An Exploratory Model of Destination Choice by International Students

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Abstract

The export of education is very important to Australia generating some $3.7 billion in 2000. Australian Universities are relying more on this income to offset falling funding from local sources. This exploratory study tests the Lawley & Blight (1997) Factor Analysis model of destination choice by international students from a study destination perspective. A sample of 80 international students was surveyed in a university in Melbourne using the same 20 Lawley and Blight variables. A Principle Component Analysis with a Varimax rotation was conducted and arrived at five separate components. These components were different to Lawley and Blight’s four factors. Two of the Lawley and Blight factors were replaced, to result in the following components: University, Administration, Country, Reference Group, and Costs. Also some of the variables ended up in different components from the previous study. Further collection of data is required to validate these findings. Issues such as the treatment of international students as a global homogenous market are also touched upon. The limitations of Principal Component Analysis are also discussed.

Introduction

According to AEI (2000) there were 153,400 (approximately 14% of enrolments) international students in Australia generating an estimated $3.7 billion for the Australian economy. Almost half of these students were in higher education. Thus Australia’s export of education is very important to our economic well being and to the fiscal welfare of Australian educational institutions. One of the challenges in marketing Australian Education is how do prospective international students choose a study destination over and above alternative host markets such as the United States, Canada or the United Kingdom?

A number of researchers (Bourke, 2000; Duan, 1997; Gatfield, 1997; Hattie, 1997; Kemp, Madden and Simpson, 1998; Lawley, 1993; Lawley and Blight, 1997; Mazzarol, Kemp and Savery, 1996; Pimpa, 2001) have developed models and/or theories that attempt to predict this behaviour. Most of these models appear to measure prospective students in their home country rather than actual students at the study destination country.

This study sought to test the reciprocity of a “Model of destination choice by international students” as developed by Lawley and Blight (1997). Whilst this model measured the intentions of prospective international students coming to Australia over and above other English speaking destinations, the model has not been previously tested with those who actually arrived in a host destination such as Australia.

The Lawley and Blight (1997) model identifies four components that grouped the 20 variables, namely: Course characteristics, Country characteristics, Administrative processes and Costs (See Table 2). These 20 variables were replicated in this study to see if there were any changes that occurred between the home and host (study destination) markets.
Methodology

A questionnaire was developed including each of the twenty Lawley and Blight (1997) variables with Likert five point scales against each. Scale reliability was 0.8915 (Cronbach’s alpha). The questionnaire was circulated in 2001 to international students mainly in business courses at a university campus in Melbourne. This resulted in a return of 80 completed questionnaires. The means and standard deviations are noted in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std Dev</th>
<th>KMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reputation/standard of the courses offered</td>
<td>4.03</td>
<td>0.87</td>
<td>0.802</td>
</tr>
<tr>
<td>Recognition of qualifications</td>
<td>4.30</td>
<td>0.99</td>
<td>0.774</td>
</tr>
<tr>
<td>Opinion of family on where to study</td>
<td>3.23</td>
<td>1.21</td>
<td>0.780</td>
</tr>
<tr>
<td>Opinion of friends on where to study</td>
<td>2.58</td>
<td>1.03</td>
<td>0.587</td>
</tr>
<tr>
<td>Opinion of agents</td>
<td>2.55</td>
<td>1.17</td>
<td>0.825</td>
</tr>
<tr>
<td>Safe place to study</td>
<td>4.04</td>
<td>1.14</td>
<td>0.890</td>
</tr>
<tr>
<td>Likelihood of experiencing racism here</td>
<td>3.43</td>
<td>0.96</td>
<td>0.825</td>
</tr>
<tr>
<td>The way of life</td>
<td>3.83</td>
<td>0.91</td>
<td>0.892</td>
</tr>
<tr>
<td>Potential to immigrate</td>
<td>3.04</td>
<td>1.19</td>
<td>0.607</td>
</tr>
<tr>
<td>Entry to universities</td>
<td>3.96</td>
<td>1.23</td>
<td>0.767</td>
</tr>
<tr>
<td>Being able to get a student visa</td>
<td>3.62</td>
<td>1.33</td>
<td>0.673</td>
</tr>
<tr>
<td>Exemptions available</td>
<td>3.45</td>
<td>1.36</td>
<td>0.889</td>
</tr>
<tr>
<td>Being able to get information on courses and living in Australia</td>
<td>3.59</td>
<td>1.18</td>
<td>0.746</td>
</tr>
<tr>
<td>Being able to work part time(legally work part time)</td>
<td>3.10</td>
<td>1.27</td>
<td>0.711</td>
</tr>
<tr>
<td>Cost of living(comparative cost)</td>
<td>3.90</td>
<td>1.20</td>
<td>0.736</td>
</tr>
<tr>
<td>Climate</td>
<td>3.41</td>
<td>1.08</td>
<td>0.552</td>
</tr>
<tr>
<td>Scholarships</td>
<td>3.07</td>
<td>1.22</td>
<td>0.658</td>
</tr>
<tr>
<td>Geographic closeness to your home country(distance from home)</td>
<td>3.01</td>
<td>1.32</td>
<td>0.473</td>
</tr>
<tr>
<td>Presence of other international students</td>
<td>3.09</td>
<td>1.09</td>
<td>0.727</td>
</tr>
<tr>
<td>Time to complete</td>
<td>3.77</td>
<td>1.21</td>
<td>0.774</td>
</tr>
</tbody>
</table>

