainment, women should, on average, be hired more than men. Nevertheless, women's unemployment rate was highest among those aged 15-24 (The Star, 2021). This significant discrepancy is evident in which females with tertiary education constituted larger total female unemployment than males. This suggests an under-utilization of the female human capital cohort. Malaysia has no discrimination laws to prevent employers from expressing gender preferences and recruiting certain types of employees. At the same time, Malaysia faces critical shortages in some areas of the skilled labour force.

The Malaysian government seeks to raise the skills of Malaysians to foster employability and leveraging on industry to upskill the workforce to expedite industries to move up the value chain. This is especially important for female workers, who are gaining increasing skills in the education system but are under-utilized in the workforce. Investments should be made to upgrade skills across the spectrum of employment. This will apply to females due to discrimination; they are unable to access the opportunities in the growth sector of the economy. Gender diversity spearheads dynamic deliberations (Rachagan et al., 2015; Poon et al., 2013). Recognizing the significant role of women, Malaysia has committed to aligning strategies and initiatives to support the 2030 United Nation's Sustainable Development Goals (SDGs) in achieving gender equality and promoting women's rights. The Federal government's continuous efforts towards achieving gender equality are mapped with the Twelfth Malaysia Plan 2021-2025, i.e., reduce socio-economic inequality, and ensure equal rights to work, and at work without gender-based discrimination in Malaysia. Malaysia has its national priorities for gender equality and women empowerment, which is also in line with women's progress for 2020-2025 through Beijing Declaration and Platform for Action.

The nation faces an acute shortage of accountants (Lim, 2017) due to high demand for accountants and more attractive remuneration in the neighbouring countries. Accountancy is one of the key areas that the nation is under-served (Lee, 2018). As of 2019, the Malaysian Institute of Accountants (MIA) has registered only 36,000 qualified accountants in this country of 32.7 million people. Yet, at the same time, the number of females enrolled in accounting courses far exceeds their male counterparts. According to the Ministry of Higher Education Malaysia (various issues), the proportions of females taking up accountancy in public higher education institutions have been increasing steadily until 2013, as shown in Table 2.

By 2013, female enrolment at public universities for accountancy reached approximately 25,000 compared to the male enrolment of 9,200, comprising 73% of the total number. Nevertheless, female enrolment at public universities for accounting has dropped significantly to 53.5% in 2018. In Social Sciences, the proportion of females has remained at about two-thirds of enrolment over the last six years. The female LFPR in Malaysia has risen over the years, averaging 51% from 2008 until 2018. The female LFPR for Malaysia in 2018 was 55.2% (see Table 2), which was relatively low compared to Singapore, Thailand, and the Philippines (Department of Statistics Malaysia, various issues). Better utilization of the female labour force thus is necessary to achieve these goals. Female participation in these areas is particularly important in this respect; productivity growth from increasing female labour utilization can bring higher productivity growth for these higher value-added activities.

Table 2: Labour Force, Labour Force Participation Rate, Sex Ratio, Accounting and Social Science Enrollments in Public Sector Universities in Malaysia, 2008-2018

Year	Males				Females			
	Labour force ('000)	**LFPR (%)**	**Social Science**	**Accounting**	**Labour force ('000)**	**LFPR (%)**	**Social Science**	**Accounting**
2008	7,074.6	79.0	61,033	2,796	3,953.5	45.7	126,350	9,048
2009	7,218.1	78.9	49,777	2,819	4,097.2	46.4	101,522	9,098
2010	7,955.5	79.3	54,976	n.a	4,348.4	46.8	112,850	n.a
2011	8,172.4	79.7	59,397	7,211	4,568.3	48.0	120,675	19,397
2012	8,419.0	80.5	59,930	7,051	4,802.6	49.5	124,289	19,256
2013	8,739.4	81.0	64,070	9,200	5,241.10	52.6	130,775	24,996
2014	8,823.2	80.6	68,041	8,015	5,440.40	53.7	143,373	13,186
2015	8,952.8	80.6	55,792	7,258	5,565.10	54.1	118,749	11,746
2016	9,012.1	80.2	53,956	7,144	5,655.70	54.3	116,962	10,783
2017	9,213.50	80.1	54,927	7,915	5,766.50	54.7	119,406	10,893
2018	9,330.20	80.4	58,764	8,372	5,950.10	55.2	123,823	11,608

Source: Labour force, labour force participation rate, and sex ratio data are from CEIC (2021). Social science and accounting enrolments data are from Statistics of Higher Education of Malaysia, Ministry of Higher Education Malaysia.
Note: LFPR denotes labour force participation rate.

