

# Australian Educational Institutions' International Markets: A Correspondence Analysis

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## Biographical Notes:

Dr. Tim Mazzarol is an Associate Professor at the UWA Business School where he teaches strategy, small business management, entrepreneurship and innovation, and marketing within the MBA program. He was Director of the UWA Centre for Entrepreneurial Management and Innovation (CEMI) from 2003 to 2007 and has published widely in the fields of marketing, small business management, entrepreneurship and international education management. Prior to joining UWA in 2001 Tim was a Senior Lecturer at Curtin University of Technology where he was the Executive Director of the Bank West Entrepreneurship and Business Development Unit, and also a Research Fellow with the Institute for Research into International Competitiveness (IRIC). He holds a PhD in management and an MBA with Distinction from Curtin University, and a Bachelor's Degree with Honours in Arts and a Bachelor's Degree in Education from Murdoch University. Prior to undertaking his academic career Tim served as a diplomatic officer with the Australian Department of Foreign Affairs and Trade for 10 years and as a manager with National Mutual Life. He is member of a member of the editorial review panels for the Journal of Small Business Management and the Small Enterprise Research: The Journal of SEAANZ.

Dr. Geoffrey N. Soutar is a Professor at the UWA Business School and the former Director of the Graduate School of Management (GSM). He holds an MA and a PhD from Cornell University. He has been with UWA since 2000. Prior this he was at Edith Cowan University from 1994 where he served as Professor of Management and Executive Dean of the Faculty of Business and Public Management. Before joining ECU, he was Foundation Professor of Management and Head of the School of Management at Curtin University. Professor Soutar has been an active researcher in marketing and management for more than a quarter of a century and was made a distinguished member of ANZAM for his contribution to management research and an inaugural Fellow of ANZMAC for his contribution to marketing research. He has been involved in a number of pioneering studies into innovation in small and large firms and the process of new product development. As well as having an academic role, Professor Soutar has been a Head of Department and Executive Dean for more than twenty years. In that time he developed strong research teams in three universities, being involved in the creation of the Institute for Research into International Competitiveness (at Curtin), the Small and Medium Enterprise Research Centre (at ECU), the Centre for Entrepreneurial Management and Innovation (at UWA) and the Integral Leadership Centre (at UWA).

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## Abstract

**Purpose** – the global market for international students have become highly competitive and many institutions, particularly higher education institutions, rely heavily on fee income from overseas students. This study examines the countries from which Australian education institutions draw such students and used this information to better understand such patterns.

**Methodology** – Data were obtained from a sample of 225 schools, colleges and universities that were actively engaged in the recruitment of international students and correspondence analysis and cluster analysis were used to examine the recruitment choices made by these institutions.

**Findings** – It was clear there were three groups within the data that had different recruitment strategies. Group 1 (Local Players) institutions were primarily established to cater to the needs of international students studying in Australia and had a narrowly focussed recruitment strategy. Group 2 (Global Players) were institutions (mainly universities) operating both within Australia and offshore who recruited widely. Group 3 (Minor Players) institutions were mainly high schools that engaged in international student recruitment only on an ad hoc basis.

**Research limitations and implications** – The study was undertaken within a single country. However, the findings, which highlighted the international student recruitment patterns of the responding education institutions, suggested they paralleled the types of activity found among other types of exporting firms.

**Practical implications** – the paper suggests managers in educational institutions seeking to engage in overseas markets must make a strategic choice as to the level of their commitment to internationalisation and that this will impact on the choices they make about the way they recruit international students.

**Originality / value** – There are few studies of education institutions in the international marketing area and even fewer have examined the issue of geographic recruitment choices. This study provides useful statistical evidence of the types of strategies that are likely to be found in this sector.