A Principal Component Analysis with Orthogonal Varimax rotation with Kaiser Normalization was then performed (See Table 2).

Table 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Rotated Component loadings</th>
<th>Lawley &amp; Blight Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal component – University (Eigenvalue=6.956)</td>
<td>1  0.827</td>
<td>course</td>
</tr>
<tr>
<td>Recognition of qualifications</td>
<td>2  0.747</td>
<td>course</td>
</tr>
<tr>
<td>Safe place to study</td>
<td>3  0.683</td>
<td>country</td>
</tr>
<tr>
<td>Time to complete</td>
<td>4  0.633</td>
<td>costs</td>
</tr>
<tr>
<td>Entry to universities</td>
<td>5  0.537 0.532</td>
<td>administrative</td>
</tr>
<tr>
<td>Principal component - Administration (Eigenvalue=2.206)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being able to get information on courses and living in Australia</td>
<td>0.765</td>
<td>administrative</td>
</tr>
</tbody>
</table>
Exemptions available 0.696 administrative
Potential to immigrate 0.68 country
Being able to get a student visa 0.654 administrative
Being able to work part time (legally work part time)
Principal component - Country
(Eigenvalue=1.415)
Climate 0.765 costs
Scholarships 0.592 0.505 costs
Likelihood of experiencing racism here 0.585 costs
The way of life 0.527 country
Principal component - Reference group influence
(Eigenvalue=1.398)
Opinion of family on where to study 0.622 country
Opinion of friends on where to study 0.812 country
Opinion of agents 0.737 country
Principal component = costs
(Eigenvalue=1.159)
Cost of living (comparative cost) 0.436 costs
Geographic closeness to your home country (distance from home) 0.873 costs
Presence of other international students 0.686 costs

The sample of 80 is a little less than desired for a Principal Components Analysis (PCA) with a number of theorists (Bryant and Yarnold, 1995; Gorsuch, 1983; Hatcher, 1994; Hutcheson and Sofroniou, 1999) recommending samples of between 100 and 300. However Lawley and Maxwell (1971) support the sample with their Significance rule of 51 more cases than the number of variables which equates to a minimum sample of 71. This Significance rule supports chi-square testing which is an aspect of the correlation-focused approach of PCA (Garson 2002).

The Kaiser-Meyer-Olkin (KMO) statistic of sampling adequacy is 0.747, which is in the “Middling” [0.7-0.799] range (Sharma 1996). The KMO statistics were also computed for each variable and only three failed to reach the 0.6 minimum: opinion of friends on where to study, climate and geographic closeness to your home country (See Table 1). The sample was also subjected to the Bartlett test of Sphericity and it was found to be significant at 0.000.

Findings

There were five components with Eigenvalues greater than 1 (See Table 2). These Eigenvalues explained 66% of the variance. This finding is different to that of the Lawley and Blight (1997) study where only four components were identified.

The rotated loadings for the variables were acceptable (> 0.5) except for cost of living which was 0.436. Whilst most of the variable loadings were “clean”, in that they had no near acceptable loadings in other components, three variables entry to universities, being able to work part-time and scholarships all had secondary loadings over 0.5. For the purposes of this study, the highest loading was preferred (See Table 2).
In all of the variables there were significant differences to the Lawley and Blight (1997) findings in the subsequent grouping of variables to their component. Only the component *Administration Processes* was similar in the variables it encompassed (See Table 2). The *Course* component had no relevance due to its variables being spread over the other components and was dropped. Some components due to their multiplicity of Lawley and Blight components were renamed *University* and *Reference group* (See Table 2).

