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An investigation of the behaviour of agricultural extension and education engineering students in Tehran University towards employability

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Abstract

One of the most significant aims of universities is to educate experts for entering the business market and applying their knowledge in developing the economy of the country. Accordingly, higher agricultural education has a very colossal role in development of the agricultural and employability skills among the students of this field. Therefore, in the present study, employability of the students of agriculture extension and education of Tehran University has been investigated, based on various observational dimensions of Ajzen’s theory of planned behavior, attitude, perceived behavioral control, subjective norm and intention. For this purpose, 42 students of agriculture extension and education of Tehran University reported their information according to the elements of Ajzen’s theory. The data supported and reaffirmed Ajzen’s theory. The first anticipant of the employability was the control of students’ perceived behavior. In the same way, intention toward employability was the most considerable anticipator of the employability behavior.

Keywords: agricultural extension; Ajzen’s theory; employability

1. Introduction

One of the most important economic sectors in Iran is agriculture which supplies the country's food and comprises a considerably high percentage of production and employment. Moreover, agricultural colleges in Iran play an important role because they develop human capital by preparing students for careers in the food, production...
and natural resources industries (Zarafshani et al., 2008). However, the employment of graduates in recent years as one of the serious problems in Iran, according to many experts has shifted and, with officials stressing the need to create jobs in order to get out of this crisis, the importance of this issue has increased. Over the last decade, employability has become one of the most defining concepts of labor market policies. For example, the idea of employability formed one of the four pillars of the European Employability Strategy (Alibaigy et al., 2013). Yorke (2004) believes that employability is a set of achievements such as skills, understandings and personal attributes that in all likelihood graduates are able not only to gain employment but also be successful in their occupations which would benefit themselves, the workforce, the community and the economy.

In this paper the capability of graduates to enter field level activities are considered. Therefore, it is necessary to discuss the employability of B.Sc. (Senior and junior) and M.Sc. levels of agricultural students in general and employment behaviour of agricultural extension and education engineering students, in particular. Universities in Europe were encouraged to promote their higher education if their countries intended to turn into the world’s first economic power. In that statement, a number of approaches were proposed the most important of which was attention to employment. These policies were designed according to strategic objectives of achieving development goals, maintaining employability and enhancing students’ learning experiences (Academic Policy Committee, 2010).

Knowledge acquisition, processing and transmission are of vital importance in today's knowledge-based economy. This is based on the notion that personal capabilities and production require constant updating of human labor and the needs of the most complex in the sense of "employability" is coded (Morley, 2007). Conventionally, employability has been historically expressed as the ability to achieve and maintain employment, both within and across organizations (Finn, 2000). Employability in this perspective is tautological because people who are employed are defined as employable. Fugate et al. (2004) illustrate employability as a person-centred, psycho-social construct, decoupled from one’s employment status. This means that one can be employable without necessarily being in employment.

One theory that prompted research on how some factors affect human behaviour was the theory of planned behaviour. Ajzen and Fishbein suggested in 1980 the theory of reasoned action (TRA) that was thereafter called the theory of planned behaviour (TPB). The theory considers intentional behaviour, because behaviour can be intentional and planned (Figure 1). According to the Theory of Planned Behaviour, attitude toward an action depends on the extent to which a person has a desirable or undesirable evaluation or evidence of the behaviour in question. On the other hand, Social norms are related to the perceived social pressure to carry out the behaviour. In addition, these are linkages to our comprehension of what people in our lives would consider about experience as a peril. According to this framework, beliefs and attitudes can lead to intention and eventually these factors result in a behaviour (Ajzen, 2011). The theory of planned behaviour assumes that behaviour is operation of beliefs appropriate to the behaviour. Behavioural beliefs are postulate to attitudes toward the behaviour. Every belief is joined to the behaviour to achieve a definite result, which is already estimated favourably or unfavourably. Thus, people automatically gain an attitude toward the behaviour in this procedure; people form positive attitudes toward behaviours believed to have favourable corollary and negative attitudes toward behaviours pertinent to unfavourable corollary (Ajzen, 1991:191). Concerning subjective norms, normative beliefs determine their principle elements. Furthermore, normative beliefs are involved with the probability that significant reference individuals or groups agree or disagree to perform a particular behavior (Ajzen, 1991).

