

Modelling Influential Factors to Pursue Master's Degree Under Graduates Students

Noor Ilanie Nordin, Norafefah Mohamad Sobri, Nor Azima Ismail, Tengku Mardhiah Tengku Jalal, Syazwani Ibrahim, Wan Nurwajihah Wan Anuar and Syafiqah Quraatulaini Ibrahim

Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA Kelantan, Bukit Ilmu, 18500 Machang, Kelantan, Malaysia

Email: ilanie@uitm.edu.my, noraf378@uitm.edu.my, norazima@uitm.edu.my,
tengkum908@uitm.edu.my, syazwaniibrahim76@gmail.com,
wannurwajihah98@gmail.com, quraatul1804@gmail.com

To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v11-i9/11811> DOI:10.6007/IJARBSS/v11-i9/11811

Published Date: 25 September 2021

Abstract

Nowadays, jobs requiring a master's degree are rising in today's competitive labor market. In Malaysia, the number of master's holders are still relatively small. Thus, there is a vital need to look into ways to boost up the number of admission and production of master's graduates. This study is aimed to identify the main factors (job, self-motivation, financial aid, family) that significantly influence students' intention to pursue a master's degree. The result showed that three variables; job, self-motivation, and family have a significant impact on students' intention to pursue a master's degree. Findings of this study will be beneficial in terms of decision making and will contribute to the roles that assist the Ministry of Higher education (MOHE) marketers to plan and improve their marketing strategy for recruiting students.

Keywords: Master's Degree, Influential Factors, Job, Self-Motivation, Financial Aid, Family Influence.

Introduction

A master's degree is an academic degree awarded by universities or colleges after completion of a master's or a high-level overview of an area of study or professional practice. A bachelor's degree is required to qualify for a master's degree, and a master's degree typically requires a full-time study of one year and a half to two years. According to the Institute of Graduate Studies of UiTM (2020), there are two main types of master's degrees offered at UiTM which are course-based master's degree and research master's degree.

Literature shows that the percentage of graduates pursuing a master's degree is growing (Ministry of Higher Education (MOHE), 2020a; Ng et al., 2011; Muola, 2010; Kusumawati, 2013). Increase in the number of undergraduate enrolments in postgraduate studies has

proved that the importance of higher education is undeniable. After all, higher education leads to several benefits, including financial security and affluent careers. The United Kingdom Department for Education (2018), stated that students can learn a wide range of skills through further study which enables them to expand their career choices in various fields. In Malaysia, employers generally do not specifically request for master's degree graduates but having this credential can provide additional benefits for certain positions (Stake & Mares, 2005). As a result, many students are pursuing their studies with as many benefits as they can get. Hunter (2019) stated that -youth unemployment rate in Malaysia is currently at 10.9 percent, which is more than three times the national rate of 3.3 percent and has steadily increased over the last decade. In addition, jobs that require a master's degree are growing in today's competitive job market since technology advancement has continually led to the creation of new jobs such as master's in business administration, master's in data analytics and others. Nauen (2017), revealed that in the last five years, 38 percent of employers have increased their educational requirement in a recent CareerBuilder survey. 33 percent recruit master graduates for positions held mainly by those with four years degrees. Teowkul et al (2019), noted that several students believe that they can build a better life and have a better future by obtaining a Master degree and some of the students are motivated by their families, peers or socio-cultural factors to pursue a Master's degree.

Due to less research conducted and the need for availability of a highly inventive and resourceful talent pool with extensive research training in the workforce, there is an urgent need for Malaysia to increase many more master's degree holders. The private sectors' need for highly competent manpower to drive their research, development and commercialization is also another evidence for Malaysia to boost more research experts through competent master's degrees. The low number of research development and commercialization, publication and patent in Malaysia as compared to other developing countries like Korea and Taiwan is evidence of the need for more master's degree holders in Malaysia (MOHE, 2020b).

Material and Method

A Study Design and Population

This cross-sectional study was conducted among 410 students from Universiti Teknologi Mara (UiTM) Kota Bharu, Kelantan. The total number of students in UiTM Kota Bharu is 1398 and were selected using stratified sampling technique. There are 79 students for CS241, 3 students for CS291, 84 students for BA242, 54 students for BA249, 40 students for BA250 and 46 students for BA240 will be represented as the sample size for each stratum.

B Instruments and Data Collection

Data was collected by using a Structured questionnaire and divided into six sections which are Section A: Social demographic, Section B: Intention to Pursue master's degree, Section C: Job, Section D: Self-motivation, Section E: Financial Aid and Section F: Family Influence. The questionnaire was distributed through google forms using both English and Malay language.

