Modelling Choice of Destination of Hong Kong Students

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Many universities are interested in knowing why overseas students choose one country over another in which to pursue their studies. Most Hong Kong students who study overseas choose either Australia, the UK, the USA or Canada, but why do they choose one over another? Exploratory research identified 17 variables thought to influence this choice. These variables were structured into a model of choice of destination involving three underlying dimensions: course and country characteristics, administrative processes, and costs. The model and two competing models were tested using data gathered through a questionnaire personally administered to 354 Hong Kong residents intending to study overseas. The model with the best fit contained only course and country characteristics.

Introduction

Education of students overseas is of increasing economic, social and political importance to many countries. Over one million post-secondary students study in another country each year (Kemp 1990), with about 600,000 coming from Asia (Blight 1995). These numbers are predicted to rise to 2.8 million with 1.4 million from Asia by 2010 (Blight 1995). Within the Asian international education market, Hong Kong has traditionally been a major source country as over 20,000 students leave Hong Kong each year to study overseas (AGB 1991). Of these students, about 28% go to the USA, 27% go to Canada, 25% go to Australia and 20% go to the UK. In terms of market share in recent years, the UK has decreased significantly, Canada has decreased marginally, Australia's market share has increased and the USA has remained stable (Cameron 1993).

Although the international education industry is growing and competition is becoming more intense, the study of international education is fragmented (Knight & de Wit 1995; Teichler 1996), with little research into how and why students select a destination country (Lawley 1993). In particular, many studies suffer from four major limitations. Firstly, most are retrospective, that is, done after a student has arrived in a destination (for example, Cummings & So 1985; Steadman & Dagwell 1990). Secondly, most studies gather information on only one destination country rather than gather comparative data on several (Ramirez & Riddle 1991) and the sole study that did get comparative data was done in the 1970s and so is now dated (Rao 1979). Thirdly, many studies identify factors influencing choice but do not attempt to establish the importance of these factors (for example, Steadman & Dagwell 1990; Industry Commission 1991). Finally, many studies use non-probability sampling and so results cannot be generalised (for example, AGB 1991; Molla & Sedlacek 1989).

Better research about how students select one destination country over others would assist destination countries in developing better marketing strategies. Thus, the central question addressed in this paper is 'How and why do students choose a destination for undergraduate university education?' This question is answered by developing and testing a model of choice of destination by students from Hong Kong in relation to the major destination countries of Australia, the UK, Canada and the USA. This study fills the gaps previously identified in the literature by obtaining information before a final decision is made while students are actively seeking information; gathering comparative data on four destinations; establishing the importance of factors influencing choice; and finally using a probability based sampling design. Essentially, we argue that course and country characteristics are more important choice criteria than administrative processes and cost factors.

Literature review and exploratory research

A review of the literature (summarised in Table 1), three focus groups of international students currently studying in Australia and depth interviews with six experts in the field identified 17 variables thought to influence choice of destination. Based on exploratory factor analysis (reported later) these variables

were grouped into three underlying dimensions: course and country characteristics, administrative processes and cost factors. The elements of each of the three dimensions from this exploratory research and where they were identified, are summarised in Table 1.

INSERT TABLE 1 HERE

Survey methodology

Based on the exploratory research, a questionnaire was developed and tested on Hong Kong students in Australia and in Hong Kong. The questionnaire consisted of an initial screening section to ensure that respondents were considering going overseas to study as undergraduates within the next 12 months. This section was followed by a section measuring evaluation and intention to choose Australia, the UK, Canada and the USA. The third section obtained respondents perceptions of each destination country in relation to the factors that influenced choice. All data regarding intention, evaluation and perceptions was collected on five point scales. The final section gathered demographic information.

The questionnaire was personally administered to 354 respondents, systematically selected at a major careers expo in Hong Kong in February 1996. The systematic sampling strategy was based on the number of sessions the expo was open, combined with expected daily attendance figures. A high response rate of 86% was achieved.

Results

The first stage of the analysis was to assess the measurement component of the model. The 17 variables representing factors influencing choice were factor analysed to explore the existence of possible underlying dimensions (Deng Katsikeas & Wortzel 1996). The use of exploratory factor analysis as a precursor to structural equation modelling is supported by Steenkamp and van Trijp (1991), Gerbing and Anderson (1988), and Gerbing and Hamilton (1996).

