

## **A Statistical Analysis on Employability among University Graduate: A Case Study in Malaysia**

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**Abstract:** This study describes a statistical analysis on employability among university graduate. The objective of this study is to explore the factors influencing graduate employability in Malaysia. A literature review of studies suggested that factors influencing student performance can be sorted into three factors: soft skills, co-curriculum and academic performance. Primary data was collected by distributing direct questionnaire. Complete data were collected from 2013 number of graduates. A factor analysis used identified three factors contributed to graduate employability. The factors are soft skills, co-curriculum and academic performance. These result was in line with the finding from the literature.

**Key words:** Employability, factor analysis, soft skills, co-curriculum and academic performance, literature

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### **INTRODUCTION**

Graduate employability has become a limelight in Malaysian of Higher Education (MOHE) in recent years. Starting from the year 2010, MOHE has initiated the tracer study specifically to get feedback from the graduates of every university in Malaysia. This study is motivated by the needs to investigate graduates' employability after they finish their study in the university. MOHE aims for the graduates to secure good jobs within 6 months after they leave university with expected percentage of 75% to be employed according to their field of study. However, Wye *et al.* (2012) in their finding reported to the Ministry of Human Resources (MoHR) that a number of 11,527 job vacancies are available as on May 18, 2010 were only filled up by 3,457 graduate job seekers when there are 32,331 new registered graduates recorded at the Jobs Malaysia.

Motivated by such scenario, MOHE has introduced the National Graduate Employability Blueprint 2012-2017 to address this issue. This blueprint highlighted attributes deemed to be necessary for graduates to acquire and to develop throughout their learning experiences in university. Initially, the blueprint identified common problems from employer's perspective. These include poor command in English, poor character, attitude or personality, asking for unrealistic salary and mismatch skills to name just a few. From the blueprint, the five most sought after attributes by Malaysian firms include strong

communication skills and the ability to relay information to others, a drive to ensure customer/client satisfaction with every contract, consistently high standards and commitment to quality service, consistently high commitment to integrity, honesty and ethical conducts, self-motivated and ability to work independently. Interested readers are encouraged to refer to (MHEM, 2012) for further detail.

The discussion on the similar issue of relationship between higher education and employment has been debated in major policy topics in Europe in early 1990s. Among the issues are the increasing speed of turnover of knowledge required in jobs, dramatic structural changes of the labour force in emerging new technologies and new managerial concepts, the globalization and Europeanization of economy and society, the rapid 'massification' of higher education and increasing unemployment (Schomburg and Teichler, 2006). As Malaysia is a developing country and is currently under going phases similar to what European has gone through, the needs to have in depth study on this issue in Malaysia is deemed necessary.

This alarming statistics is valid not only in Malaysia but also faced globally. Some countries, i.e., Taiwan, Middle East, Nigeria and Greek are also affected by this issue and are currently finding alternatives to rectify such a situation. For example (Wu, 2011; Romani, 2009; Arogundade, 2011; Kougioumoutzaki and Kalamatianou, 2012), respectively. However, Cardoso and Ferreira (2009)

pointed out that the rises of unemployment in graduates did not supported by the idea of employers no longer interested to recruit university graduates based from Portugal environment. Thus, more in depth research should be conducted to identify the factors of why such scenario existed.

There are many negative consequences for under employment. Under employment can also occur when employee is employed in inferior places by some standard (McKee-Ryan and Harvey, 2011) or over qualification (Maynard *et al.*, 2006). Such scenario results to lower well-being, lower life satisfaction, more physical and psychological strain, lower job performance and withdrawal behavior (Feldman, 1996; Kinicki *et al.*, 2000; Maynard *et al.*, 2006; McKee-Ryan and Harvey, 2011).

There are numbers of researchers globally that is concern on graduate employability. Bridgstock (2009) suggested a conceptual model of career management skills in Australia landscape that significantly enhanced the earlier concept of employability to better acknowledge the needs of graduate’s sustainable development in their career enhancement and not focusing on the short-sighted aim to provide graduates with jobs after they graduate. Some related researchers have also been conducted in Romania and Britain about the over qualification among graduates to enter market place (Florea and Oprean, 2010; Green and Zhu, 2008).