**Discussion**

The Lawley and Blight (1997) data, “was developed from literature, focus groups and depth interviews of international students and exploratory analysis of data from [n=354] Hong Kong students” in 1995 (1997, p7). The sample was from students who might be considering studying offshore. This study, on the other hand was conducted with international students who were already studying offshore. The difference could be explained in part by, intention/speech versus deed (Usunier 2000) or context (Hall 1976) differences.

Some of the Lawley and Blight (1997) variables appeared to be in conflict with the factor groupings such as *Racism* in *Costs* rather than *Country characteristics*. This becomes harder to equate with *Safety* that did appear in *Country characteristics*. The variable *Presence of Other international students* was in *Costs* and not in *Country characteristics*. These inconsistencies were in part corrected when measured with the destination cohort by this study. The secondary loadings in this study also reflect this “combination” of factors/components that students may perceive. Perhaps the time between a student thinking about going to a host country and actually being in a host country acts as some modifier in terms of some factors/components.

Ethnicity of respondents could also be an issue as the Lawley and Blight (1997) sample comprised only of Hong Kong students, where this study had no less than 24 nations represented. By grouping all respondents together in this study does cover up particular weightings and other possible cultural sensitivities. Only a larger study isolating different cultures will overcome this limitation.

This study is limited as it was conducted in one campus in Australia, although it did include both postgraduate and undergraduate students. The postgraduate students in most cases had done their undergraduate degree at another university, often in Australia. Also the cohort in this study were mainly business students yet they represent approximately half of higher education and vocational enrolments in Australia (DETYA 2001).

The timing of the study is also moot as much has happened to influence overseas study destination since the original Lawley and Blight (1997) sample in 1995. Events include the Hong Kong handover, various Taiwan/China disputes, Japanese economic recession, Pauline Hanson/One Nation, East Asian Economic crisis and September 11. The timing of when respondents in this study made a decision to come to Australia varied from 1994 until 2001, no doubt in response to some of the factors previously mentioned. However this is a survey of those who came to Australia, not those who chose to stay at home or go to another destination.

As mentioned previously some variables had multiple acceptable loadings including: *entry to universities, being able to work part-time and scholarships*. Could these be as a result of
ambivalence by respondents to either component as in the case of entry to universities could be equally relevant to the University component as it is to the Administration processes component.

Kreber points out that factor analysis (as in Lawley and Blight’s 1997 study) is a “useful method to identify underlying clusters or relationships among certain phenomena, the interpretation of the results is a fairly subjective, as well as speculative process. Not only would one likely find different factors with a different sample, but someone else might label and interpret the emerging factors quite differently” (2000, p68). This criticism equally applies to Principal Components Analysis as was used in this study.

A limitation with Principal Component Analysis is that it does not emphasise any particular variable as being any more important than any other. For instance Kemp, Madden and Simpson (1998) found from Taiwanese and Indonesian prospective students that education service quality is an important determinant of a study destination. A finding such as Kemp, Madden and Simpson’s could not be derived from a Principal Component Analysis.

The test that this study represents does have one saving value in that it describes components of customers not prospects. We do have some idea of what customers of Australian Higher education look for. What is not known is the difference between those who got to Australia and those who went elsewhere and why they chose an alternative destination.

**Implications for Marketers**

The Lawley and Blight (1997) model is a fundamental tool that helps education marketers identify the underlying factors that guide international students choice of study destination. It was clear that in this reciprocal study that some of those factors/components appear to be differently compiled and actually do not represent the components that are used by international students that reached Australia. The revised components make it easier to identify and communicate factors to reach international students as a cohort.

What is certain is that a larger sample is required across more than one university campus in more courses than business, with sufficient cultural sample representation, to properly validate this exploratory model. This will also deal with the sampling concerns raised earlier in this paper.

In addition further work should be done to have a look at additional variables that prospective international students use to select a destination. Variables such as English language, Time Zones, Medical system/costs are worthy of exploration.

Another issue raised by this study is whether international students are a global market in the terms of converging commonality as espoused by Levitt (1983)? Does this “one approach to suit all” marketing reach the desired market/s? Or are these markets discreet cultural cohorts that need to have more tailored marketing activities? This can only be answered with a larger more robust sample.
References


http://www.aare.edu.au/01pap/pim01016.htm accessed 11/06/02