Discrimination in the Malaysian labour market is not well understood, and previous research suggests that it is important but cannot identify its causes. This study aims to establish if there are grounds for suggesting that discrimination exists between genders in calling for an interview. The research aims to distinguish between these two competing explanations of discriminatory behaviour by providing varying amounts of information in the curriculum vitae of the job applicants (Altonji & Pierret, 2001). This paper used an audit study to investigate the extent of gender bias in call-back rates for job advertisements for new graduates. We investigated discrimination in jobs related to two areas of tertiary study: in a traditional female sector of employment - Clerical, Administration and Human Resources, and the shortage sector of accounting.

It is important to narrow inequality to boost women's empowerment and heighten economic growth. Creating gender balance by promoting equitable opportunities for women to join the workforce from an entry level is crucial. Discrimination against a particular group can originate from a variety of sources. It is not easy to quantify the extent and cause of discrimination in a marketplace. If younger less experienced applicants are discriminated against in the entry level job, this deters economic growth. Moreover, this is seemingly evidence of discrimination indicative of women potentially maltreated in entry level employability. To promote gender balance and promote gender equality, it is necessary to streamline government-to-business interfaces. Governments and businesses should be proactive in driving changes. The Gender Equality Act 2006 was instituted to safeguard women from discrimination, and efforts are obligatory to execute its provisos. Companies can improve gender parity. This will directly lead to suggestions for a more appropriate policy to create a pro-competitive economic climate and changes required in the relevant laws. This study is important from a policy perspective as it will inform the correct policies to deal with the situation.

There are two types of discrimination in the theoretical economic literature. The first is taste-based discrimination (Becker, 1957) which refers to the tendency of employers to discriminate against certain groups of people regardless of their productivity. This is the case where there is a prejudice against a particular group. In the beauty premium literature, taste-based discrimination occurs when employers have unbiased beliefs about performance but prefer hiring individuals they consider physically attractive (Deng et al., 2019). The second is statistical discrimination (Arrow, 1973). Statistical discrimination arises in a milieu where agents develop expectations based on available information that is associated with different groups. They then treat any individual from that group as having similar characteristics to the average of the group. In statistical discrimination, employers can assess productivity based on limited information and rely on physical attractiveness. Physically attractiveness could be the determinant of resume evaluations and more likely to be successful in their careers (Mobius & Rosenblat, 2006; Neilson & Ying, 2016; Ch'ng & Narayamam, 2021). In the latter case, agents will place greater weight on information from the group that they are more familiar with or can associate with. In the former case, extra information is treated similarly across groups, but agents prefer not to deal with a particular group.

Typically, statistical discrimination is deliberated concerning gender discrimination. Gender roles could lead to differences in average education, assigning female group at a disadvantage in determining occupational access outcomes. Given limited information, employers are prone to

choose negative stereotypes in hiring, but there is a possibility that discrimination is shrunk when one has sufficient information to make the decision (Feltovich & Papageorgiou, 2004).

Discriminations studies were pioneered by Jowell and Prescott-Clarke (1970). Others employed the resemblance technique to examine discrimination against minorities in developed nations (e.g., Riach & Rich, 1991; Booth et al., 2012; Carlsson & Rooth, 2007; Bertrand & Mullainathan, 2004). Altonji and Pierret (2001) employed the methodology on the U.S. labour market, but very little evidence for statistical discrimination in the Malaysian context. To the best of our knowledge, no studies have been conducted in a developing country such as Malaysia.