**Keywords** – international education, strategic marketing, recruitment choices, differentiation

**Paper type** – research paper.

## **The Global Market for Education Services**

The international demand for educational services grew strongly throughout the last century, driven by rising levels of affluence within key sending countries and the commercialisation of education within key supplier countries. For example, on a global basis enrolments in secondary education grew tenfold from 40 million in 1950 to over 400 million by 2000. During the same time period enrolments in tertiary level education increased around fourteen times from 6.5 million in 1950 to over 88 million in 2000. By the start of the twenty-first century four out of ten young people living in the 30 OECD<sup>1</sup> countries were likely to enrol in university (OECD, 2007). The impact of this growth in demand for education has been a significant rise in the number of students seeking to study outside their own country. Over the period 1995 to 1999, total enrolments of international students throughout the OECD countries grew by 9 percent, compared to 5 percent growth among domestic student enrolments. This international trade in education services generated around \$US30 billion revenues in 1999 (Larsen and Vincent-Lancrin, 2002). From an estimated 1.4 million students studying overseas in the early 1990s, the global international students “market” reached 2.5 million in 2004 (UNESCO, 2007). Forecasts suggest that, by 2025, there will be more than 7 million students studying overseas (Boehm, Davis, Meares and Pearce, 2002). Such has been the growth in the international trade in education services that many governments throughout the OECD (where the main supplier countries are found), have begun to view international education as a critical driver of education policy. Governments and institutions have

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<sup>1</sup> Organisation for Economic Co-operation and Development (OECD)

responded by enhancing the accessibility of their education sectors to overseas students and internationalising the curriculum that is taught there (Kameoka, 1996).

The internationalisation of the education sector began in earnest in the 1980s and continued strongly through the 1990s, triggered by a series of “push “ factors originating from sending countries, but facilitated by “pull “ factors inherent within the supplier countries. The “push “ factors included a lack of available places within students’ home countries, the absence of such courses at home, a desire to learn more about overseas countries and a desire to migrate. The most common “pull “ factors were knowledge of the host country, perceived quality of education in a host country, recognition of prior qualifications and the recognition of the host country qualifications in the student’s home country (Mazzarol and Soutar, 2002).

For international students with the capacity to study overseas, the reputation of the supplier country and its educational institutions is a major factor influencing selection of a study destination. Countries such as the United Kingdom, Australia, the United States and New Zealand have become important study destinations for such students as they are seen as having good quality education systems, flexible entry and qualifications that are well recognised internationally (Bourke, 2000). International students have also become increasingly important to Australia’s educational institutions, which were the focus of the present study.

Australia has a small, but high quality, education sector and, since the mid-1980s, has become a major participant in the global trade in education services (Mazzarol and Soutar, 2001). In 2002 there were more than 250,000 international students enrolled

within its institutions, contributing more than \$5 billion to the Australian economy (AEI, 2003). By 2006, international education services were ranked as the nation's third fastest growing export industry after coal and metals ores (IDP, 2006). The majority of Australia's international students came from countries in the South East Asian region, particularly China, Singapore, Hong Kong, Malaysia and Indonesia, where geographic proximity and unmet demand at the local level boosted the trade (Technology Industry Advisory Council, 2000). However, it is unclear whether Australia's educational institutions recruit in the same countries or whether they have chosen to focus on a subset of potential source countries. The present study, which is discussed in subsequent sections, was undertaken to examine this issue.

### **The Present Study**

As mentioned earlier, the study investigated the countries from which Australian education institutions recruited students. Australian schools, colleges and universities involved in international education must be registered on the Commonwealth Register of International Courses for Overseas Students (CRICOS) Database, which is maintained by the Australian Federal Government. At the time of the study, 920 institutions were listed in the CRICOS Register, although a telephone survey of all institutions found only 828 as some institutions were no longer in operation or involved in international education. A questionnaire was mailed to these institutions and a total of 258 responses were received, giving a response rate of 30 percent. A number of these institutions returned partially completed questionnaires or explained that they did no international marketing. As a consequence, a final sample of 225 was obtained. The sample included universities (9%),

VET colleges (both private and government) (17%), ELICOS colleges (9%), secondary schools (both government and private) (60%), and other institutions (e.g. Bible colleges) (6%). This sample was representative of the CRICOS register and, therefore, of the Australian international education sector.

The questionnaire asked about the institutions' international education activities and was completed by a person within the institution with direct responsibility for the recruitment of overseas students. An important focus of the questionnaire was the markets or the source countries or regions from where international students were recruited. As respondents were asked to indicate whether or not they recruited students from a list of major source countries or regions, it was decided to use correspondence analysis to examine these data as this procedure is useful when data are categorical (Hoffman and Franke, 1986; Green, Schaffer, and Patterson 1988; Soutar and McNeil, 1995; Gonzalez and Bello, 2002). Correspondence analysis "is an easy-to-interpret perceptual mapping tool that is appropriate for analysing categorical data" (Javalgi, Whipple, McManamon, and Edick 1992). It can be considered as a principal components analysis for nominal data. Its results can be interpreted in a variety of ways. The eigenvalues associated with the solution show the inertia (which is an analogue to variance in principal components analysis) explained by the various principal axes and the sum of the eigenvalues shows the total inertia explained (which is an analogue to the variation explained in traditional multivariate analysis).

