

## Exploring Employment of Graduates

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**Abstract:** This paper considers the relationship between gender and employment. Using graduates, who had just completed their studies in the field of Information Technology, the paper considers how gender determines time taken to secure employment, salary, job tenure and job matching. The findings suggest it takes time for graduates to secure a job and gender's role is insignificant. Similar findings i.e insignificance of gender, was found between gender and job tenure too. Most of the graduates were able to secure a permanent job upon completing their studies. On the contrary, gender was found to be significant in determining salary and job matching. Besides drawing a higher salary, male graduates had job matching their academic qualification.

**Key words:** Gender • Job tenure • Salary • Job matching • Information technology

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### INTRODUCTION

Many studies on the relationship between gender and hiring, promotion and career advancement have been conducted over the years [1-4]. The current study contributes to our understanding on gender and job search success among graduates who had just completed their studies. By using graduates, a comparison between gender is possible, because the sample used for this study shares a common education level and similar economic circumstances. Specifically, graduates from the field of Information Technology (IT) is explored.

A university's primary focus is to produce graduates who are well informed and able to meet the needs of a country and this is reflected through the employment of their graduates [5]. This task i.e producing graduates who are employable becomes more difficult when the knowledge and skill required are constantly changing; which is common in the field of IT. Therefore faculties offering IT courses have an uphill task of producing graduates who can meet the expectation of the employee. Failing to do so causes employers perceiving job seekers as not having the necessary skills [6]; and jeopardizes a person's (graduate) chance of getting a job [7,8]. Compounded with gender favouritism, female IT

graduates face more hurdles than male in seeking employment. Valuable feedback gathered from graduates' experiences in the job market would enable universities in assessing their institutional excellence.

In 2005, 60,000 graduates were unemployed, of which 70% graduated from local universities [9]. This study elaborates on workplace experiences gathered from University of Malaya graduates namely in IT. Specifically, the purpose was to compare the status of males and females in areas such as time taken to obtain employment, salaries and job status.

The research questions of this study were:

- How much time do graduates need in obtaining employment after completing their studies?
- Is there a significant difference between males and females in obtaining employment?
- Is there a salary difference between males and females of IT graduates?
- Is there a job tenure difference between males and females of IT graduates?
- Is there a job matching difference between males and females of IT graduates?

## **Review of Literature**

**Salary:** An imperative prediction of human capital theory is, an individual is willing to accept lower salary when seeking employment [10]. Determining the level of wages offered to an employer is often at the discretion of an employer; when workers and firms are heterogeneous [11]; and if unemployment is rampant in a country, employers' clout on salary issues increases.

By offering a lower starting salary, employers feel this would reduce the cost involved in training a potential worker. Such arguments are not applicable, when the job seekers are already trained. As such helping the new employee assimilating into the organizations should be among the concern of employers.

Studies investigating on the starting salary, found gender play a role too [12, 13]. The study by Daymont and Andrisani (1984) [14] showed the extent of gender salary gap depended on the field of study. Gender pay difference could be studied by controlling factors which causes productivity variations, such as education, training and experience [12].

**Job Tenure:** A valuable attribute of a job is tenure. Job tenure is positively correlated to job satisfaction [15-17]; and the feelings of the employers [18]. In deciding tenure, employers take into consideration the gender of the employee [19]. In many organization firms like to employ on temporary basis or contract-based [20].

Relationship between job tenure and gender is influenced by a number of other factors too. Naswall, Sverke and Hellgren [21] found reaction to the question of job tenure depends on their level of education and skills. However when the levels of education and skills are controlled, then gender plays a prominent role.

Some studies found that male is more concern about job tenure than female. It is linked to the amount of responsibility a male shoulders. Particularly when males are the sole 'breadwinner' of their families [22]. As such, insecurity of a job is more distressing to men than women. An opposing view is, since men have higher occupational mobility, they are less concern about job tenure [23,24].

**Job Matching:** Job matching is defined as the process of employment equilibration between heterogeneous workers and heterogeneous firms [25]. It has received attention in research on unemployment [26,27]; labour turnover and wage growth [26,27]; occupational choice [28]; internal labour markets [29]; and worker productivity

[30]. Though a number of papers had explained wage difference [31] through job matching, inclusion of gender is rare.

Job-matching literature stresses that suitability to a job varies from one person to another. Thus, the difference in the productivity of a worker could contribute to heterogeneity of talent among potential job seekers [32]. Education credentials play an important role in signalling by workers and screening by employers [25]. Thus, matching a job with academic qualification of person depends on the number of vacancies in the labour market and the education level of the individual. Job matching models stress the flow of job offers, contingent on the current position of the job searcher [33]; where gender should not influence on individual's job matching.

