

The Relevancy of Co-Curricular Activities on Graduates Employability: Evidence from a Graduate Unemployment Duration Model

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ABSTRACT

This paper studies the effect of participation in curricular activities on graduates employability. Using a sample of 500 college graduates in 2010, the present study employs a Cox Proportional Hazard Model in order to estimate the unemployment duration of the graduates. The study finds that the effect of co-curricular activities is insignificant on graduate

Keywords: unemployment, employability, extracurricular, graduates

INTRODUCTION

As an initiative to facilitate employment among fresh graduates in the Malaysian job market, the government of Malaysia launched the Graduate Employability (GE) Blueprint in 2012 in order to increase employment opportunities available to graduates. The blueprint serves as a guideline for graduates seeking to obtain requisite skills before entering the job market. As such, the target of the GE blueprint is to produce competent graduates that are able to be employed within six months after graduation.

Poor intake attributes are among the six major issues identified in the GE blueprint concerning graduate employability. Graduate possessing such attributes are characterized as passive spectators who are not interested in questioning, debating, creating, innovating and thinking “out of the box”. The former Minister of Higher Education, in his column concerning the blueprint, mentioned that one of the most common complaints by prospective employers regarding fresh graduates concerns a lack of desirable characteristics, including motivation, leadership and communication skills. For example, prospective employers report that more than 50% of fresh graduates are considered to possess insufficient English communication skills (MOHE, 2012).

For fresh graduates, personal development should begin while attending university. One theory argues that the greater the level of student involvement in college, the more the student gains in relation to personal development (Astin, 184). Student involvement refers to the quantity and quality of the physical and spiritual energy that students devote to extracurricular activities during their college experience. Participation in extracurricular activities is one example of activities that improve soft skills among students. In fact, success during the later stages of one’s profession is influenced by knowledge gained by the individual through involvement in extra-curricular activities while attending university (Vermeulen and Schmidt, 2008). Extracurricular activities provide students with hands-on skills and training, alongside opportunities to increase self-esteem. Many studies show that student participation in sports, clubs and societies increase graduate employment prospects (Brown & Scase, 1994; Purcell & Hogarth, 1999).

The present paper fills the existing gap in literature concerning the effect of extracurricular activities on future employment by performing an econometric examination of whether extracurricular activities shorten unemployment duration of Malaysian graduates in the Malaysian labor market. In

particular, the present study employs the Cox Proportional Hazard Model in order to estimate the effect of participation in extracurricular activities on the duration of unemployment among graduates.

The present study argues that participating in extracurricular activities is considered an individual human capital investment. The involvement in such activities assists in the development of good personal characteristics (e.g., motivation, leadership, communication skills) that will, in turn, strengthen the employability attributes of graduates in the labor market. Thus, the knowledge and experiences gained through participation in extracurricular activities becomes a value added to graduate labor during process of seeking employment. As a result, the unemployment duration of graduates that were involved in extracurricular activities should be lower than other fresh graduates.

LITERATURE REVIEW

In general terms, an extracurricular activity is defined as an activity that conducted after school hours (Zaimi, 1996). Extracurricular activities are also referred to by many other terms, including co-curricular activities, extra class activities, pupil activities, socializing, allied activities, student activities and school activities (Esa, A. Md. Yunus, J & Kaprawi, N, 2012). According to R. Syakir (2009), by enrolling in extracurricular activities, students are able to develop their soft skills through their involvement in formal and informal activities, such as organizing seminars, workshops and conferences.

Some studies show a positive relationship between extracurricular involvement at the secondary school and university levels and certain aspects of students personal development Johari & Sutinah 2010; Noraini & Norashidi 2010; Hassan, Ahmad & Bahari 2008; Tieu et,al 2010). Johari & Sutinah (2010) examine the awareness among students concerning the effects of participation in extracurricular activities on their personal development. The results indicate that 89.2% of students agree that a strong relationship exists between involvement extracurricular activities and personal development, especially in regards to communication skills with peers.