**MATERIALS AND METHODS**

This study was conducted to explore on graduate employability among university graduates. A number of two thousand thirteen graduates were selected. The questionnaire consists of 13 items. These items were measured using a Semantic scale with the following anchors: 1 = strongly agree to 5 = strongly disagree.

**RESULTS**

**Internal consistency of reliability:** By using SPSS, researchers estimated internal consistency of the scores (Cronbach alpha coefficient). A number of 13 items had an alpha of 0.835, indicating a high degree of internal consistency for group analyses. Items in the questionnaire under went the reliability analysis in accordance with the extracted three factors. The reliability coefficient shows the consistency of the questionnaire. The widely used Cronbach’s alpha calculates the average of all possible split-half reliability coefficients. In this study, the Cronbach’s alpha yielded acceptable ranges of reliability coefficients.

**Factor analysis:** Factor analysis is a statistical technique used to reduce many variables to a few dimensions (Seiler, 2004). Responses were subjected to a factor analysis using the maximum likelihood method of extraction and varimax, orthogonal rotation. Based on Seiler (2004) both Kaiser-Guttman criterion of retaining factors with eigen values >1.0 and Catell’s Scree test were considered. Three factors were retained which accounted for 63.442% of the variance. The value of Kaiser-Meyer-Olkin measure of sampling adequacy is recorded at 0.878 and the Bartlett’s test of sphericity value is also significant. That is its associated p<0.05.

**Scree plot:** The purpose of factor analysis is to reduce the number of variables to a smaller number. In this study, factor analysis is used to derive the new variables which are called factors in order to give better understanding about the data. The graphical scree plot proposed by Cattell (1966) was used to reduce the number of factors from items in the instrument. Cattell’s Scree test are plotting the eigenvalues and looking to see where the graph tails to shallow scree. From the result in Fig. 1, an analysis of the scree plot revealed that three items should be extracted. These items have the point at which the eigenvalues seem to level off.

**Varimax with Kaiser normalization:** Items with loadings of >0.5 are considered valid contributors. Table 1 presents

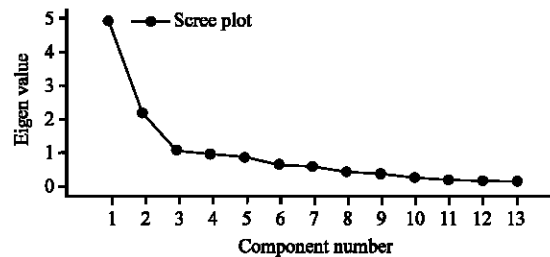


Fig. 1: Scree plot diagram showing the eigenvalues of the item

Table 1: Factor analysis showing the loadings of each item

Items	Factors		
	1	2	3
Problem solving	0.890	-	-
Critical thinking	0.885	-	-
Communication	0.867	-	-
Analytical thinking	0.856	-	-
Teamwork	0.808	-	-
Malay language	0.537	-	-
Information Technology (ICT)	0.519	-	-
Student’s club	-	0.895	-
Student society	-	0.875	-
Sport	-	0.817	-
Courses	-	0.533	-
CGPA	-	-	0.867
English language	-	-	0.531

the factor loading under three different categories. Factor 1 = soft skills, factor 2 = co-curriculum and factor 3 = academic performance. Items problem solving, critical thinking, communication, analytical thinking, teamwork, Malay language and Information Technology (ICT) were loaded under soft skill factor. Items student's club, student society, sport and courses were loaded under factor co-curriculum. Items CGPA and English language were loaded under academic performance factor.

For factor 1, item problem solving loaded highest with factor loading of 0.890. Factor 2 loaded highest on item student's club with factor loading of 0.895 while for factor 3, the highest loaded item is CGPA with factor loading of 0.867.

### **DISCUSSION**

This study was carried out to explore on employability factors among university graduates. Results suggest that all the items were retained and were categorized under three different categories which are soft skill, co-curriculum and academic performance. Basically, the factors found in this study were in line with the National Graduate Employability Blueprint 2012-2017 introduced by MOHE. From the findings, researchers also acknowledge the low loading factors on language (Malay and English) and information technology. This may be contributed by population selection of the graduates in study 2 and the redundancy of the language as being part of communication factor. Researchers also suggest a study from employer's view point to be carried out for future research.

