University of Wollongong
Research Online

Faculty of Commerce - Papers (Archive) Faculty of Business and Law

1-1-2008

Linking attitudes and demographics in a tourist segmentation model - a two-stage approach

Uraiporn Kattiyapornpong
Deakin University, pingk@uow.edu.au

Kenneth E. Miller
University of Technology, Sydney

Follow this and additional works at: https://ro.uow.edu.au/commpapers

 Part of the Business Commons, and the Social and Behavioral Sciences Commons

Recommended Citation

Kattiyapornpong, Uraiporn and Miller, Kenneth E.: Linking attitudes and demographics in a tourist segmentation model - a two-stage approach 2008, 1-6.
https://ro.uow.edu.au/commpapers/2295

Research Online is the open access institutional repository for the University of Wollongong. For further information contact the UOW Library: research-pubs@uow.edu.au

Linking attitudes and demographics in a tourist segmentation model - a two-stage approach

Abstract

Segmentation has been widely studied in tourism research e.g. Dolnicar (2004). Dawley (2006) points that commonly used segmentation variables such as demographics lead to identifiable segments which are not actionable while other useful approaches e.g. psychographics, are actionable but not identifiable. The objective of this paper is to develop a two-stage linkage approach to segmentation whereby cluster analysis using psychographic variables is conducted within demographic group. Demographic groups are selected based on propensity to travel. This research utilizes data generated from a cross-sectional self-completed survey of 49,105 Australian respondents on travel and tourism. The managerial usefulness of this segmentation is assessed. Clearly segments can be directly linked both demographically and psychographically.

Keywords

Linking, attitudes, demographics, tourist, segmentation, model, two, stage, approach

Disciplines

Business | Social and Behavioral Sciences

Publication Details

Kattiyapornpong, U. & Miller, K. E. (2008). Linking attitudes and demographics in a tourist segmentation model - a two-stage approach. ANZMAC 2008 : Australian and New Zealand Marketing Academy Conference (pp. 1-6). Canning Bridge, W.A.: Promaco Conventionsat.

This conference paper is available at Research Online: https://ro.uow.edu.au/commpapers/2295

Linking Attitudes and Demographics in a Tourist Segmentation Model – A Two-stage Approach

Uraiporn Kattiyapornpong, Deakin University
Kenneth E Miller, University of Technology, Sydney

Abstract

Segmentation has been widely studied in tourism research e.g. Dolnicar (2004). Dawley (2006) points that commonly used segmentation variables such as demographics lead to identifiable segments which are not actionable while other useful approaches e.g. psychographics, are actionable but not identifiable. The objective of this paper is to develop a two-stage linkage approach to segmentation whereby cluster analysis using psychographic variables is conducted within demographic group. Demographic groups are selected based on propensity to travel. This research utilizes data generated from a cross-sectional self-completed survey of 49,105 Australian respondents on travel and tourism. The managerial usefulness of this segmentation is assessed. Clearly segments can be directly linked both demographically and psychographically.

Introduction

Market segmentation has been widely studied in tourism research using a range of segmentation variables including demographics, socioeconomics, psychographics, holiday activities and a range of travel specific variables. Generally the market is segmented on a single criterion variable to form segments which should be identifiable, substantial, accessible, stable, responsive and actionable (Kotler, 2000). Dawley (2006) points out that there is often a significant problem in implementing the results of segmentation studies. Commonly used segmentation variables such as demographics lead to identifiable segments which according to Dawley, are not actionable while other useful bases for segmentation e.g. psychographics, are actionable but not identifiable. She proposes a linkage approach to segmentation whereby the unit of analysis is not the potential traveller but rather the demographic groups. A limitation of this approach is subsequent averaging of independent variables across demographic groups. The objective of this paper is to develop a two-stage linkage approach to segmentation whereby cluster analysis, using psychographic variables is conducted within demographic group to form final segments which are both identifiable using demographics and actionable using psychographics.

