MOTIVATIONS AND PROMOTIONAL OPPORTUNITY OF ACADEMIC CITIZENS TOWARDS OPEN INNOVATION

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Abstract—Education that plays as bedrock of knowledge and innovation has been given high attention in fostering world class innovative human capital. Quality of human capital, intellectual capacity and skills among Malaysian will be polished up by structured programs and strategically crafted plans of actions offer by educations. However, without a group of motivated academicians in supporting and running the programs, the overall prospects will still end up with ineffective upshots. Therefore, this study aims to explore Factors that will motivate academic citizens to participate in Open Innovation activities. In doing so, this study will be relied on three sources of data including data obtain from literature review, formal interviews, and structure questionnaires. It is hoped that findings that will be drawn from this study can contribute to the development of a model of key motivation factors for academic citizens to participate in Open Innovation.

Keywords—Motivation, Promotional Opportunity, Higher Education, Academic Citizens, Open Innovation

I. Introduction

National competitiveness factors has experienced a great shuffle from factors of labour, land and natural resources to potential to produce, acquire, utilize and disseminate knowledge (see OPP3, 2011). Since late nineties, Malaysia has determined this conjuncture and has started its transformation into knowledge-based economy. The transformation process has followed by clear objectives where national competitiveness and progress by the year of 2020s will be supported by innovation-led performance, rather than conventional skills-based (see OECD, 2008).

The process of transformation into knowledge economy has been commented as linchpin for leading Malaysia towards high-income developed country. However, to date it has still found itself stuck within range of middle-income. In order to speed up the overall prospects, four key components which are education, government, industry and ventures are required to increase their progressiveness to promote knowledge and innovation in human capital development.

As one of the four key components in developing an innovation ecosystem, Ministry of Higher Education Malaysia (MOHE, 2010) has undertaken its mission in developing higher education environment that encourages the growth of premier knowledge centres and individuals who are competent and innovative with high moral values to meet national and international needs. Obviously, among the twelve Pillars of Initiatives introduced by MOHE Implementation Plan for Development of Innovative Human Capital at Tertiary Level (2010), the issues of Motivation have been found to be given highest attentions. For instance, Public Awareness and Appreciation that comes under Pillar 2 Initiative has an expected outcome of cultivating high motivated students and Academician staffs. Besides, People Competency under Pillar 3 also expecting both Academic and Governmental staffs are more motivated to innovate. Furthermore, Product/Idea Performance on Innovation under Pillar 6 set a strategy of motivate University to develop technologies and explore innovations for the global world. The statements above have revealed that the factor of motivation among academicians should be clearly determined for successful implementation of the Pillars.

II. Literature Review

Higher Education

Higher education nowadays is holding a key role in achieving knowledge-based economy. It is believed to play a crucial role to stimulate innovation in the creative industries by pioneering and delivering courses, graduates, ideas, opportunities and research. (Stuart Cosgrove, as cited from Geoffrey, 2010). The main competitive advantage offer by higher education is producing academic attainments to contribute to firms and government. Besides, higher education also supplies graduates who are a continual source of innovation. In the theory of Triple Helix, higher education together with industry and government are interacting closely while each maintains its primary role and distinct identity (Chesbrough, 2006). A new and more direct role arises from the Helix further requires higher education to practice “capitalization of knowledge” by organizing their academic and technical knowledge and transfer to firms.

Open Innovation

Open innovation is defined as organizations’ permeable innovation process where projects can be launched from internal or external sources and new technology can enter at various stages (Chesbrough, 2003c). This is often a result of alliance or collaborations between partner firms that results in greater technological innovation and exploitation (Chesbrough, 2006). Open innovation was distinct into two different dimensions: inbound or outside-in open innovation and outbound or inside-out open innovation (Chesborough et al., 2006). Outside-in open
innovation refers to the use of discoveries of third parties and involves opening up to, and establishing relationships with external organizations with the purpose to access their technical and scientific competences for improving its own innovation performance. In contrast, the inside-out dimension suggests that companies look for external organizations with business models that will better exploit and commercialize their particular technology than just depend on their own internal paths to market.

**Motivation**

Motivation is defined by Saraswathi (2011) as the willingness to exert high levels of effort, toward organizational goals, conditioned by the effort’s ability to satisfy some individual need. Three key elements in the definition are further provided as effort, organization goal, and need. Motivation is one of the most important factors in affecting human behavior and performance. The level of motivation an individual or team exerted in their work task can affect all aspects of organizational performance. However, understanding human needs and preferences will not be the same from one to another. Thus, one set of motivation package designed for an individual or groups may not turn up as the same effect to the others. This infact has been earlier supported by Burke (2007), in his article what makes individual do something is not necessary the same for another individual. Moreover, Saraswathi (2011) also commented individuals are showing a discrepancy on their basic motivation drive. As a result, based on Bourgault et al. (2008), organizations should obtain clear understanding in employees’ dissimilarities in needs and preferences for motivation factors to boost up their performance towards overall organization goal.