![Figure 1. Ajzen's Theory of planned behavior](image-url)
The results of research of Ingram et al. (2000) showed that the single best predictor of intentions was the students' attitudes towards graduate school and how graduate school would be helpful for their future careers. Also perceived behavioural control was a significant predictor of actual application behaviours. In the study by Jiang and Liang (2010), the TPB model explained 39.6% of the variation on the will of the carve-out and explained that there should be more attention paid to alter the employment values of the people who live around the students who study in higher agricultural colleges. In the study by Alibaygi et al. (2013), students showed moderate employability levels, which were significantly different depending on their field of study. The path analysis technique indicated that social class, university obligations, mastery in generic competencies, and agricultural background were the most important factors affecting students' perceived employability, respectively.

Therefore, the current study helps us understand how elements of TPB affect employability behavior of B.Sc (Senior and junior) and M.Sc. levels of agricultural extension and education engineering students at Tehran University. The objectives of this research are:

1. Describing some personal characteristics of respondents
2. Investigation of employability behaviour based on Theory of planned behaviour
3. Investigation of correlation between components based on the theory of planned behaviour and employability behaviour of the students
4. Providing path analysis model of employability behaviour of agricultural extension and education engineering students

2. Method

The statistical population of this research consisted of 64 students who were studying at B.Sc. and M.Sc. levels in the faculty of agricultural economics and development, University of Tehran. Using proportional stratified sampling, 42 students were selected. To collect data, a modified questionnaire was used. The questionnaire was based on published literature on relevant topics and pervious experiments in the field or from past researches (Jiang and Liang, 2010; Abbasi and Akbari, 2011). In order to determine the validity of the questionnaire, content validity was established. The content validity of the questionnaire was obtained using a panel of faculty members and in the course of multi-step correction and revised process. Afterwards, a pilot study was conducted using 25 students. As shown in Table 1, Cronbach's alpha computed to measure reliability of the employability behaviour index was 0.75. In this study, descriptive and inferential statistics were used to analyze the data. Descriptive statistics include frequencies, percentage and mean and inferential statistics include correlation and path analysis.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Number of items</th>
<th>Item dropped</th>
<th>Cronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude towards employability behaviour (ATEB)</td>
<td>1-4</td>
<td>4</td>
<td>0.74</td>
</tr>
<tr>
<td>Subjective norms of employability (SNE)</td>
<td>5-12</td>
<td>8</td>
<td>0.75</td>
</tr>
<tr>
<td>Perceived behavioural control of employability (PBCE)</td>
<td>13-19</td>
<td>7</td>
<td>0.70</td>
</tr>
<tr>
<td>Intentional employability behaviour (IEB)</td>
<td>20-23</td>
<td>4</td>
<td>0.83</td>
</tr>
<tr>
<td>Employability behaviour (EB)</td>
<td>24-25</td>
<td>2</td>
<td>0.72</td>
</tr>
<tr>
<td>Total alpha=0.75</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Result

The sample used in present study consisted of participants of whom 36 (85%) had urban background and 6 (15%) had rural background. There were 21 (50%) females and 21 (50%) males. Students' ages ranged from 20 to 34 years old, with an average age of 23. Also, only 10 (23.8%) of students had entrepreneurial experience and 32 (76.2%) of them had no entrepreneurial experience.

As shown in Figure 1, Ajzen's model suggests a particular casual flow of a set of exogenous variables (attitude, subjective norms and perceived behavioural control) through an intermediary variable (intention) to an outcome variable (behaviour). Since the sample in our study was not large (lower than 150), we examined Ajzen's model with a path analysis technique, which is appropriate for small samples and a frequently applied technique for testing the fit between such a model and observed set of correlations between variables in the model.

So far, we admit that the sample size (N=42) applied in this research is not large and as a result the error bands
around the reported coefficients are wider than they would be with a larger sample size. Nevertheless, the sample size was sufficiently large for all of the zero order and multiple correlations to be statistically significant beyond the .01 level. Although some of the smaller and no significant partial effects may well have been significant with a larger size, which is always the case. If the partial effects predicted by Ajzen's model are considerably smaller than those predicted, we shall consider what the model has supported regardless of whether these partial effects are statistically significant or not.

In order to apply a path analysis, the elements of the model were verified to determine whether they related significantly to each other. Table 2 indicates the correlations among the scales. As shown in the table, all correlations are significant beyond the .01 level (IEB) that is significant beyond the .05 level. Regression analysis revealed that the variables of Ajzen's model explained about 51% variances of the dependent variable (EB) (Table 3).