Literature Review

Dolnicar (2004), in a comprehensive study, categorises segmentation approaches using the building blocks of data-based and common sense segmentation. Researchers commonly use socioeconomic and demographic variables to segment markets. Some researchers segment the market on gender, (Balogu and Shoemaker, 2001, Kim, Lee and Klenosky, 2000), income, (Kozak 2002), region (Yuan and McDonald, 1990), motives, (Balogu and Shoemaker, 2001), (Yuan and McDonald, 1990), travel party composition (Bieger and Laesser, 2002) and trip purpose (Bieger and Laesser, 2002, McQueen and Miller, 1986).

However the use socioeconomic and demographic variables in a single-stage segmentation approach does not reveal underlying motivations for travel, because people with similar socio-

demographics do not necessarily possess the same travel interests. Psychographic variables have been used to overcome this shortcoming. Psychographics are used by Perreault, Darden and Darden (1977) to identify five distinct groups of vacation orientation: the budget travellers, adventurers, homebodies, vacationers, and the moderates. Engel and Blackwell (1982) state that the term "psychographics" has come to mean about the same as measurements of activities, interests, and opinions (AIOs). Many studies on the relationship between lifestyle and travel behaviour support the usefulness of lifestyle information. Woodside and Pitts (1976) study differences in the characteristics of tourists. They investigate socio-demographic characteristics, motivations, tourist activities, travel experiences, and lifestyles and values. They conclude that lifestyle information can be used to predict foreign and domestic travel behaviour rather than demographic variables. This is consistent with Abbey's (1979) study which finds that using lifestyle information is more effective than demographic information in designing tour packages. Keng and Cheng (1999) examine different types of international pleasure travellers from Singapore, based on lifestyle preferences sought in travel experiences. They find that the various segments of travellers exhibit differences in their socio-demographic profiles, in the types of tourism activities in which they engage, their novelty-seeking inclination and past travel behaviour. Many researchers attempt to explain consumers' lifestyle patterns in terms of demographics, which are very important in explaining consumer behaviour at that time. However, they do not go far enough.

Davis, Allen and Cosenza (1988) segment Florida residents using attitudes, interests and opinions toward tourism, and find that demographics are of little value in describing segment membership of distinct psychographic segments. Demographic and socio-economic variables are not effective in differentiating British travellers. Taking a holiday or vacation does not mean a change in a traveler's lifestyle. Travellers, of course, continue doing the same things, but in different places. Psychographics including lifestyle and activities, interests and opinions (AIOs) are useful in understanding travel preference, intention, choice and behaviour. Limited research has been conducted in identifying segments which are demographically, pyschographically and behaviorally (travel) determined. This paper utilizes a two-stage segmentation approach which combines psychographic variables, demographic variables and socioeconomic variables to derive segments which are identifiable, actionable and relevant.

Method

This research utilizes data generated from the Roy Morgan Research Centre in Australia (RMRC). RMRC collected these data in 2003 and 2004 from a face-to-face survey and a self-completion questionnaire survey. A large sample of 49,105 Australian respondents was interviewed. The sample is representative of the Australian population and therefore includes travelers and non-travelers. The data collected include a wide range of variables such as media habits, demographics, AIOs, consumer travel attitudes behaviour and intentions, and travel motivations. The framework for segmentation is summarised in Figure 1 below.

Results

The analysis is conducted in stages. Stage one is the formation of discrete respondent groups using a priori analysis. In this study, 180 groups are formed using combinations of age, gender, and income and life stage. The largest group has a sample size of 1,288 respondents. Using the

large data set (n=49,105), a large inventory of binary psychographic items is factor analysed using MPLUS to develop 23 psychographic factors. The average psychographic profiles of the 180 respondent groups are then calculated using factor scores. Table 1 shows the six most frequent demographic traveler groups and the five least frequent demographic traveler groups (domestic short trips in the past 12 months). The first group comprises respondents who are single, male, earn under $20,000 and are over 70 years old. As expected, less frequent traveller groups are poorer older and more like to be single. Group sizes weighted by the Australian population are also shown in Table 1. Propensity to travel domestically varies from a low of 23% to a high of 82%.