The inertia associated with each axis (or dimension) can be broken down into the proportions explained by the various row (or column) points and can be used to decide the 'quality' of a particular row or column variable (Hoffman and Franke, 1986); which

is analogous to a communality in a factor analysis. A high 'quality' suggests the results obtained provide a good representation of that aspect (row or column) of the data, giving insight into the number of dimensions that should be retained. Correspondence analysis also provides co-ordinate values for each row and column point, which allows the rows and the columns of a data matrix to be mapped. Thus, in the present study, both source regions and educational institutions were 'mapped'. These pieces of information were used in the subsequent analysis, although the educational institution scores were of more interest as they were used to define a recruitment profile for each institution.

The recruitment countries and regions were then cluster analysed to see which regions were related. As only eighteen regions were included in the analysis, a hierarchical cluster analysis was used. The educational institutions were also cluster analysed to see if there were sub-groups of institutions with distinct student recruitment profiles. However, as there were more than two hundred such institutions, a K-means clustering procedure was used in this case. The results obtained from the various analyses are outlined in the next section.

## **The Results Obtained**

The proportions of Australian educational institutions that indicated they recruited students from the various regions are shown in Table 1. As can be seen from the Table, the proportions varied widely. Hong Kong was the most popular recruitment source, followed by Indonesia and Malaysia, which is in accord with the countries from which Australia recruits most of its students (AEI, 2006). Interestingly, Japan and Korea were also popular regions, which is not surprising as they are major markets for Australia's

ELICOS language schools and a number of these types of schools were included in the sample. The Middle East, the minor ASEAN countries and South Asia were the least popular regions. The average number of regions from which institutions recruited students was 5.99, which suggests there are patterns of recruitment that need to be investigated. As noted earlier, correspondence analysis provides a way through which such patterns can be determined.

**Table 1: Proportion of institutions that recruit in the regions (Overall and Group)**

RECRUITMENT SOURCE	OVERALL	GROUP 1	GROUP 2	GROUP 3
Malaysia	0.58	0.58	0.96	0.46
Singapore	0.43	0.47	0.93	0.26
Indonesia	0.65	0.85	0.96	0.36
Thailand	0.46	0.77	0.85	0.03
Other ASEAN Countries	0.16	0.16	0.52	0.07
Japan	0.56	0.75	0.81	0.30
Korea	0.49	0.62	0.85	0.25
Taiwan	0.44	0.62	0.81	0.13
China	0.27	0.24	0.85	0.14
Hong Kong	0.69	0.86	0.96	0.43
Pacific Countries	0.31	0.20	0.81	0.28
India and Pakistan	0.22	0.09	0.85	0.18
Middle East	0.10	0.02	0.67	0.03
Africa	0.11	0.04	0.44	0.09
North America	0.13	0.04	0.59	0.09
South America	0.07	0.05	0.33	0.01
Western Europe	0.23	0.24	0.56	0.12
Eastern Europe and Russia	0.09	0.08	0.30	0.04
Number of Countries from which students are recruited	5.99	6.68	13.07	3.29



The statistical aspects of correspondence analysis, which were outlined earlier, have been well discussed by Greenacre (1984) and Hoffman and Franke (1986). A six dimensional solution, which explained 58 percent of the inertia in the data and ensured a high quality result for the various regions (as quality ranged from 0.43 for Taiwan to 0.70 for Africa), and also represented the educational institution's recruitment patterns well, was found to be appropriate in the present case. As it is extremely difficult to show a six dimensional outcome graphically, a clustering approach was used to examine the relationships between the countries and regions and the educational institutions.

The relationships between the countries and regions were examined first. As there were only eighteen countries or regions, Ward's hierarchical clustering algorithm (Hair, Black, Babin, Anderson and Tatham, 2006) was used and a dendrogram, which is shown in Figure 1, was drawn to illustrate the various relationships. As can be seen from the Figure, Malaysia and Singapore were grouped together and also joined into a larger group of South East and East Asian countries. These countries were the major source of Australia's students and so it was not surprising that they grouped together. Interestingly, newer markets (South Asia, Pacific, China and minor ASEAN countries) also joined into a larger group. Less common source countries (e.g. Eastern Europe and Russia and South and Central America) were outliers.