Thus far, audit experiments to investigate gender discrimination have only been carried out in the context of countries that have enacted anti-discrimination laws. For instance, Booth and Leigh (2010) investigate gender discrimination in major Australian cities for female-dominated occupations. Call-back rates were higher; 32% for females compared to 25% for males. Bias only existed if female employment in the occupation was 80% or more. They concluded that gender stereotyping is the most likely explanation. Arceo-Gomez and Campos-Vasquez (2014) examined discrimination in Mexico. Discrimination has been illegal since 2003, although enforcement remains an issue. It was noted that average call-back rates across all sectors were higher for women than for men, 13.78% against 10.75%, respectively.

Darolia et al. (2015) found no gender bias on call-back rates in the U.S. They argued that this might reflect the fact that no indicators of socio-economic status were given in the applications. Alternatively, it may indicate that gender discrimination has become less prevalent in the U.S. In a similar vein, studies uncover gender disparity in the propensity to promotion application in Italian universities (Paola & Scoppa, 2015; Paola et al., 2017), and individual voting reports suggest that mixed gender composition of the scientific committees does matter (Bagues et al., 2017), in which men evaluators become less favourable than women candidates after women evaluator joins the committee. More recently, Kessler et al. (2019) use an experimental paradigm to evaluate employer inclinations for applicants graduating from Ivy League university. They demonstrate no evidence that businesses are less attentive to women applicants on average and uncover evidence of lower returns to prominent internships for females.

In terms of educational inequality, studies focus on gender disparity instead of the ethnic divide. Female academics published less frequently than males (Poon & Leeves, 2017). Milanovic (2006) claims that during the 1980s, there was no gender disparity in educational attainment in Malaysia. But, educational gender disparity has widened after that. Yong (2017) has ascertained the increasing gender gap in Malaysian public universities. Consequently, women graduates are stereotyped when it comes to job applications in Malaysia, which may explain low level of women integration into the labour market. According to Raman (2021), the growth of female entrepreneurship in Malaysia stumps mainly attributed to gender-biased stereotypes and gender discrimination.

Industrialization in Malaysia has enhanced job opportunities in various industries (Ng & Chee, 1996; Kaur, 2000). However, certain opportunities were constrained by occupational segregation and occupational stratification structure. There are patterns of gender discrimination and occupational stratification (Yoong, 2020). Women are discriminated at the workplace in many aspects, including pay scale, promotion, task allocation, reward and compensation (Chapman &

Harding, 1985; Narayanan & Selvanathan, 2017). Occupational segregation is also ubiquitous in explaining the gender gap in the Malaysian job market (Ismail et al., 2017; Nor, 2000). This has been confirmed by Khazanah Research Institute (2018) that within the woman like services segment, male managers outstripped females considerably that deterring contributory women's entry into the job market. According to Mellstrom (2009), women are equally comparable to men, without the constraint of cultural and institutional stereotyping.

In our study, applications were sent to jobs in two occupational categories, one of which was dominated by females: "Clerical, Administration and Human Resources", and the other by males: "General and Cost Accounting". The jobs were advertised on Jobstreet.com.my, the largest employment recruitment portal in Malaysia. Official data classifies occupations according to the MASCO; this does not coincide exactly with the occupational categories used in the job portal. We selected the two categories that are closest to those on the online job portal: Technicians and Associate Professionals for General and Cost Accounting; and Clerical Workers for Clerical, Administration and Human Resources.

In Table 3, the sex ratio of males to females was relatively high. The pattern of sex ratio in Malaysia was observed that men outnumbered women across the past few years (with a sex ratio of 107 in the year 2016). Females dominate clerical work, but the percentage is comparable to those occupations where no recall bias was found by Booth and Leigh. Technicians and Associate Professionals would be expected to exhibit no recall bias on the basis that it is male-dominated. However, Riach and Rich (2006) noticed discrimination against men for trainee accountants in the U.K, where the proportion of females was 31%.

The second part of our study provides evidence on requirements for a specific gender stated in job advertisements. This type of study can only be conducted in jurisdictions where such direct discrimination is legal. Khun and Shen (2013) studied gender preference ads in the Chinese job market and found that a third of the firms using an online job site asked for a male or female in one of their advertisements during the period the study was conducted. There is extensive heterogeneity in demand for skills, even within narrowly defined occupations and locations, after controlling for experience requirements and education qualifications (Deming & Kahn, 2018). The market for skilful workers is thinner than lower-skilled workers (Lazear et al., 2018). The idea is intuitive. The lower-skilled jobs can be overflown, but only a tinier group of skilful staff can accomplish higher-skilled jobs. In our context, most of the advertisements expressing a gender requirement were for lower-skilled positions. The authors suggested that higher-skilled markets are thinner, and firms needed to search more widely for the best talent to fill the position.