Figure 1 Approach to Segmentation

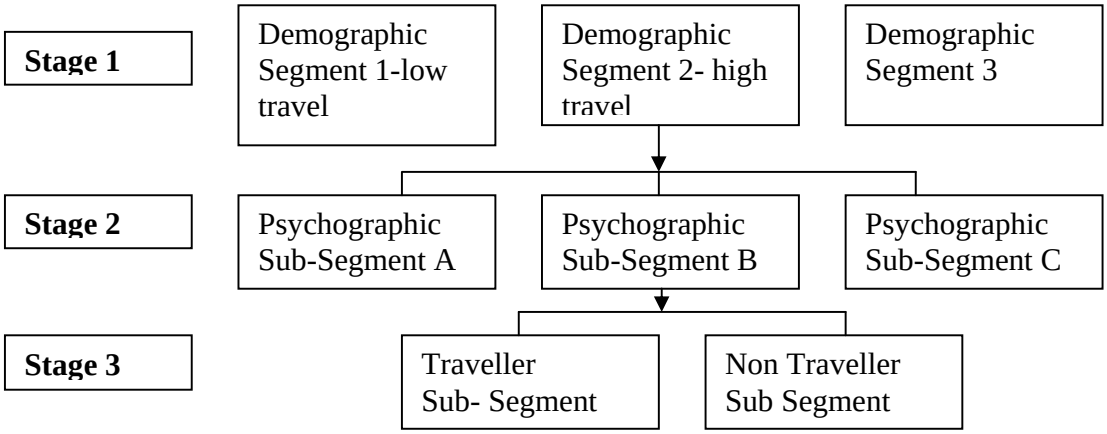


Table 1 Demographic Groups Showing More Frequent and Less Frequent Travellers

Gender	Life Stage	Income	Age	Proportion Domestic Trip	Sample Size	Population Size (Aust.)
Less Frequent Travellers						
Men	Single	Under 19,999	> 70	0.23	426	61,447
Men	Single	20,000 - 34,999	> 70	0.24	143	21,896
Men	Family	Under 19,999	50 to 59	0.24	29	9,563
Women	Single	Under 19,999	40 to 49	0.26	189	26,109
Women	Single	Under 19,999	> 70	0.28	1288	168,032
More Frequent Travellers						
Women	Family	> 90,000	50 to 59	0.70	102	41,551
Women	Family	> 90,000	30 to 39	0.70	677	210,813
Women	Couple	> 90,000	40 to 49	0.70	492	166,056
Women	Couple	60,000 - 89,999	20 to 29	0.70	224	90,927
Women	Couple	35,000 - 59,999	20 to 29	0.70	132	58,297
Men	Couple	> 90,000	30 to 39	0.82	231	122,054

Using the group, or socio-demographic segment as the unit of analysis, regression analysis is used to determine those psychographic factors which are most strongly related to short term domestic travel. 10 significant psychographic factors are identified and are used in subsequent

analysis. It was found that the four most important factors in explaining domestic short trip travel are “well insured”, “work oriented”, “drinking at home” and “stylish cloths shopping”.

Two groups, one most frequent traveller and one least frequent traveller, are selected for subsequent sub segmentation. These segments are Group 6 (Male respondent, single, income below $20,000 and age greater than 70) and group 176 (Female respondent, travel with family, income greater that $90,000 and aged between 30 and 39). A cluster analysis was conducted on each group using the ten psychographic factors. Five travel clusters are derived within each group using the K Means method. The five cluster solution yielded balanced yet substantial cluster size membership. The clusters are therefore both demographically and psychographically determined. A common basis of segmentation in marketing is degree of usage or visitation. Only respondents who actually traveled either domestically or overseas are profiled on the psychographic factors. The means across psychographic factors are shown in Figure 2, for the five cluster sub-segments of the low frequency travelers (Male respondent, single, income below $20,000 and age greater than 70). As expected, significant differences occur across all clusters. The profile of the high travel demographic segments is shown in Figure 3.

All ten clusters can be compared as the psychographic factor scores are measured on the same scale. Cluster 3 in the high group likes stylish clothes and loves food when compared to the other nine groups. Cluster 2 is well insured. Of the low group, cluster 4 is highest on ecotourism, having meals at home and is strongly work oriented.