## **MATERIALS AND METHODS**

**Sample and Data Source:** The data for this study comes from the Tracer Study 2006, an annual national survey, carried out by Ministry of Higher Education Malaysia (MOHE). The survey is a self-reported survey where graduates respond to an online questionnaire through their respective university's websites; and it is a prerequisite to attend their graduation ceremony. The following criteria are applied in selecting the respondents of the study.

First, only the graduates from the field of IT and whose age is less than 26 years old and seeking employment were chosen as the potential sample respondents. Likewise, this research also excluded the self-employed graduates and those working with family owned businesses.

Currently there are about 20 public universities in Malaysia. To eliminate the influence of a university only those graduated from University of Malaya (UM) were selected. To represent the total population in UM, all three major races (Malay, Chinese and Indian) were considered. The detailed sample by race and gender are reported in Table 1.

**Measurement and Data Procedure:** Although employment can be viewed from both institutional and individual perspective, only the individual dimensions are examined. Employment is determined by the status of a job. Morisi's (2008) [34] definition of employment is used; when a person does any work for pay or profit during the reference period. The "reference period" is

Table 1: Sample Profile by Race and Gender

| Race    | Gender |        | Total |
|---------|--------|--------|-------|
|         | Male   | Female |       |
| Malay   | 512    | 1168   | 1680  |
| Chinese | 523    | 1040   | 1563  |
| Indian  | 48     | 124    | 172   |
| Others  | 51     | 76     | 127   |
| Total   | 1134   | 2408   | 3542  |

Source: MOHE, 2007

Table 2: Time Taken to obtain First Job Upon Completion of studies

| Time Taken (months)              | Male |       | Female |       | Total |       |
|----------------------------------|------|-------|--------|-------|-------|-------|
|                                  | n    | %     | n      | %     | n     | %     |
| Offer upon completion of studies | 22   | 2.7   | 43     | 2.7   | 65    | 2.7   |
| 1 month                          | 8    | 1.0   | 15     | 0.9   | 23    | 1.0   |
| 2 months                         | 5    | 0.6   | 6      | 0.4   | 11    | 0.5   |
| 3 months                         | 2    | 0.2   | 4      | 0.3   | 6     | 0.2   |
| 4 months                         | 113  | 13.8  | 241    | 15.1  | 354   | 14.7  |
| 5 months                         | 172  | 21.1  | 428    | 26.8  | 600   | 24.8  |
| 6 months                         | 253  | 31.0  | 429    | 26.8  | 682   | 28.2  |
| 7 months                         | 120  | 14.7  | 259    | 16.2  | 379   | 15.7  |
| 8 months                         | 43   | 5.3   | 73     | 4.6   | 116   | 4.8   |
| 9 months                         | 30   | 3.7   | 34     | 2.1   | 64    | 2.6   |
| 10 months                        | 25   | 3.1   | 39     | 2.4   | 64    | 2.6   |
| 11 months                        | 23   | 2.8   | 29     | 1.8   | 52    | 2.2   |
| Total                            | 816  | 100.0 | 1600   | 100.0 | 2416  | 100.0 |

Table 3: Salary Range of IT students (upon completing their studies)

| Salary Range (per month) | Male |       | Female |       | Total |       |
|--------------------------|------|-------|--------|-------|-------|-------|
|                          | n    | %     | n      | %     | n     | %     |
| Less than RM500          | 17   | 2.1   | 46     | 2.9   | 63    | 2.6   |
| RM501 - RM1 000          | 63   | 7.7   | 222    | 13.9  | 285   | 11.8  |
| RM1 001 - RM1 500        | 107  | 13.1  | 310    | 19.4  | 417   | 17.3  |
| RM1 501 - RM2 000        | 232  | 28.4  | 500    | 31.3  | 732   | 30.3  |
| RM2 001 - RM2 500        | 237  | 29.0  | 260    | 16.3  | 497   | 20.6  |
| RM2 501 - RM3 000        | 102  | 12.5  | 172    | 10.8  | 274   | 11.3  |
| RM3 001 - RM5 000        | 50   | 6.1   | 86     | 5.4   | 136   | 5.6   |
| RM5 001 or over          | 8    | 1.0   | 4      | 0.3   | 12    | 0.5   |
| Total                    | 816  | 100.0 | 1600   | 100.0 | 2416  | 100.0 |

Table 4: Job Tenure of IT students (upon completing their studies)

| Job Tenure | Male |      | Female |      | Total |      |
|------------|------|------|--------|------|-------|------|
|            | n    | %    | n      | %    | n     | %    |
| Contract   | 292  | 35.8 | 638    | 39.9 | 930   | 38.5 |
| Permanent  | 524  | 64.2 | 962    | 60.1 | 1486  | 61.5 |
| Total      | 816  | 100  | 1600   | 100  | 2416  | 100  |

Table 5: Job Matching of IT students (upon completing their studies)

| Job Matching | Male |       | Female |       | Total |       |
|--------------|------|-------|--------|-------|-------|-------|
|              | n    | %     | n      | %     | n     | %     |
| Related      | 563  | 69.0  | 934    | 58.4  | 1497  | 62.0  |
| Unrelated    | 253  | 31.0  | 666    | 41.6  | 919   | 38.0  |
| Total        | 816  | 100.0 | 1600   | 100.0 | 2416  | 100.0 |

from the time the graduate had completed his/her study to the time he/she responded to the questionnaire i.e Tracer Study.