Generic skills obtained through participation in extracurricular activities can influence a student's personal development. A study conducted by Noraini & Norashidi (2010) shows that extracurricular activities enhance soft skills, such as teamwork, leadership and communication skills. The present study is very similar to the study performed by Hassan, Ahmad & Bahari (2008), which examines the perceptions of students towards personal development (i.e., soft skills). Hassan, Ahmad & Bahari (2008) characterize university community programs as a channel through which students can pursue personal development. The study finds that communication is the most obvious soft skills element enhanced through extracurricular community programs.

Consequently, many researchers state that student participation in sports, clubs and societies provide them with an advantage regarding employment prospects after graduation (e.g., Brown & Scase, 1994; Purcell & Hogarth, 1999). According to Knight & Yorke (2004), employability is defined as "a set of achievements-skills, understandings and personal attributes that make graduates more likely to gain employment and be successful in their chosen occupation, which benefits themselves, the workforce, the community and the economy". The definition by Knight & Yorke (2004) is consistent with the findings by Johari & Sutinah 2010; Noraini & Norashidi 2010; Hassan, Ahmad & Bahari 2008, which conclude that student participation in extracurricular activities exposes such students to potential avenues of soft skill and personal development that directly contribute to their employability. Schulz (2008) explains the importance of soft skill in contemporary job markets, which are getting more competitive and require job searchers to be prepared to compete in such an environment. Additionally, Schulz (2008) also notes that candidates who are seeking for jobs must possess sufficient knowledge and soft skills that suit the needs of employers and organizations. McQuaid & Lindsay (2002) emphasize that a lack of basic skills, qualifications and work experience will contribute to a longer duration of unemployment. Surprisingly, Nemanick & Clark (2002) report that extracurricular activities listed on an applicant's resume influences the favorability of the applicant in the eyes of potential employers.

From an employer perspective, Juhdi et al. (2010) find that 90% of the 329 employers sampled in their study agree that high performance; fast learning and adaptation; and good leadership skills are three important criteria that employer looks for during the hiring process. Furthermore, Andrew & Higson (2008) add that employers also search for candidates with have good communication, presentations and team-work skills; and that are able to think outside the box.

DATA DESCRIPTION

The data is collected through a survey conducted among students who graduated in May 2010. The survey is intended to obtain information on graduate job search characteristics and extracurricular background while attending university. The respondents are randomly selected across various universities in Malaysia. The survey is collected through fieldwork; and e-mail correspondence with selected respondents. The survey managed to obtain 515 observations with a response rate of 30%. The key variable in the present study is student participation in extracurricular activities as a determinant of graduate employment. The questionnaire consists of 16 questions that attempt to obtain demographic information of the respondents, such as gender, age and race; information concerning the educational background of the respondents, such as education level, location, date of graduation; employment information, such as date of employment, job suitability, sectors of employment, level of income; and information concerning extracurricular activities at the secondary school, college or university level, as well as the type of involvement.

METHODOLOGY

Duration Model

Since the probit model and OLS ignore much of the information on the actual duration of unemployment, the problem is resolved by estimating a duration model that incorporates all available information regarding a graduates' unemployment period. The Cox model (Cox, 1972) is employed in the unemployment duration model. The information available on unemployment duration in the surveys is discrete, therefore the surveys only provide data concerning the month in which employment is gained by the individuals participating in the survey. Kuhn and Skuterud (2001) explain that such problems make a continuous time duration model inappropriate. Following Kuhn and Skuterud (2001), a discrete time hazard model is estimated. The hazard is assumed to be in the following form:

$$h(t) = h_0(t) \exp((X_i)\beta + \varepsilon) \quad (1)$$

X contains covariates describing the unemployed workers' observed characteristics. The last observation period in this study is month 10. $h_0(t)$ is the baseline hazard model which is allowed to be nonparametric. A partial likelihood method is used to estimate the slope parameter in the β vector.