**Promotional Opportunity**

Factor of promotion refer to the actual change in upward status within organization that employee is serving. It creates the opportunity for employees’ self-advancement, increased levels of responsibility and a higher social standing according to his or her abilities, skills and work (Robbins, 2009). Particularly, promotional opportunities refer to the degree employees perceive the opportunities of their statuses are officially being granted to move upwards within their organization. Employees expect to work in jobs that provide them with opportunities to be promoted to new and challenging positions (see Jane et. al, 2012).

**III. Methodology**

Although motivations topic has being widely discussed throughout industries, there is less research evidence focusing on Higher Education especially on the theory practicability towards Generation Y academicians. As a result, this study will re-employ Herzberg’s Two-Factor theory together with other variables that determine from other sources to analyse their relationships towards academic citizens’ Open Innovation. Objectives of this research are to answer: (1) what are the Extrinsic Factors that will motivate academic citizens to participate in Open Innovation? (2) what are the Intrinsic Factors that will motivate academic citizens to participate in Open Innovation? (3) will the factor of Promotional Opportunity intervine academic citizens’ motivations towards Open Innovation?

This study will explore Personal and Environmental Factors towards academic citizens’ Open Innovation. The academic citizens’ motivational issues will be explored because of the high attention given by MOHE towards implementation of Innovative Human Capital at Tertiary Level. Figure 1 represents the research model of the study.

**Figure 1: Research Model**

The independent variables in this research are Personal and Environmental Factors. The detail of each sub-factor under the Personal-Environmental Factors groups will be determined based on literature review and interviews. In detail, this research will conduct a meta-analysis to study review variety of Content/Process motivation theories that provide motivation factor, such as Self Determination theory (Ryan & Deci, 2009), Herzberg Two-Factor theory that provide two groups of Motivation-Hygiene Factors. Maslow Hierarchy of Need that propose five human needs, McClelland’s Three Needs Theory that propose factors of Achievements, Power and Affiliations, as well as empirical literatures that contribute other factors of motivations. The factors collected will further integrate into two new groups of Personal and Environmental motivation factors.

The intervening variable is academic citizens’ expectation on Promotional Opportunities available in their universities. The detail of this factor will be determined by comprehensive review on selected classification of public Universities’ requirements for job promotions. This process will either start with visiting each university’s homepage to download their policy and procedures for academic staffs’ job promotions or direct made appointments with universities’ registrar office to request for particular information. The criteria for job promotion collected from the selected Universities will be compare and summarize into a detailed list of promotional criteria. The process will follow by designing questionnaire to study respondents’
perceptions in terms of fairness, logical, practicability towards criteria.

And finally, the last dependant variable is Open Innovation. This variable will be measured in actual participation rate. However, the types of rates to measure Academician’s extents of participation will be determine based on literature review and document review.

This study will employ Mix-method approach. Before the approach is implemented, a literature review process for theoretical and empirical papers will be conducted. The process serves a purpose of designing a new combination of Motivation Factors. The process is following with qualitative interview method among public universities in order to filter-out or adding-in Personal and Environmental Motivation Factors prepared in earlier stage. It will later follow by a quantitative cross sectional study throughout selected public universities using electronic questionnaire.

The research scope of this study is academic citizens that work in all public universities in Malaysia. Samples are all academic citizens that experienced or interesting in conducting, participating or supervising in either academic or industrial research. Sample for the survey will be selected based on simple random sampling method. It starts with conducting simple random sampling to draw samples independently from each university accordingly. Next, the samples drawn will be merged together for data analysis. This sampling method will ensure all parts of the population of every university are represented in the research so as to increase the efficiency.

Based on the stated population as of December 2011, there are currently 27,433 academic citizens from twenty public universities (Malaysia Higher Education Statistics, 2011). The population is categorised according to three broad-based Universities that are: Research University, Comprehensive University, and Focused University.

This research has chosen all public universities as population in this research. According to Krejcie and Morgan’s (1970), a sample size of 5243 is confirmed from summing up total population of all public universities with 27433 academic citizens. To create a sample size, a simple calculation was performed as below.