Table 3: Occupation Gender Distribution in Malaysia, 2008-2017

Year	Technicians and Associate Professionals					Clerical Support Workers					Sex ratio
	Total employment	M (Mn)	F (Mn)	M (%)	F (%)	Total employment	M (Mn)	F (Mn)	M (%)	F (%)	
2008	1.496	0.899	0.597	60.1	39.9	1.053	0.320	0.733	30.4	69.6	104
2009	1.560	0.942	0.619	60.4	39.7	1.087	0.327	0.760	30.1	69.9	106
2010	1.644	0.995	0.649	60.5	39.5	1.133	0.340	0.793	30.0	70.0	106.3
2011	1.313	0.914	0.399	69.6	30.4	1.178	0.352	0.827	29.9	70.2	106.4
2012	1.284	0.867	0.418	67.5	32.6	1.170	0.326	0.844	27.9	72.1	106.4
2013	1.288	0.868	0.421	67.4	32.7	1.190	0.323	0.867	27.1	72.9	106.8
2014	1.365	0.917	0.448	67.2	32.8	1.235	0.319	0.916	25.8	74.2	106.7
2015	1.407	0.926	0.481	65.8	34.2	1.241	0.351	0.890	28.3	71.7	106.6
2016	1.454	0.995	0.458	68.4	31.5	1.164	0.310	0.854	26.6	73.4	106
2017	1.521	1.029	0.492	67.7	32.3	1.235	0.339	0.896	27.4	72.6	106

Source: CEIC (2021) & Labour Force Survey Report, Department of Statistics Malaysia (Various issues).
Notes: F denotes females; M denotes males; Mn denotes million. Occupation is classified according to the Ministry of Human Resources Malaysia (2010), Malaysia Standard Classification of Occupations 2008 (MASCO). Sex ratio is the number of males per 100 females.

2. METHODOLOGY AND SAMPLING

The traditional approach to estimating discrimination is through the use of secondary data from surveys using the Oaxca decomposition technique, which cannot identify the type of discrimination. Fernandez (2009) found that a substantial portion of the gap in earnings between genders in Malaysia could not be accounted for by differences in observable characteristics (e.g., experience and education). Hence, the residual component or unexplained component is attributed to discrimination. This confirmed the evidence of limited earlier studies. However, this approach may postulate biased estimates of the true extent of discrimination. If income surveys hold no fair measures of productive attributes, and these characteristics are systematically correlated with gender, then their omission may be biased estimators of labour market discrimination. Hence, the respondents of the attitudinal surveys may reply with socially acceptable answers instead of their actual beliefs.

Using correspondence techniques to study discrimination has been around for some time (Jowell, & Prescott-Clarke, 1970). In the early stages, many researchers used audit studies, where trained individuals apply in person for jobs (Page, 1995). Audit studies are considered problematic as the actors may not seem the same to employers or landlords. Hence, there has been a move towards studies using fictitious online applications. The applications differ in some way that identifies the minority in question. Carpusor and Loges (2006) was the first study to use the email approach to study discrimination; they were seeking to identify racial discrimination in housing markets. This was followed by a similar study by Ahmed and Hammarstedt (2008), which again was attempting to measure discrimination in housing markets. Nevertheless, it is recognized that if the distribution of unobservable productivity relevant attributes varies across groups, then this has the potential to bias estimates of discrimination (Heckman & Siegelman, 1993).

Some good examples of the methodology proposed for this study are provided below. Booth et al. (2012) handled a field experiment to evaluate labour market ethnic discrimination in the three largest cities in Australia. They sent out four fictitious CVs, carrying ethnically identifiable names at the top of the CV, for entry-level jobs to employers. It was found that there was a significant difference in call-back interview rates where the ethnic minority applicants may require to apply for more jobs to get the same number of interviews. Ewens et al. (2014) sent out emails to a website advertising rental property in the U.S and varied the applications with names of identifiable groups and the amount of information provided about the applicants' background. This extra information included details such as whether the applicant smoked or had a bad credit history. They find evidence to suggest that discrimination is statistically based as revealing more positive information about applicants was treated similarly across all groups. More broadly, a systematic review of field experimentation in public administration (Hansen & Tummers, 2020).