The Cox model is designed for the analysis of time until an event. In the present study, time until an event refers to the time until graduates find employment. Cox regression is *semiparametric* and does not assume any particular distribution for the shape of the hazard function. Instead, the regression focuses upon predicting the hazard ratio. Thus, the Cox Model is a better choice over all parametric event history models because there is no clear theoretical reason for positing a particular baseline hazard ratio.

Cox Proportional Hazard Model Set Up

The status variable, which is also referred to as the event variable, is the dependent variable in the Cox regression. In the present study, the status variable is a binary variable equal to 0 for remaining unemployed and 1 for finding employment. The status variable is analyzed in relation to a *time variable* (see below) with hazard or survival rates being the central output of the Cox regression. The Cox regression focuses on analyzing the probability of graduates becoming employed during any time period. One does not know the final labor force status for all observations or the time to reach final status because the data contains censored and uncensored cases where the final status may only be determined after the observation period.

The time variable measures the duration to the event defined by the status variable. The time variable in the present study refers to how many months before graduates become employed. The Cox model assumes that the hazard rate increases linearly with time, conditional upon covariates in the model.

Covariates are the predictor or independent variables in the Cox model. Covariates in the present study are all observed characteristics of the graduates, such as age, gender, and education

status. The main covariates indicate the individuals' status on participating in extra co-curricular activities

There are two types of observations in the present study. Individuals who find employment during the study periods are referred to as uncensored observations. Meanwhile, individuals who remain unemployed at the end of study periods are referred to as right censored observations.

Shared Frailty Model

In order to resolve the unobserved heterogeneity problem, the shared frailty model is utilized. The model assumes that the similar observations in a group share frailty, but the frailty varies from group to group. In present study, the graduates are divided into groups according to education level. Since occupation type is not observed for every individual, education level is the best choice to identify different classes of workers. One education group is expected to be more prone to leave unemployment than others for unobserved reasons. In effect, shared frailty causes observations within the same groups of education level to be correlated.

Hazard rates are examined in n observations and g education subgroups. The hazard rate for the n^{th} individual in the g^{th} subgroups will be a function of the covariates and the unmeasured and unobserved frailties of different education groups as follows:

$$h_{gn}(t) = h_0(t) \exp(X_{gn}\beta + W_g\psi) \quad (2)$$

where W_g represents the unobserved subgroup frailties which are assumed to be independently distributed with a mean of 0 and a variance of 1. If $\psi = 0$, then a normal PH model exists. The hazard is then re-expressed as:

$$h_{gn}(t) = h_0(t) V_g \exp(X_{gn}\beta) \quad (3)$$

where $V_g = \exp(W_g\psi)$. Frailty is now shared among the n observations in the g^{th} group. Furthermore, frailty shared model makes the following assumption:

$$V_g \sim \text{Gamma}, E(V_g) = 1, V(V_g) = \theta$$

RESULT AND DISCUSSION

The Cox regression is analyzed using STATA software to examine the unemployment duration among graduates. The variable of interest is the level of participation of graduates in extracurricular activities as a self-development factor affecting employability.

Table 1 shows the Cox Proportional Hazard Regression Model of graduate unemployment duration. The results show that the explanatory variable of active participation in extracurricular activities yields a 9.8% decrease in the risk of hazard to be employed. The result, however, contradicts findings in existing studies, which indicates that participating in extracurricular activities fasten the rate of leaving unemployment.

Nevertheless, the insignificant result concerning the variable of interest in the present study bars putting forward a conclusion concerning the effect of participating in extracurricular activities on unemployment duration. The finding of the present study on this matter can be potentially explained in several different manners. First, the present study does not observe repeat unemployment during the 12 month period of study. Cases may exist where graduates obtained employment at the beginning of study period, but subsequently became unemployed in the middle of the study period and began to search for new employment within the twelve month period of study. Second, the present study does not take into account to what extent the graduates were involved in extracurricular activities that contributed to their prospects of obtaining employment. The sample may include graduates who spent very little time being involved in extracurricular activities. Third, some graduates devoted significant time to extracurricular activities, but opted to obtain employment by means other than traditional labor market channels, such as sponsorship and networking. For example, graduates who were sponsored during their studies are often required to secure employment with the bodies that funded them for a particular period of time. Therefore, such graduates do not enter labor market despite the fact that they have made an effort to pursue self-development by participating in extracurricular activities. Additionally, the possibility exists that active graduates decided not to enter the labor market after graduating due to personal matters or further human capital investment, such as going for training or

continuing study. The exclusion of these active individuals from the present study may lead to the underestimation of the effect of extracurricular activities on the duration of unemployment.