C Statistical Analysis

Analysis was performed by using Statistical Package of Social Sciences (SPSS) software version 22 (IBM Inc., USA). Frequency and percentage were used for socio-demographic variables. The independent variables of this study are job, self-motivation, financial aid and family influence were expressed as mean.

The relationship between independent variables of this study are job, self-motivation, financial aid and family influence towards students' intention to pursue master's degree as the dependent variable was evaluated using Pearson's correlation. Statistical test was run using 95% confidence interval. Factors associated with the students' intention to pursue master's degree was determined by using Multiple Linear Regression. Goodness-of-fit model was checked using correlation of determination and adjusted correlation of determination. Model adequacy checking was done to check the assumption of a regression model. Normality plot, residual versus predicted plot and residual versus order were used to check normality, homoscedasticity and independent assumptions. Variance Inflation Factor (VIF) and Tolerance value were used to check multicollinearity. In Multiple Linear Regression analysis, variables for inclusion in the model were selected by using stepwise selection. Variables with a p-value less than 0.05 reported to be influenced with dependent variable which is students' intention to pursue master's degree

Results and Discussion

A Descriptive Statistics

Table 1 showed the sociodemographic of the respondents. Majority of the respondents were female (82.9%) with small percentages of males (17.1%). Most of the respondents were approximately aged 22 to 23 years old (55.6%) and the rest were aged 20 to 21 years old (44.2%) and above 24 years old (3.2%). 27.8% of the respondents were from CS241, BA242 (20.5%), BA249 (20.2%), BA250 (19.0%), BA240 (11.5%) and CS291 (1.0%). The distribution of students according to their semester are (32.9%) of the students were from part 4, (27.8%) from part 2, (14.4%) from part 3 and (12.9%) from part 6. Besides that, there were (11.2%) of the students from part 5 while only (0.7%) of them were from part 1.

Table 1

Sociodemographic of students

Variables		Frequency (N)	Percentages (%)
Gender	Female	340	82.9
	Male	70	17.1
Age	20 - 21 years old	169	44.2
	22 – 23 years old	228	55.6
	Above 24 years old	13	3.2
Course	BA 240	47	11.5
	BA 242	84	20.5
	BA 249	83	20.2
	BA 250	78	19.0
	CS 241	114	27.8
	CS291	4	1.0
Semester	1	3	0.7
	2	114	27.87
	3	59	14.4
	4	135	32.9
	5	46	11.2

B Pearson Correlation

Table 2 below indicates that for all variables the p-value was 0.000 which was less than the significant value 0.05. These imply that there was a significant relationship between job, self-motivation, financial aid, and family influence with students` intention to pursue master`s degree. Pearson's correlation coefficient value shows that there is a high positive relationship between (job, self-motivation, family influence) with students` intention since the correlation coefficient (r) value (0.806, 0.748, 0.799). There is a moderate positive relationship between financial aid and students` intention since correlation coefficient (r) value is 0.607.

Table 2

Value of Pearson Correlation Test

Relationship between variables	R	p-value
Students` intention to pursue master`s degree *job	0.806	0.000
Students` intention to pursue master`s degree *self-motivation	0.748	0.000
Students` intention to pursue master`s degree *financial aid	0.607	0.000
Students` intention to pursue master`s degree *family influence	0.799	0.000