Only experimental studies such as the one proposed have the potential to explicitly detect evidence of statistical discrimination and taste discrimination. Secondary data is often used to identify possible discrimination between groups using the Oaxca decomposition technique, but the sources of any discrimination cannot be identified. Previous literature that has used the experimental approach has produced evidence of statistical discrimination, but it is by no means conclusive. Moreover, this type of experimental study of these important issues has not been undertaken in a developing country.

2.1. Audit Experiment

Drawing on previous research experiments conducted in other countries, we can adapt our field experiment to suit the Malaysian job market and illicit responses. We applied for 788 jobs; these jobs were located in all states of Malaysia, with the majority located in the Klang Valley (Kuala Lumpur and Selangor), the most populous areas in Malaysia. We sent applications to jobs that specifically called for fresh graduates, without explicit gender preferences in job ads in 2017 and 2018. Employing email correspondence will reduce potential heterogeneity in unobservable (Bertrand & Mullainathan, 2004). Our interest is in the misallocation of tertiary-educated females for the reasons stated earlier. Our CVs were identical except for the names. The names were Chinese, to overcome any racial bias that might exist, but with obvious female and male identifiers. Chinese names were used by purpose in this experiment because whitening ethnicity in the resume may not be able to identify race identity in our context.

We recorded some details about the organization and the job including the number of companies, company profile, location, firm size, industry classification, working hours, if there were specific skill requirements (i.e. software usage), and if there was a preferred ethnicity or gender. Most jobs required regular hours, although requests for weekend work occurred in 20% of cases. Half of the jobs required specific skills, which were mostly software skills, and almost all required proficiency in English. Nearly all jobs were in urbanized states. Small firms with fewer than 50 employees accounted for nearly half of all positions advertised. The Accounting jobs required more specific skills, which often consisted of familiarity with particular types of accounting software. Some advertisements mentioned a possible range for a salary while others made no mention.

2.2. Gender Preference Ads

Following the study by Khun and Shen (2013), we took specific periods, in our case two observation periods: March 10, 2017 through April 21, 2017; and October 19, 2018 through November 23, 2018, to survey all advertisements on the Jobstreet portal in Clerical, Administration and HR; this amounted to 2000 jobs. We identified all advertisements that explicitly stated whether females or males were required for the position. For these advertisements, we recorded information on the location and size of the organization.

3. RESULTS AND DISCUSSION

3.1. Audit Experiment

A summary of the call-back rates is presented in Table 4, as in Booth and Leigh. The call-back rates were 15% for females and 6% for males, a difference of 9%. This compares to a figure of 7% in Booth and Leigh. A further breakdown by sector shows that there was a significant female bias in call-back rates in Clerical, Administration and HR. The ratio of female to male call-back rates was 7.30 compared to 1.74 for Australian cities. However, for the Accounting jobs, we found no evidence of female bias in call-back rates. The difference between the occupations is consistent with the narrower market in accounting and the identified shortage of new graduates.

In Table 5, we presented regression results in which the dependent variable is the binary indicator of whether the applicant was called back for an interview. In the first column are the results for the whole sample. Our main variable of interest is *female*; this is significant at the 1% level. To aid interpretation, at the bottom of the table, we presented the marginal effects; average marginal effect (AME) was used, as this is generally a preferred estimate. There was a 9% increase in the likelihood of call-back for females, similar to the unconditional estimate in Table 4.