The procedures followed for the study were as follows:

- Permission was obtained from the MOHE to use the data.
- To answer the research questions of this study, the data was summarized based on the responses and analyzed by comparing males and females responses.
- Analyses were done using non-parametric methods. Non-parametric methods have the ability to provide estimation in quantifying the trends of within and between groups, minus the peril of misspecification danger [35]; and assumptions required for parametric test, such as normality of data, are not necessarily fulfilled [36] and [37].

## Findings

**Time Taken to Obtain Employment:** Of the 3542 graduates, 68.2% indicated they were employed prior to graduation, only 2.7% indicated they secured a job upon completing their studies. Majority of those who obtained a job took more than 3 months, as shown in Table 2.

To answer the strength of the association between gender and the time taken for the graduates to obtain employment i.e the second Research Question, Somers'd was used. A significant Somers'd, 0.037, indicates there is a difference between males and females. The small value i.e 0.037 points out that gender does not influence graduates chances of getting employed.

**Salary:** Of the 2416 respondents, the largest number of graduates (30%), indicated their salary range as RM1 501-RM2 000. Almost 62% of the sample indicated they earned RM 2 000 or less. However, only 51% of males earned less than RM2 001, compared to females 62%, as shown in Table 3.

To answer the third Research Question, a Mann-Whitney U test was carried out. The result showed a significant difference in the salary levels of males and females,  $U=535983$ ,  $z=-7.37$ ,  $p=0.00$ ,  $r=0.14$ . Perloff (1981) [38] implied salary difference is associated with skill and knowledge. Since the sample used in this study is from the same university, the quality of education (knowledge and skill of the graduates) does not arise. Under such circumstances, higher salary drawn by male graduates implies female graduates are at more disadvantaged position than their male counterparts.

**Job Tenure:** Table 4 shows the composition on the job tenure. Majority of IT graduates, 62%, are employed on a permanent basis. Male graduates are hired more on a permanent basis than their female counterpart. To answer the fourth Research Question, a Chi-square test for independence (with Yates Continuity Correction) indicated an insignificant association between gender and job status,  $\chi^2$  (1, n=2416) =3.65, p=0.06, phi= -0.04.

This finding i.e insignificant of job tenure among gender, contradicts to Burmaster's (2000) [39] observation in the American labour market back in the 1990s. It also defies Bender and Heywood's (2006) [16] opinion; female workers' concern on job tenure is less than male. However whether emphasis on job tenure occurs during the first job, as in this study is inconclusive. For questions examining these were not covered in the Tracer Study.

**Job Matching:** Upon completing their studies, many graduates of UM were able to secure employment. Whether the job specification matched their academic qualifications is doubtful. Males were able to gain employment matching their academic qualifications. As shown in Table 5, i.e. 69% and 58.4%, more males compared to females' job matches their qualification.

To discover whether there is a difference in job matching, a chi-square test was used. A Chi-square test for independence (with Yates Continuity Correction) indicated a significant association between gender and job specification,  $\chi^2$  (1, n=2416) =25.41, p=0.00, phi= -0.103. This answered the fifth Research Question; female graduates hold jobs which are mismatched with their academic qualification.

**Conclusion and Policy Implications:** Besides academicians, policy makers and labour unions can use the results of this study to make their stand in regulating and improving job prospects of IT graduates. In many countries, female students in university are increasing over the years. Depriving them of an equal opportunity, could lead to many unwanted scenarios.

For example, it could cause a brain drain in a country. Although at the moment, the findings of study shows the disparity is not large, ignoring the disparity could encourage many female students to seek better opportunities outside the country. As globalization becomes more widespread [40], female graduates will be tempted to try their luck out of this country

At the same time, it could discourage females from pursuing IT courses. Though gender discrimination in terms of education opportunities is rare in Malaysia,

existence of discrimination in job market will deter female from pursuing IT courses. This would be a great loss to the nation. It could dampen the efforts of nation building undertaken by the government.

Therefore, government organizations and universities should embark on educating employers that female graduates are at par with their male counterpart. Gender should not be an issue when paying or assigning a job. Though human capital theory posits that difference in employment opportunities are attributable to differences in productivity, discrimination will only lead to minimization of human capital. In other words, using efficiency imperatives, will be costly for employers to maintain a preference for a particular gender.

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