C Multiple Linear Regression

i. Model Adequacy checking

Normality Assumption

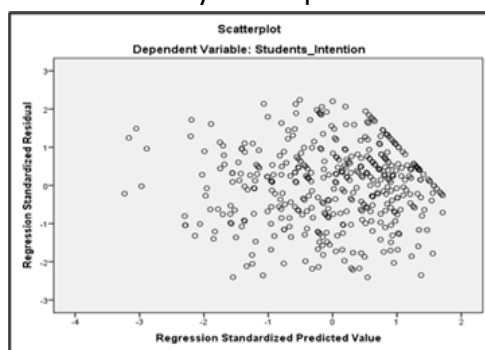


Fig. 1: Normality Plot of residual

Homogeneity Assumption

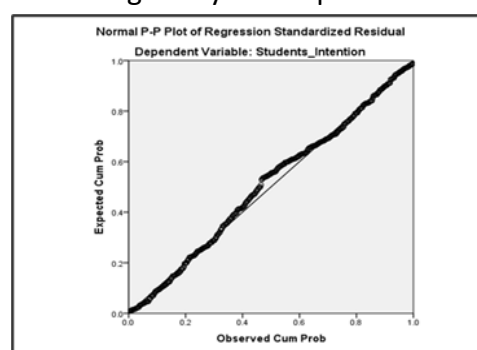
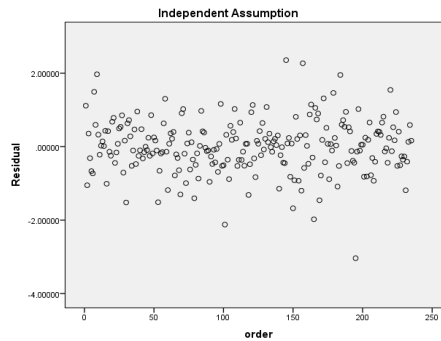


Fig. 2: Residual vs predicted plot



Independent Assumption
Fig 3: Residual versus order

Figure 1 shows the P-P plot of residuals, since most of the points are scattered roughly along the line, therefore it can be concluded that the normality assumption error assumption of error is satisfied. Scatter Plot of residual versus predicted in Figure 2 shows no pattern of increasing or decreasing in any circumstances. Thus, it shows that homoscedasticity assumption is satisfied. Lastly Figure 3 shows no obvious pattern and is randomly scattered. Therefore, the independence assumption is satisfied.

Multicollinearity

Multicollinearity is checked by referring to the value of Tolerance and Variance Inflation Factor. Based on Table 3, the result shows the value of variance inflation for the independent variables. From the value, it was found that all the independent variables are not correlated within each other since the value of VIF is less than 10 while the value of Tolerance is more than 0.1. Therefore, multicollinearity does not exist in this case.

Table 3

Multicollinearity among Independent Variables

Variable	VIF	Tolerance
Job	2.816	0.355
Self-motivation	2.811	0.356
Financial aid	1.907	0.524
Family influence	2.235	0.447

ii. Analysis of Variance

Analysis of variance (ANOVA) for the regression model is illustrated in Table 4. The F- statistics and p-value were 344.773 and 0.000 respectively. As the p-value is lower than the significance level (0.05) of the regression model, the model has been indicated to be statistically significant.

Table 4

Value of the Significant of the Model

F statistics	p-value
344.772	0.000

Table 5 shows a significance value of 0.000, 0.000 and 0.000 respectively for job, self-motivation and family influence. The significance value of the three variables was less than 0.05, thus indicated that all variables are significant. Therefore, it can be concluded that job, self-motivation, and family influence had a significant impact on the students' intention to pursue a master program. However, financial aid was not significant because the p-value is 0.538 greater than the significance value 0.05. It may be concluded that the students' intention to pursue master's degree was not affected by financial aid. As a result, the intention of students to pursue a master's program increases as the prospects of a job improves. It is also shown that the students' intention to pursue a master's program increases if self-motivation increases. Furthermore, the intentions of the students to pursue a master's program can be concluded by increasing the influence of the family.

Table 5

Value of the Significant Variable

Variables	B	p-value	Finding
Constant	-2.250	0.000	
Job (X_1)	0.519	0.000	Significant
Self-motivation (X_2)	0.284	0.000	Significant
Financial aid (X_3)	0.031	0.538	Not Significant
Family influence (X_4)	0.445	0.000	Significant

D Stepwise Selection Procedure

The analysis proceeds with the model selection and validation criterion by using stepwise regression due to the presence of insignificant variables in the model. The stepwise model has been chosen since it produced the simplest model. Based on Table 6, Model 3 is the best model as the adjusted R^2 value produced is 0.771 in comparison with other models. Thus, Model 3 was chosen as the final model.

Table 6

R² Value for Each Model

Model Summary		
Model	Variable Included	Adjusted R^2
1	Job	0.649
2	Job & Family Influence	0.759
3	Job, Family influence & Self-motivation	0.771

The value for goodness of fit of Model 3 is shown in Table 7. Based on the adjusted R^2 , 77.1 percent of the overall variance in the students' intention to pursue master's degree was explained by job, self-motivation and family influence, while the balanced 22.9 percent was explained by the other variables. It can be inferred that there was a strong relationship between variables (job, self-motivation, family influence) and the intention of students to pursue a master's degree. Thus, based on both values, it can be concluded that the regression line is fit in this model.