Table 4: Call-back Rates

	Call-back Rate	**Ratio (Female rate/ Male rate)**	**Difference (Female rate – male rate)**	**P-value on difference**
All jobs				
Male	6.15			
Female	15.42	2.51	9.27	0.007
General and Cost accounting				
Male (Obs = 194)	10.16			
Female (Obs = 194)	13.68	1.35	3.52	0.434
Clerical, Admin and HR				
Male (Obs = 200)	2.45			
Female (Obs = 200)	17.89	7.30	15.44	0.001
Gender Discrimination difference across job types		z value = 1.97	P>|z| =0.048	

Table 5. Probit Regression Results, Call-back

Interview Request	**All**	**Clerical, Admin & HR**	**General and Cost accounting**
Female	0.74*** 0.01)	0.89*** (0.00)	0.37 (0.48)
Weekend Work	0.38 (0.49)	0.36 (0.65)	-0.17 (0.93)
Irregular Hours	1.67** (0.03)	0.87** (0.05)	1.13** (0.04)
Software skills	0.37 (0.38)	0.81* (0.09)	-0.16 (0.90)
Location			
Klang Valley	0.23 (0.43)	0.47 (0.32)	0.49 (0.26)
Other locations	-0.97** (0.04)	-	-
Psuedo R^2	0.11	0.17	0.05
Obs	788	400	388
Average Marginal Effect (Female)	0.09** (0.01)	0.12*** (0.00)	0.03 (0.37)

Notes: Figures in brackets are P(z), the probability that z value is greater than the critical value (chi-squared with 1 df). *, **, *** represent 10%, 5% and 1% significance levels, respectively. Omitted cases: Location – Kuala Lumpur.

Of the other variables, we noted that jobs specifying irregular hours are more liable to lead to a call-back for an interview. There are likely to be fewer applicants and so requires employers to examine more applicants. Jobs in locations outside the Klang Valley attracted fewer call-backs. Our "candidates" were based in Selangor state, so employers might consider the likelihood of take-up to be less likely in rural locations. The results for the sectors are reported in columns three and

four. The AME for a female applicant in the clerical, administration and human resource sector was estimated to be 12%; in the general and cost accounting sector, the female coefficient was insignificant.

3.2. Gender Preference Ads

Table 6 presents data on gender preference advertisements in the clerical, administration and human resource sectors. Of the 2000 clerical, administration and human resource jobs, 3.4% stated a gender preference. It can be seen that there was a clear bias for female applicants in the clerical, administration and human resource sector, consistent with the call-back results. Over 90% of the jobs expressing gender preference were related to organizations based in the urban states in Klang Valley. This is disproportionate to the number of advertisements from this source in the sample. It is consistent with Khun and Shen's (2013) argument that preferences can be expressed more readily in broader markets where there is a greater choice. It appears that preference expressions are much more common among smaller-sized organizations. One possible inference to be drawn from this is that larger organizations are less willing to openly express preferences and leave this to the selection process for fear of any negative impact on their brand image. Alternatively, it may be that they are more prepared to search wider, given that the fixed costs associated with recruitment and the marginal cost of filtering the additional applications are relatively low.

Table 6: Gender Preference

	Clerical, Admin & Human Resource	
	Frequency	**%**
Number of companies	2,000	
Expressed Gender Preference		
Location*		
Urban states	64	94.1
Rural states	4	5.9
No. of workers		
1-50	32	47.1
51-200	12	17.6
201-500	5	7.4
500-2000	3	4.4
>2000	1	1.5
n.a.	15	22.1
Gender		
Male	5	8.9
Female	51	91.1

4. CONCLUSION AND POLICY IMPLICATIONS

In general, gender discrimination occurs more often when hiring for positions requiring entry-level jobs. In addition, irregular working hours and locations outside of urban areas significantly impact the call-back rate. Specifically, in a labour market where gender discrimination is not illegal, a bias towards female applicants for jobs in markets that traditionally offer female employment like general clerical, administration and human resources jobs can be found. In the narrower market of accounting, there appears to be no gender bias. Our results suggest gender discrimination can

explain heterogeneity in call-back interview rates across broadly defined occupations, but not within narrowly defined occupations, after controlling for factors such as weekend work, irregular hours of work and location. Results also indicate a preference for software skills in broader labour markets, but the skill-targeting effect is not found in narrower market jobs, where the job specification is likely to include necessary broader skills. Thus, being called back for an interview for a broadly defined job depends not only on gender but also on one's own software skills.

The implication that lower-skilled markets generate higher call-back interview rates makes intuitive sense. Moreover, if the only open vacancy is one that low-ability employees cannot perform, software skills are almost compulsory. Nevertheless, even high software skill applicants may not be the key determinant for employers' call-back decisions, especially in a tight labour market, because there could be many superior applicants for just one posted position.