Figure 2 Psychographic profiles of clusters of male, single, low income and older travellers.

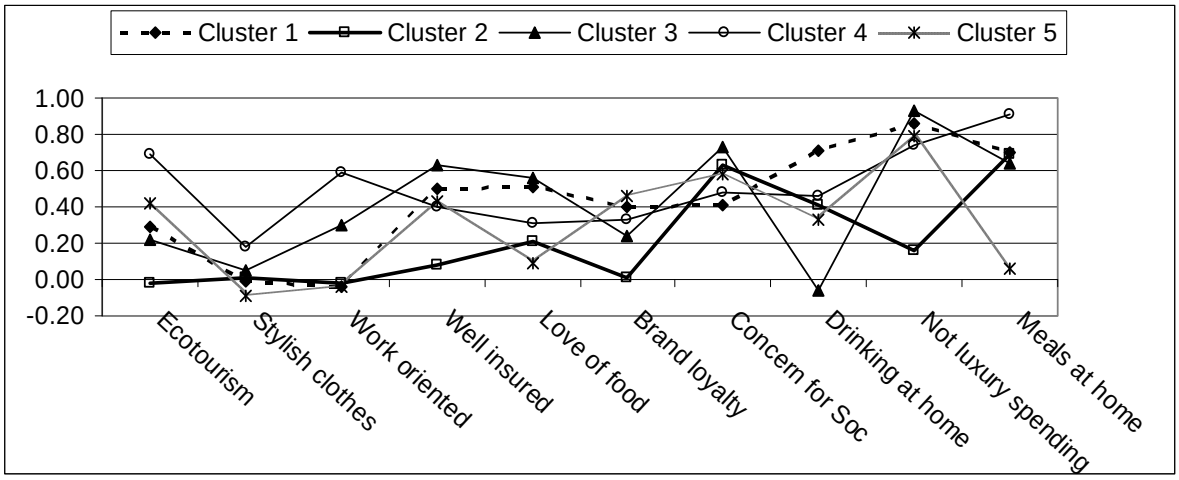
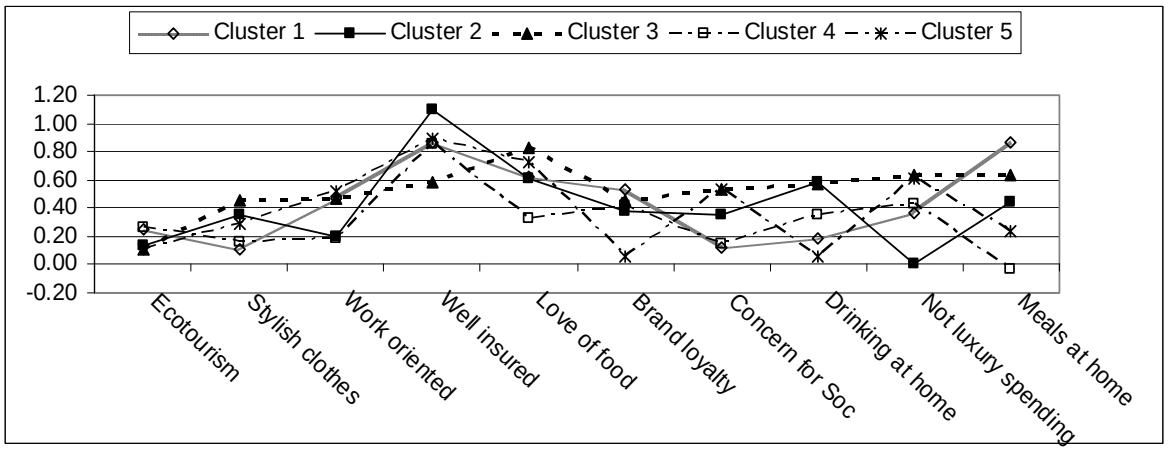


Figure 3 Psychographic profiles of clusters of respondents who are female, travel with family, high income and are aged between 30 to 39 and travel.