### **CONCLUSION**

These three factors-soft skill, co-curriculum and academic performance will become as helpful indicator in discussing the important element on university graduates employability. In the future, it will help university/institution to outline suitable courses and arrange appropriate activities that may be of relevance to student needs in order to prepare them for the working environment. The findings in this study will give in depth understanding to the underlying needs for the students and will prepare students with importance knowledge and career management skills needed before entering job market place.

### **ACKNOWLEDGEMENT**

Researchers would like to acknowledge the research that led to this study which was partially funded by the Universiti Utara Malaysia.

### **REFERENCES**

- Arogundade, B.B., 2011. Entrepreneurship education: An imperative for sustainable development in Nigeria. *J. Emerg. Trends Educ. Res. Policy Stud.*, 2: 26-29.
- Bridgstock, R., 2009. The graduate attributes we've overlooked: Enhancing graduate employability through career management skills. *Higher Educ. Res. Dev.*, 28: 31-44.
- Cardoso, A.R. and P. Ferreira, 2009. The dynamics of job creation and destruction for University graduates: Why a rising unemployment rate can be misleading. *Applied Econ.*, 41: 2513-2521.
- Cattell, R.B., 1966. The Meaning and the Strategic Use of Factor Analysis. In: *Handbook of Multivariate Experimental Psychology*, Cattell, R.B. (Ed.). Chapter 6, Rand McNally, Chicago, IL., USA., pp: 174-243.
- Feldman, D.C., 1996. The nature, antecedents and consequences of underemployment. *J. Manage.*, 22: 385-407.
- Florea, S. and C. Oprean, 2010. Towards an integrated project: Higher education and graduate employment in Romania. *J. Manage. Sustainable Dev.*, 2: 78-85.
- Green, F. and Y. Zhu, 2008. Over qualification, job dissatisfaction and increasing dispersion in the returns to graduate education. *Series Studies in Economics No. 0803*, Department of Economics, University of Kent, Kent, UK.
- Kinicki, A.J., G.E. Prussia and F.M. McKee-Ryan, 2000. A panel study of coping with involuntary job loss. *Acad. Manage. J.*, 43: 90-100.
- Kougioumoutzaki, F. and A.G. Kalamatianou, 2012. Employment status and job-studies relevance of social science graduates: The experience from a Greek public university. *Int. J. Econ. Sci. Applied Res.*, 5: 51-75.
- MHEM, 2012. *The National Graduate Employability Blueprint 2012-2017*. Ministry of Higher Education Malaysia, Putrajaya, Malaysia, ISBN: 978-967-0334-43-1, Pages: 62.
- Maynard, D.C., T.A. Joseph and A.M. Maynard, 2006. Underemployment, job attitudes and turnover intentions. *J. Organiz. Behav.*, 27: 509-536.
- McKee-Ryan, F.M. and J. Harvey, 2011. "I have a job, but..." : A review of underemployment. *J. Manage.*, 37: 962-996.
- Romani, V., 2009. The politics of higher education in the Middle East: Problems and prospects. *Middle East Brief No. 36*, May 2009, Crown Center for Middle East Studies, Brandeis University, Waltham, MA., USA.

- Schomburg, H. and U. Teichler, 2006. Higher Education and Graduate Employment in Europe: Results from Graduates Surveys from Twelve Countries. Springer, The Netherlands, ISBN-13: 9781402051548, Pages: 178.
- Seiler, M.J., 2004. Performing Financial Studies: A Methodological Cookbook. Prentice Hall, USA., ISBN-13: 9780130479815, Pages: 432.
- Wu, C.C., 2011. High graduate unemployment rate and Taiwanese undergraduate education. *Int. J. Educ. Dev.*, 31: 303-310.
- Wye, C.K., Y.M. Lim and T.H. Lee, 2012. Perceived job readiness of business students at the institutes of higher learning in Malaysia. *Int. J. Adv. Manage. Econ.*, 1: 149-156.