A path analysis was conducted to examine the fit between the data and Ajzen's model. The model and the resulting path coefficients are indicated in Figure 2. Intentional employability behaviour (IEB) was significantly correlated with the three exogenous variables (ATEB), (PBCE) and (SNE). Behaviour employability (EB) was significantly correlated with intentional employability behaviour (IEB), perceived behavioural control of employability (PBCE) and attitude towards employability behaviour (ATEB), but the partial effect of attitude towards employability behaviour (ATEB) fell short of statistical significance. Also, Ajzen's model includes direct paths to employability behaviour (EB) from all of the variables. The coefficients for this model are shown in Table 4.

### Table 2. Simple correlation among the scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>(ATEB)</th>
<th>(SNE)</th>
<th>PBCE</th>
<th>(IEB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(SNE)</td>
<td>.576</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PBCE)</td>
<td>.588</td>
<td>.573</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(IEB)</td>
<td>.342</td>
<td>.504</td>
<td>.59</td>
<td></td>
</tr>
<tr>
<td>(EB)</td>
<td>.485</td>
<td>.394</td>
<td>.489</td>
<td>.659</td>
</tr>
</tbody>
</table>

### Table 3. Regression analysis of the role of independent variables of employability behaviour (EB)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R^2</th>
<th>R^Adjusted</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter</td>
<td>.719</td>
<td>.517</td>
<td>.465</td>
<td>1.45</td>
</tr>
</tbody>
</table>

### Table 4. Effect coefficients for the path model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ATEB)</td>
<td>.344</td>
<td>.067</td>
<td>.277</td>
</tr>
<tr>
<td>(SNE)</td>
<td>.101</td>
<td></td>
<td>.07</td>
</tr>
<tr>
<td>(PBCE)</td>
<td>.007</td>
<td>.293</td>
<td>.286</td>
</tr>
<tr>
<td>(IEB)</td>
<td>.597</td>
<td></td>
<td>.597</td>
</tr>
</tbody>
</table>

![Figure 2. Path analysis of Ajzen's Theory of planned behavior](image)

4. Discussion

The purpose of this study was to test how elements of the theory of planned behaviour (TPB) affect employability behaviour of B.Sc. (Senior and junior) and M.Sc. levels of agricultural extension and education.
engineering students. We predicted that these elements affect the employability behaviour. Results in this study show how the theory of planned behaviour (TPB) can increase our understanding of the factors that influence and determine students’ employability behaviours. First, the three components of Intention employability behaviour (IEB); Attitude towards employability behaviour (ATEB), Subjective norms of employability (SNE), and Perceived behavioural control of employability (PBCE) were correlated with each other as the theory predicts. Also, these three variables each contributed to the prediction of perceptions of employability behaviours of students. Also, the reason why the Subjective norms of employability (SNE) are not a strong predictor of employability behaviour (IEB) in this study can be due to the fact that most students’ parents did not have any academic education.

All of the four variables including Intention employability behaviour (IEB); Attitude towards employability behaviour (ATEB), Subjective norms of employability (SNE), and Perceived behavioural control of employability (PBCE) predicted employability behaviour. Each was significantly correlated with employability behaviour. This may be the case because they are all significantly correlated with each other, making them redundant. Each of these significantly influences behaviour individually. Also, Intention employability behaviour (IEB) had the biggest effect on employability behaviour (EB). The findings of this study are consistent with those of Ingram et al. (2000) and Jiang and Liang (2010). Also it seems that in this study the theory of planned behaviour (TPB) was partially supported.

Research on the theory of planned behaviour (TPB) could continue in several directions. First, other aspects of students and graduates related to this issue such as entrepreneurial intention can be studied. With respect to this latter topic, a minority of students in this study reported that they had entrepreneurial experience, and therefore this model (TPB) could explain why the minority of students had such an experience.

In conclusion, the results of this study provide some fascinating insights into the employability behaviour of agricultural extension and education engineering students based on the theory of planned behaviour (TPB), but, the present study did not examine other majors of agricultural engineering such as agronomy, animal science, horticulture etc. On the other hand, limitations of the present study include a small size. Therefore, future research to follow will contribute to a more comprehensive study. The results of this study suggest that we have much more to learn about employability behavior of agricultural engineering students.

References
Academic Policy Committee. (2010). Review date: The aim of Glasgow Caledonian University’s Academic Support Policy is to ensure that ...www.gcu.ac.uk/quality/handbook/Documents/GCU GSDS.pdf