Discussion

This segmentation approach is very relevant to marketing management. Clearly segments can be directly linked both demographically and psychographically. Important issues are the variation of psychographics across the many demographic segments. Given the large number of demographic segments, i.e. 180, there is significant variation across demographic groups. There is also significant psychographic variation within each demographic group. Given the significant variation of travel behaviour across demographics and psychographic variables when considered separately, there are significant differences in travel behaviour across the travel clusters which are both demographically and psychographically determined.

These travel clusters can be further profiled on additional variables which are included in the existing data set. These variables include specific travel behaviour, travel destinations, motivation for travel, travel expenditure patterns, media habits and holiday activities undertaken. A third stage of segmentation could be conducted using a commonsense or data drive approach following Dolnicar (2004). Specific criteria to measure the superiority of market segmentation need to be developed. Measures can include segment size, profitability, variability, accessibility, action ability and discreteness. This study provides alternative segmentation views. Stage one of the segmentation yields 180 narrowly defined demographic segments. Stage Two conducts cluster analysis within the socio-demographic segment to yield 5 Travel Clusters for each segment with significantly different profiles. These segments are both identifiable, through socio-demographics and actionable through psychographics. Only the travellers within each cluster are profiled.

The approach segments the entire Australian market. This may not be desirable as some travel segments may not be attractive to travel and tourism marketers. Certainly many of the segments are too small to consider separately. However this approach provides insight into why individuals in low potential segments do travel and why individuals in high potential segments do not travel. Further many sizable yet homogeneous segments can be analysed. Significantly different marketing strategies can be developed for the travel clusters within the demographic segments.

References

Abbey, J.R., 1979.Does Life-Style Profiling Work? Journal of Travel Research, 18 (1), 8-14.
Baloglu, S., Shoemaker, S., 2001. Prediction of senior travelers' motorcoach use from demographic, psychological, and psychographic characteristics. Journal of Travel Research, 40 (1), 12-18.
Bieger, T., Laesser, C., 2002. Market segmentation by motivation: The case of Switzerland. Journal of Travel Research, 41 (1), 68-76.
Davis, D., Allen, J., Cosenza, R.M., 1988. Segmenting Local Resident by their Attitudes, Interest, and Opinions toward Tourism. Journal of Travel Research, 27 (2), 2-8.
Dawley, J., 2006. Making connections. Marketing Research, Summer, 16 – 22.
Dolnicar, S., 2004.Beyond "Commonsense Segmentation": A systematics of segmentation approaches in tourism. Journal of Travel Research, 42 (1), 244-250.
Engel, J.F., Blackwell, R.D., 1982. Consumer Behavior. The Dryden Press, USA (4th Edition).
Hudson, S., 2000. The segmentation of potential tourists: Constraint differences between men and women. Journal of Travel Research, 38 (4), 363-368.
Keng, K.A., Cheng, J.L.L., 1999. Determining tourist role typologies: An exploratory study of Singapore vacationers. Journal of Travel Research, 37 (4), 382-390.
Kim, S.S., Lee, C., Klenosky, D., 2003. The influence of push and pull factors at Korean National Parks. Tourism Management, 24 (2), 169–180.
Kotler, P., 2000. Marketing Management. Pearson Education, Inc., NJ (11th edition).
Kozak, M., 2002. Comparative analysis of tourist motivations by nationality and destinations. Tourism Management, 23 (3), 221-232.
McQueen, J., Miller, K.E., 1986. Target Market Selection of Tourists: A Comparison of Approaches. Journal of Travel Research, 24 (1), 2-6.
Perreault, W.D., Darden, D.K., Darden, W.R., 1977. A Psychographic Classification of Vacation Lifestyles. Journal of Leisure Research, 8 (3), 208-224.
Woodside, A.G., Pitts, R., 1976. Effects of Consumer Lifestyles, Demographics, and Travel Activities on Foreign and Domestic Travel Behavior. Journal of Travel Research, 14 (3), 13-15.
Yuan, S., McDonald, C., 1990. Motivational determinates of international pleasure time. Journal of Travel Research, 29 (1), 42-44.