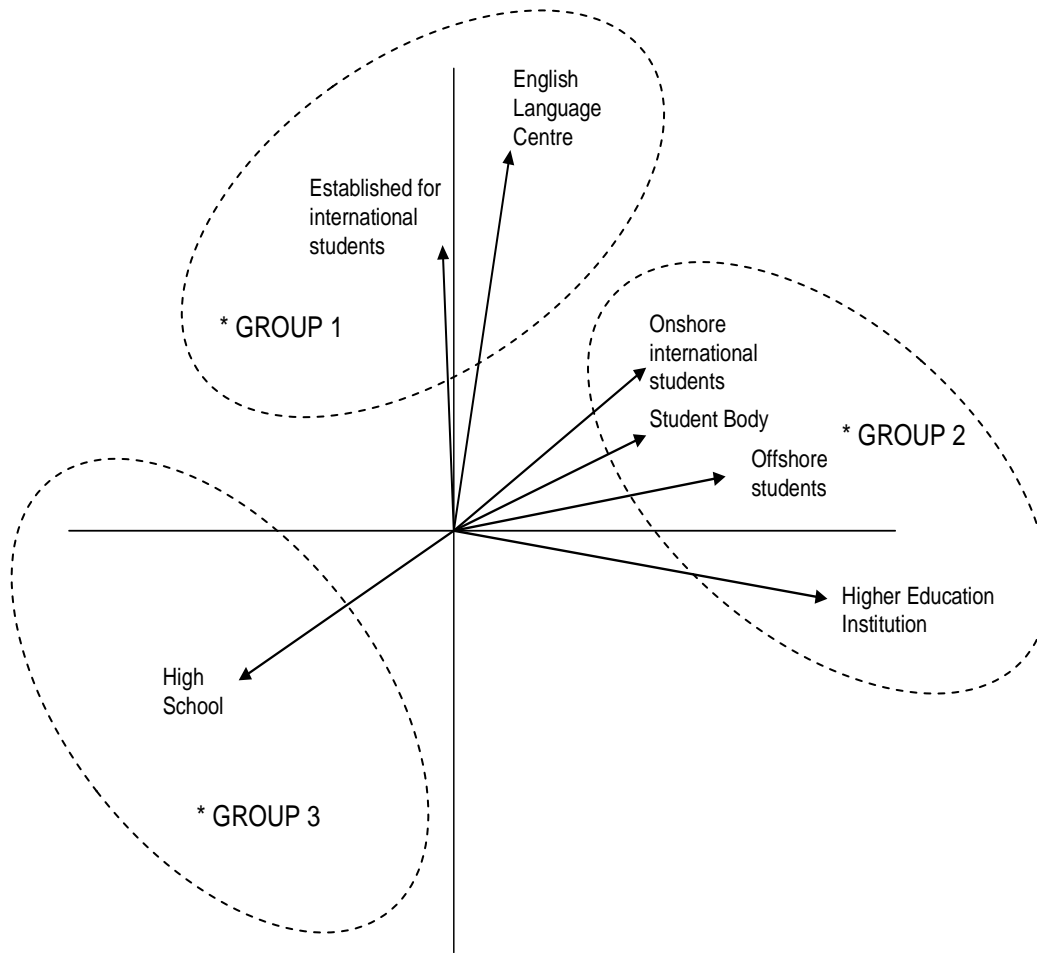


members (43% of the sample) are minor players. They are less concerned about international students and market into very few countries, all of which tend to be in the “local” region. These institutions are generally reactive, in that they likely to accept students who apply but are less likely to have an active international marketing program.

Respondents were also asked a number of questions about their organisations and this information was used to see whether there were differences in the types of institutions in the three groups. In particular, respondents had been asked:

- Whether their institution was a university or polytechnic, a high school or an ELICOS language centre.
- How many international fee paying students they enrolled in Australia and in offshore programs.
- How long they had been involved in recruiting international students.
- Whether the institution had been established to cater for international students
- About the size of their institution.

As the variable of interest (group membership) was nominally scaled, discriminant analysis (Klecka, 1988) was used to examine the differences between the groups. The analysis found two significant functions that, using the I-squared statistic suggested by Peterson and Mahajan (1976), which explained 35 percent of the variation between the groups.