Based on the results of the exploratory research and the exploratory factor analysis, three models were developed to explain choice of destination as it is recommended that rival models should be tested (Bollen & Long 1992; Morgan & Hunt 1994). The base full model is illustrated in Figure 1. The *full model* proposes that all three factors influence both alternative evaluation and intention and is based on the theory summarised in Table 1. The *first competing model* proposes that the cost factor be excluded from the model and that the administrative processes factor only influences intention and does not influence alternative evaluation. This model is based on the results of the focus groups and depth interviews which suggested that the variables making up the cost factor were not highly important to most students and that the administrative processes do not really influence the choice process until a student actually starts to make applications. The *second competing model* proposes that administrative processes and costs are both excluded from the model. This model is again based on the results of the focus groups and depth interviews that suggested that the course and country characteristics are the most influential variables in choosing a destination.

The dependent variable in all models is choice. Intention was used as a surrogate measure of choice in this study (Engel, Blackwell & Miniard 1987) as students were surveyed before a final destination was chosen. However data was collected as close to the actual choice decision as possible to maximise the relationship between intentions and behaviour (Engel et al. 1987). While the predictive validity of using intention rather than actual choice has been questioned (Cote & Umesh 1988), intention has been used in many studies where research designs and research questions make the use of choice unfeasible (for example, Bitner 1990).

INSERT FIGURE 1 HERE

The structural relationships in the proposed models were tested using AMOS 3.6. The models were tested on data for Australia as a destination, with the results summarised in Table 2. For the *full model*, the chi-square was significant (chi-sq=294(130), p<0.00), and the other fit indices were just outside of acceptable ranges (CMIN/DF=2.261; GFI=0.916; AGFI=0.890; RMSEA=0.06). More specifically, course and country characteristics contributed significantly to both alternative evaluation (CR= 5.520) and intention (CR=4.971), administrative processes contributed significantly to intention (CR=2.484) and costs did not contribute significantly to either alternative evaluation or intention. The squared multiple correlation

(SMC) for alternative evaluation was 38.7 percent while for intention it was 45.1 percent.

For the *first competing model*, the chi-square was still significant (chi-sq=144(75), p<0.00), however the other fit indices were within acceptable ranges (CMIN/DF=1.922; GFI=0.945; AGFI=0.924; RMSEA=0.051). The squared multiple correlation (SMC) for alternative evaluation was 35.8 percent while for intention it was 45.5 percent. For the *second competing model*, the chi-square was still significant (chi-sq=44(26), p<0.01), and the other fit indices were still within acceptable ranges (CMIN/DF=1.708; GFI=0.972; AGFI=0.952; RMSEA=0.045). The squared multiple correlation (SMC) for alternative evaluation remained 35.8 percent but it dropped slightly for intention to 43.4 percent.

INSERT TABLE 2 HERE

From a theoretical point of view, the full model provides a greater degree of richness than either of the more parsimonious competing models and while only of adequate as opposed to good fit, it provides some predictive explanation. Nevertheless, for the purposes of looking at differences across the different destination countries all three models will be used.Having evaluated the three models of choice for the Australian data, the next step was to investigate how these models apply across the remaining three destination countries of Canada, the UK and the USA. For this step the form of the model was kept constant (Bollen 1989) and the similarity of parameters across the four destination countries was assessed, as well as the overall fit. Table 3 summarises the results for Canada, the UK and the USA.

INSERT TABLE 3 HERE

From Table 3 it appears that all models could be considered adequate, with the first competing model slightly better than the other two models. Table 3 also indicates only minor differences in the squared multiple correlations for alternative evaluation and intention for each country across the three models with again the first competing model offering slightly better explanations of these variables. When considering the explanatory powers of the models it can be seen that the models offer the best explanation for Australia and the weakest explanation for the UK.

Before discussing the implications of the research, its limitations should be recognised. First, the same data was used in the exploratory analysis as was used in the structural equation modelling so acceptable fit was not surprising (Mueller 1997). Second, the measures in this study were new scales. However, analysis of the measurement model showed that that these scales were satisfactory in relation to validity and reliability for exploratory research.

Conclusions

This study contributes to the literature by providing insight into the factors influencing choice and their underlying dimensions. The results show that course and country characteristics is the major factor influencing choice of destination, while administrative processes and costs do not contribute to predicting choice. Administrative processes only impact on a student once they have selected a destination and have begun the process of applying for admission, hence once a student has decided on a destination the fact that they may have to wait longer or do more to obtain a visa is not likely to change their choice of destination. Similarly, in relation to cost issues such as comparative financial cost, if a student can afford to go overseas the differences in cost between destinations is in most cases marginal. The results for each destination country have highlighted the relative importance of each of the identified factors to final choice of destination for overseas study and so provided a basis for developing more informed marketing strategies by university administrators and international education consultants and agents.