<table>
<thead>
<tr>
<th>Classification</th>
<th>University</th>
<th>No of Academic Citizen</th>
<th>Sample</th>
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</thead>
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<tr>
<td>Research University</td>
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<td>1758</td>
<td>317</td>
</tr>
<tr>
<td></td>
<td>UPM</td>
<td>1469</td>
<td>306</td>
</tr>
<tr>
<td></td>
<td>UM</td>
<td>1859</td>
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<td>2175</td>
<td>322</td>
</tr>
<tr>
<td></td>
<td>UTM</td>
<td>1907</td>
<td>320</td>
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<tr>
<td>Comprehensive University</td>
<td>UiTM</td>
<td>8383</td>
<td>367</td>
</tr>
<tr>
<td></td>
<td>UMA</td>
<td>1552</td>
<td>310</td>
</tr>
<tr>
<td></td>
<td>UMS</td>
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</tr>
<tr>
<td></td>
<td>UNIMAS</td>
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<td>248</td>
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<tr>
<td>Focused University</td>
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<td>1280</td>
<td>297</td>
</tr>
<tr>
<td></td>
<td>UPSI</td>
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<tr>
<td>UMP</td>
<td>671</td>
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<tr>
<td>UMK</td>
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<td>UPNM</td>
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<tr>
<td>Total</td>
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</tr>
<tr>
<td></td>
<td>5243</td>
</tr>
</tbody>
</table>

Table 2: Research Sample Size

Three sources of data will be collected: data from interviews, survey (structured questionnaires) and secondary data as literature reviews and empirical research findings within five years from 2008s to 2012s. This research will start with literature review for motivation theories and empirical literatures that present factors of motivation of academic citizens. All motivation theories despite Content or Process theory will be reviewed in order to collect factors of motivation. Empirical literatures on the subject of motivations will be collected through web sources such as Social Science Research Network or Emeralds. On the other hand, Job promotion criteria of selected Universities will be acquired from their home page or direct request from the department in-charge. Output of this process will bring forward to interview with academic experts in order to further enhance or comb out factors that may or may not influence academic citizens’ motivation and job promotion.

The last instrument in this research is quantitative questionnaire method that will provide a comprehensive descriptive statistics and Structural Equation Model. The questionnaire will consist three sections. In section 1, the respondents are required to fill their demographic profile such as gender, age, position and working experience. By using a five-point Likert-type scale with anchors ranging from “strongly agree” to “strongly disagree”, section 2 requires the respondents to indicate their extent of satisfactions towards motivation factors experienced from their workplace, as well as job promotion criteria available in their universities, while the last section 3 requires respondent to indicate their actual participation rate on Open Innovation. Having designed the survey form, the questionnaire will be sent to a group of academic professionals to ensure the reliability and validity of the instruments. Only those academic citizens who had at least six years’ experience on conducting research will be chosen. Based on their responses, certain adjustments will be incorporated into the final version of the questionnaire such as the wording and the statement clarity of each item. The improved questionnaire will distribute to target respondents by internet instruments. Surveymonkey.com will be selected as medium to reach respondents.

Reliability test will be conducted on data collected from questionnaire. This process is to ensure elements in research variables are accepted as reliable with Cronbach’s Alpha value of 0.7. Data will next move on for SPSS and Structure Equations Model (SEM) analysis. SPSS is able to generate comprehensive descriptive data as well as factors analysis and regression. On the other hand, SEM will supply an all-inclusive analysis of relationships of each item in the questionnaire.
iv. Research Contribution

This research will contribute a model inclusive of academic citizens’ extent of satisfactions on Personal and Environmental Factors, key motivation factors subtract from Personal and Environmental Factors towards Open Innovation as well as the intervening variable of Promotional Opportunity among key motivation factors and Promotional Opportunity.

Besides, this research will offer academic contributions by generating an up-to-date, well categorised list of new Personal and Environmental motivation factors to the body of knowledge in the field of motivation. No doubt that there are numbers of empirical researches concluded discrepancies between academic theories and actual practice as well as other new factors found from recent researches. All motivation factors will determined from literature review on theories and comprehensive study on empirical literatures on the subject of motivation/ job satisfactions/ performance, following by process of compare, sorting and integrate into a new list of Personal and Environmental factors. This research product not only to be used in this research; in fact, it will be helpful for other researchers in their area of social science research.

Lastly, the statistical result of this research will offer both government and universities an opportunity to take a glimpse into academic citizens’ current extents of satisfactions in motivation factors and promotional opportunity, as well as their actual participation level in Open Innovation. Obviously, descriptive statistics generated from the survey is useful for MOHE and universities in observing progress of Implementation Plan for Development of Innovative Human Capital at Tertiary Level, compare extent of satisfactions among the four broad-based universities, and serve as reference in designing future motivation packages or adjust their promotional requirements.

v. Reference


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