**Figure 2: Background Differences between the Groups**

The differences can be shown diagrammatically as in Figure 2 (Soutar and Clarke, 1981). The structural correlations, which are drawn as vectors in the diagram, show the relationship between the variables and the estimated discriminant functions. The head of the vector shows the direction of the relationship, while the length shows the strength of the relationship. As can be seen from the Figure, the groups were very different in terms of institutional type. Group 2 (the Global Players) were more likely to be Higher Education institutions, Group 3 (the Minor Players) were more likely to be high schools, and Group 1 (the Local Players) were more likely to be English language centres that had

been set up to cater for international students. Not surprisingly, as Group 2 were the higher education institutions, Group 2 members were larger and had more international students than did either of the other two groups.

## **Discussion of the Findings**

The study suggests Australian education institutions have differentiated international marketing strategies with clear differences across the sector. Group 2 members (Global Players) source students from a wide range of overseas markets and often have forward integration strategies with offshore teaching programs that are used to boost their market position. Most of these institutions were large and were, typically, universities. These institutions have the resources to undertake major international marketing campaigns and to form and sustain joint-ventures in overseas markets.

Group 1 members (Local Players) focus on a smaller number of geographically close markets from which there is an established flow of overseas students. As most of these institutions were private VET or ELICOS Colleges this pattern was unsurprising. Such institutions generally offer a fairly narrow range of specialist courses that are targeted at profitable markets from which students can be readily recruited. The Asian markets targeted by this group have been “low hanging fruit” for Australia’s international education sector. Many of these institutions serve as feeders into Group 2 members, providing language training or pre-university academic preparation and have strategic alliances with universities within Australia. By comparison Group 3 members (the Minor Players) were smaller institutions such as schools or Bible colleges that appear to be

reactive and that undertake limited international marketing. Such institutions are not likely to have the resources to target more than a few overseas.

These findings are consistent Poole's (2001) qualitative study of five Australian institutions. He found larger institutions aspired to be major international players and sought to achieve this through the formation of strategic alliances with overseas partners and the establishment of offshore teaching programs. The smaller institutions were "opportunistic and ad hoc" in their international marketing efforts and sought niche positions. These smaller institutions saw the merits of establishing offshore programs and forming international alliances, but had little capacity to do this. The factors influencing the internationalisation of these institutions included the availability of the managerial competencies required to fully engage in offshore strategic alliances and global marketing activities.

As was noted earlier, Australia's education sector has done well in the highly competitive global market for international students. The growth of Australia's overseas student enrolments during the 1990s was significantly higher than for all other countries within the OECD (Larsen and Vincent-Lancrin, 2002). However, this rate of growth has slowed and new competitors have emerged from within Europe and Asia as countries, such as France, Germany and Japan, seek to compete. There has also been a change in the nature of sending countries, with traditional markets such as Hong Kong and Singapore moving to become education destinations (Economist, 2006) or knowledge hubs, such as in Dubai's "Knowledge Village " or Qatar's "Education City " (Bain, Luu and Green, 2006). The "mega-markets" of China and India are also moving quickly to build their

own domestic education systems to encourage more of their citizens to study at home (Boehm, Davis, Meares and Pearce, 2002).

These global trends are a reflection of the maturing of the global market in education services, and institutions seeking to maintain a competitive position within international markets will need to adopt increasingly global strategic orientations that are supported by well resourced, sophisticated marketing activities. Quality will always remain the platform upon which to base any future international marketing strategy, but the measuring of quality within education remains highly problematic (Green, 1994). Institutional reputation boosted by active branding campaigns will be an important element for any education institutions seeking to participate in international markets, and this will require strategic support from the highest levels (Chapleo, 2007). The Global Players (of Group 2) are likely to hold a place in the future global market for education services, but Local Players and Minor Players are likely to face significant challenges unless they can find a clear niche position and offer specialised programs to clearly differentiated segments.

## **Conclusions**

Education has become a global industry and education institutions of all kinds have become involved in international education for financial and non-financial reasons. As with any industry there is a need for education managers to think and act strategically in order to secure a competitive advantage (Mazzarol and Soutar, 2007). International marketing require a significant commitment by senior management and a willingness to allocate substantial resources to achieve and sustain a competitive position. As markets

become more saturated, opportunities will emerge for segmentation strategies that offer differentiated services. Even large institutions with the aspiration to be global players are likely to need to differentiate. However, smaller institutions will need to adopt a niche or differentiated strategy, which is a pattern in many industries throughout the world (Porter, 1990).

The study highlighted the stratification of Australia's international education sector and suggests the industry behaves in a similar manner to many others as a small number of large global players dominate, while a larger number of smaller firms seek to compete through finding niches. Interestingly, most of the small institutions seemed to be reactive and to behave in an ad hoc manner.

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