In addition to the practical outcomes outlined above, this research has contributed to the development of theory in the area of choice of destination by bringing together the existing empirical research and proposing the first comprehensive model of choice. The study is also the first to gather comparative data on four destination countries. Hence this study not only answers the question of why a student selected a particular destination but also answers the question of why another destination was not chosen.

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Figure 1
Full model of choice of destination

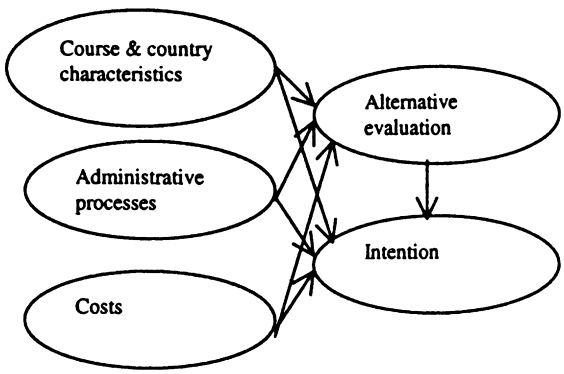

Table 2
Summary of full and competing models (Australian data)

Model	Full Model	Comp-eting 1	Comp-eting 2
Chi square df p	293 130 0.000	144 75 0.000	44 26 0.010
Cmin/df	2.261	1.922	1.708
GFI	0.916	0.945	0.972
AGFI	0.890	0.924	0.952
RMSEA	0.060	0.051	0.045
SMC: alt eval intention	 0.387 0.451	 0.358 0.455	 0.358 0.434

Table1
Variables thought to influence choice

Variable	Source
Course and country characteristics	
Standard of courses	Steadman & Dagwell 1990; Blaug & Woodhall 1985; de Vries & Richter 1988; Rao 1979
Recognition of qualifications	Discussions with experts and focus groups
Standard of teaching facilities	Discussions with experts and focus groups
Opinion of family	Harris & Rhall 1993; Paradigm Communications 1995; Rao 1979; AGB 1991; Chapman 1981
Opinion of friends	As for opinion of family

Level of personal safety	Smart & Ang 1995; Industry Commission 1991; Hill et al. 1992
Way of life	Focus groups
Potential to immigrate	AEC Hong Kong 1992; Nesdale et al. 1995
Administrative Processes	
Ease of entry to university	BIE 1989; Hill et al.1992; Rao 1979
Ease of obtaining a student visa	Hill et al. 1992
Ease of obtaining exemptions	Focus groups
Ease of obtaining information	Stewart & Felicetti 1991
Ability to legally work part-time	Industry Commission 1991
Costs (financial and pyschological)	
Comparative financial cost	AGB 1992; Chandler 1989; Throsby 1986; Back, et al. 1997
Level of racial discrimination	Chandler 1989
Climate	Hill et al. 19921 Industry Commission 1991
Distance from home	Hill et al. 1992; Industry Commission 1991

Table 3
Summary of full and competing models
(Canada, USA, UK)

	Full Model	Competing 1	Competing 2
Canada			
Chi square/df/p	223/130/0.000	123/75/0.000	50/26/0.000
CMIN/df	1.712	1.637	1.926
GFI	0.932	0.951	0.968
AGFI	0.911	0.931	0.945
RMSEA	0.045	0.043	0.051
SMC alt eval/intention	0.369/0.334	0.314/0.334	0.314/0.335
United States			
Chi square/df/p	255/130/0.000	153/75/0.000	74/26/0.000
CMIN/df	1.961	2.040	2.831
GFI	0.925	0.938	0.952
AGFI	0.901	0.913	0.917
RMSEA	0.050	0.054	0.072
SMC alt eval/intention	0.339/0.362	0.300/0.353	0.300/0.321
United Kingdom			
Chi square/df/p	375/130/0.000	196/75/0.000	108/26/0.000
CMIN/df	2.886	2.609	4.164
GFI	0.889	0.921	0.930
AGFI	0.854	0.890	0.879
RMSEA	0.073	0.068	0.095
SMC alt eval/intention	0.349/0.271	0.280/0.269	0.280/0.189