On a different note, the results show that certain factors fasten the rate of leaving unemployment, including being male; ethnic Malay; living in an urban area; and having a degree. For example, living in an urban area where many services and access are available increases the prospects of obtaining employment. Additionally, since most of the jobs are located in urban areas, such a living situation is likely to favor graduates that live in close proximity to a city. On the other hand, other variables show adverse effects on the rate of leaving unemployment. For example, having only a diploma increases the rate of remaining unemployed among graduates. Since job competition is getting tougher, all graduates are expected to have stronger human capital investment. As such, having only a diploma is not sufficient to enter a competitive job market.

CONCLUSION

This study estimates the effect of student involvement in extracurricular activities on unemployment duration using the Cox Proportional Hazard Model. The data are collected from a comprehensive survey on students that graduated in 2010. The study finds that the effect of extracurricular activities is insignificant to graduate unemployment duration. This implies that no clear evidence exists that extracurricular activities serve as a tool to enhance graduate employability. Thus, the findings indicate that educational background remains the relevant determinant for labor employment outcomes.

REFERENCES

- Abu Bakar, Z. (1996). The perceptions of Secondary School Teachers Regarding The Value of Co-Curricular Activities. University of Houston and Aminuddin Baki Institute. Masters Thesis (*unpublished*).
- Andrew, J. & Higson, H. (2008). Graduate Employability, 'Soft Skills' Versus 'Hard'. Business Knowledge: A European Study. *Higher Education In Europe*, 33(4), 411-422
- Astin, A. (1984). Student Involvement: A Developmental Theory for Higher Education, *Journal of College Student Personnel*, 25(4), 297-308.
- Schultz, B. (2008). The Importance of Soft Skills: Education beyond Academic Knowledge. *Nawa Journal of Communication*, 2(1), 146-154.
- Brown, B.K., & Champion, M.A. (1994). Biodata phenomenology: Recruiters' perceptions and use of biographical information in résumé screening, *Journal of Applied Psychology*, 79, 897-908.
- Brown, P. & Scase, R. (1994), Higher Education and Corporate Realities: Class Culture and the Decline of Graduate Careers. *UCL Press*, ISBN No: 1857281047
- Cole M.S., Rubin R.S., Field H.S. & Giles, W.F. (2007). Recruiters's Perceptions and Use of Applicant Resume Information: Screening the Recent Graduate. *Applied Psychology: An International Review*, 56(2) 319,-343.
- Cox, David. (1972). Regression Model and Life Tables. *Journal of Royal Statistical Theory*, 34, 187-220
- Esa, A., Md. Yunus, J. & Kaprawi, N. (2012), The Implementation Of The Generic Skills Through Co-Curricular At the Polytechnics to Fulfill The Industrial Needs In Malaysia. International Conference on Education, May 2012, Athens.
- Farewell, V and R Prentice. (1980). The approximation of partial likelihood with emphasis on case-control studies. *Biometrika*, 67, 273-278.
- Ham. C.Jr. & Jr. S.A.R (1986). Unemployment Insurance and Male Unemployment Duration In Canada. Working Paper. Industrial Relations Section. Princeton University.
- Hassan, H., Ahmad, R. & Bahari, A. (2008). Kemahiran Insaniah Dan Kepentingan Penerapannya Dalam Program Baktisiswa Perdana UniMAP. International Conference on the Roles of The Humanities and Social Sciences in Engineering 2008 (ICOHSE08): 634-644.
- Hassan, J. & Saffar, S.A. (2010). Pembinaan Kecemerlangan Diri Pimpinan Pelajar Menerusi Penglibatan Dalam Aktiviti Kokurikulum Di Universiti Teknologi Malaysia, Skudai, (UTM).
- Hsieh, F. (1995). A cautionary note on the analysis of extreme data with Cox regression. *Am. Statistician*, 49, 226-228
- Juhdi, F. Pa'wan, Mokhsin, H. & Othman, N.A. (2010). Factors Influencing Internal and External Employability of Employees. *Business and Economics Journal*, 11 ,1-10.