Table 7

Value of R² and adjusted R² for Goodness of Fit of Model 3

R ²	Adjusted R ²
0.773	0.771

Table 8, shows that all variables were significant since the p-value for job, family influence and self-motivation was less than 0.05. Thus, it can be concluded that the intention of the student to pursue a master's degree was significantly affected by job, self-motivation, and family influence. As a result, the intention of students to pursue a master's degree increases as prospects improve. Then it showed that if self-motivation increases the students' intention to pursue a master's degree will increase too. In addition, the students' intentions to pursue a master's degree can be inferred by the family influence. However, financial aid is omitted from this model because it is not significant. Thus, the estimated regression equation is: $Y = -2.200 + 0.525 X_1 + 0.295 X_2 + 0.449 X_3$.

Table 8

Value of the Significant Variable

Variables	B	p-value	Finding
Constant	-2.200	0.000	
Job (X ₁)	0.525	0.000	Significant
Self_motivation (X ₂)	0.295	0.000	Significant
Family_influence (X ₃)	0.449	0.000	Significant

Conclusion

Based on the results, the influential factors to pursue a master's degree was significantly influenced by job, self-motivation, and family. Although the study found that finance is not one of the constraints faced by candidates, awareness towards availability of funds to pursue a master's degree may encourage students to gain the highest qualification without the need to sacrifice their own financing. MOHE or other financial bodies should provide enough funds to the students and the university particularly in the field like S&T. Encouragement can also be done through developing awareness on the areas of research and grants available through research council units, university centres of excellence or the professors' personal websites requesting for research assistance.

In this research, it is recommended for other researchers to enlarge the population of the study. The research can include other university students from different courses and backgrounds. Thus, the findings will be more interesting and accurate. The other researcher can also conduct the study on different educational groups and include more variables in the study. The research can be done to pre-university students, diploma students, degree students and postgraduate students. All in all, in order to attract more potential candidates to embark into the master program, all parties such as the Ministry of higher education, universities and industries play a paramount role to ensure the nation's vision is materialized.

Acknowledgements

The authors gratefully acknowledge use of the facilities of Universiti Teknologi MARA Cawangan Kelantan. The authors also would like to take the opportunity to thank all staff of Academic Affair and all students at UiTM Kota Bharu, Kelantan.

References

- Institute of Graduate Studies of UiTM. (2020). Programmes. Retrieved June 4, 2020, from <https://ipsis.uitm.edu.my/v2/index.php/programmes>
- Ministry of Higher Education. (2020a). Graduate tracer study higher education statistics 2018. Ministry of Education Malaysia. <http://mohe.gov.my/muat-turun/awam/statistik/2018-3/628-bab-7-kajian-pengesanan-graduan-2>
- Ng, S. F., Muhd, N. M. N., Ab Rahman, K., & Ismail, N. (2011). Influential factors to pursue doctorate degree in Malaysia. *Procedia-Social and Behavioral Sciences*, 15, 2028–2032
- Muola, J. M. (2010). A Study of the Relationship between Academic Achievement Motivation and Home Environment among Standard Eight Pupils. *Educational Research and Reviews*, 5(5), 213--217.
- Kusumawati, A. (2013). A qualitative study of the factors influencing student choice: The case of public university in Indonesia. *Journal of Basic and Applied Scientific Research*, 3(1), 314--327.
- United Kingdom Department for Education. (2018). Graduate labour market statistics 2017. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/701720/GLMS_2017.pdf
- Stake, J. E., & Mares, K.R. (2005). Evaluating the Impact of Science-Enrichment Programs on Adolescents' Science Motivation and Confidence: The Splashdown Effect. *Journal of Research in Science Teaching*, 42 (4), 359-375
- Hunter, M. (2019). Malaysia youth unemployment crisis. *Asia Sentinel*. <https://www.asiasentinel.com/p/malaysia-youth-unemployment-crisis>
- Nauen, R. (2017). 38 percent of employers are looking for more educated workers. *CareerBuilder*. <https://www.careerbuilder.com/advice/employers-looking-for-more-educated-workers>
- Teowkul, K., Seributra, N. J., Sangkaworn, C., Jivasantikarn, C., Denvilai, S., & Mujtaba, B. G. (2009). Motivational factors of graduate Thai students pursuing master and doctoral degrees in business. *RU international Journal*, 3(1),25-56. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.464.3924&rep=rep1&type=pdf>
- Ministry of Higher Education. (2020b). Graduate tracer study higher education statistics 2019. Ministry of Education Malaysia. <http://mohe.gov.my/muat-turun/awam/statistik/2019-1/618-bab-7-graduate-tracer-studies>