Despite Malaysian women playing an increasingly important role in national development, racial discrimination remains an issue that needs to be addressed. Policy-making should adequately address structural inequalities. A robust legislative framework should be enacted on gender and ethnic equalities to prevent gender or racial discrimination in the workforce. This policy should be more inclusive and fair distribution among young women or B40 women into entry-level positions. On-the-job training could be integrated into the business development program. If female workers are absorbed into new entrants of the lower-level position, then there is a tendency to reduce occupational segregation. Empowering women with equal rights and opportunities is necessary to reap the benefits of economic progress.

Employers should acknowledge that bias and prejudice are overshadowing the hiring system to tackle discriminatory hiring rituals. Business leaders should re-look resume screening processes, check for discrimination, and screen for qualified applicants, and the minorities should be given an opportunity to call back interviews. Blind recruitment by removing personal information such as names, race, gender, or socioeconomic background from resumes before Human Resource managers see them is a possible resolution. This action eliminates biases; recruitment is exclusively influenced by skills and character.

Future research to distinguish multi-racial discrimination and gender scenarios would be of great interest as well. The data collection period has strongly influenced the sample size of this study. For future research, a longer period of data collection should occur to increase the number of observations to increase the power of tests and econometric evidence.

ACKNOWLEDGEMENT

This work was supported by the Malaysian Competition and Commission; project title "A Fair and Open Market for Accounting Services: Evidence from a Field Experiment" and UTP-CU Collaborative Research Fund.

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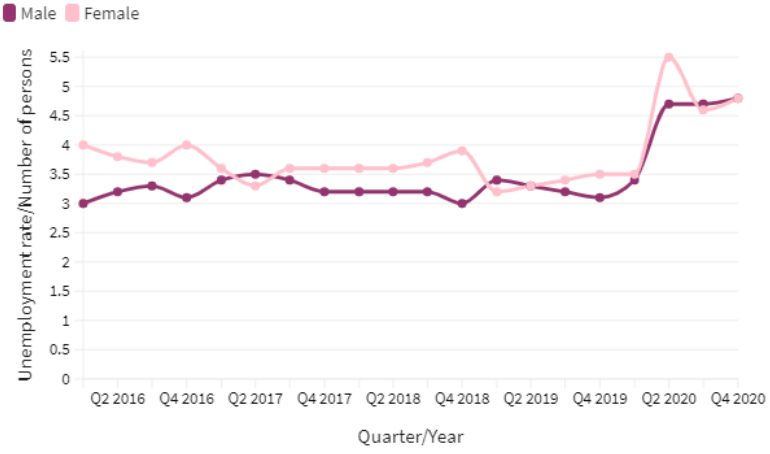
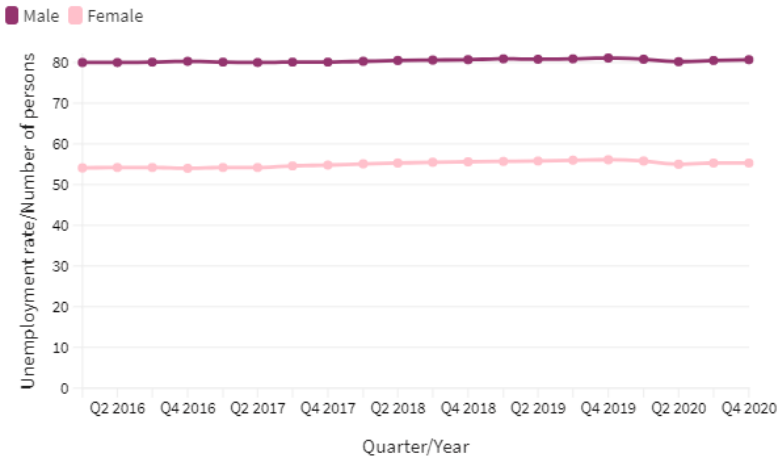
APPENDIX

Appendix 1: The Unemployment Rate, by Gender, 2016-2020



Appendix 2: Labour Force Participation Rate, by Gender, 2016-2020



Source: Menon (2021).