- Kinicki, A.J., & Lockwood, C.A. (1985). The interview process: An examination of factors recruiters use in evaluating job applicants. *Journal of Vocational Behavior*, 26, 117–125.
- Knight, P.T & Yorke, M. (2004). *Employability, Judging and Communicating Achievements*. York: LTSN.
- Kuhn, Peter and Mikal Skuterud. (2000). Job Search Method: Internet Versus Traditional. *Monthly Labor Review*, 123, 3-11
- Md Noor, Norani. & Borhan, Noorashidi (2010). Penerapan kemahiran generik dalam kokurikulum di Kalangan Pelajar Tahun Akhir Sarjana Muda Teknologi serta Pendidikan. UTM.
- Nemanick, R.C., & Clark, E.M. (2002). The differential effects of extracurricular activities on attributions in résumé evaluation. *International Journal of Selection and Assessment*, 10, 206–217.
- Purcell, K. & Hogarth, T. (1999), *Graduate Opportunities, Social Class And Age: Employers' Recruitment Strategies In The New Graduate Labour Market*, (London: Council for Industry and Higher Education).
- McQuaid, R.W. & Lindsay, C. (2002). The 'employability gap': long-term unemployment and barriers to work in buoyant labour markets. *Environment and Planning C: Government and Policy* 2002, 20, 613-628.
- Ministry of Higher Education Malaysia MOHE (2012), The National Graduate Employability Blueprint 2007-2012, *Perpustakaan Negara Malaysia* (ISBN 978-967-0334-43-1)
- Rubin, R.S., Bommer, W.H., & Baldwin, T.T. (2002). Using extracurricular activity as an indicator of interpersonal skill: Prudent evaluation or recruiting malpractice? *Human Resource Management*, 41, 441–454.
- Syakir, R. (2009). Soft Skills at The Malaysian Institutes Of Higher Learning. Education Research Institute, Seoul National University, Seoul, Korea. *Asia Pacific Education Review*, 10(3), 309-315.
- UNESCO (2012), Graduate Employability in Asia, *UNESCO Bangkok Asia and Pacific Regional Bureau for Education, United Nations Educational, Scientific and Cultural Organization*.
- Vermeulen, L. & Schmidt, H.G. (2008), Learning environment, learning process, academic outcomes and career success of university graduates. *Studies in Higher Education*, 33(4), 431-51.

TABLE 1: Cox Regression Unemployment Duration Model of Graduates

Variables	Reg. Coeff (b)	SE	p-value	95% CI fo Hazard Ratio	
				Lower	Upper
Gender (0 = Fem 1 = Male)	0.0732287	0.090505	0.418	0.9010829	1.284816
Age	-0.0224366	0.029193	0.442	0.9234365	1.035392
Race					
Ethnic Malay (1)	0.2020315	0.208486	0.333	0.8133508	1.841639
Ethnic Chinese (2)	-0.0875588	0.234204	0.709	0.5789206	1.449868
Ethnic Indian (3)	-0.1276581	0.229827	0.579	0.5609571	1.380982
Edu					
SPM (1)	-0.2371644	1.040499	0.82	0.1026423	6.062828
Diploma (2)	-0.066291	1.016091	0.948	0.1277355	6.856599
Degree (3)	0.1129868	1.075784	0.916	0.1359443	9.221004
Location 0 = Urban 1 = rural	0.1323983	0.091607	0.148	0.9539452	1.36608
Extracurricular Activities 0 = Participation 1 = No Participation	-0.0988685	0.098011	0.313	0.7475411	1.097713