Executive Summaries

Towards an Understanding of Frugal Consumers

Sarah Todd & Rob Lawson

While both marketing practitioners and academics have tended to focus on actual consumption behaviour, there is increasing recognition of the need to understand why some consumers choose not to buy. Dissatisfaction with the prevalent materialist culture is evident through the advent of global campaigns such as “Buy nothing day” and growth in the number of ‘simplifiers’ (people who are voluntarily choosing to live a ‘simple’ life). Findings from this survey of New Zealand consumers suggest that reasons for non-consumption may be related to certain personal values. In general, those who were low on the frugality measure rated values associated with individualism more highly, while highly frugal consumers placed more importance on collectivist values. This basic pattern is understandable as frugality involves restraints and conservation in use, which is clearly at odds with values relating to power, stimulation and hedonism. One of the exceptions to this general pattern relates to two of the values related to achievement being rated more highly by frugal consumers. As the frugality measure includes items to do with making better use of one’s resources and getting value for money, frugality can be seen as a means to an end and this is clearly not incompatible with achievement as a goal.

Non-consumption, then, appears to be motivated by more than just a concern for the environment and nor is it due entirely to financial constraints. In practical terms, this suggests that marketers will need to look at the promotional messages used to position their products, as conventional themes linking material goods with status and success, or convenience, are unlikely to appeal to frugal consumers. Products will need to not only meet environmentally friendly standards but should also be long lasting and reusable. This may well provide opportunities for firms that are not at the forefront of technological innovation but instead rely on the application of existing technologies. Given the self-sufficient nature of frugal consumers, there are also obvious opportunities for marketers of products associated with the DIY industry.

Components of Wine Prices for Australian Wine: How Winery Reputation, Wine Quality, Region, Vintage, and Winery Size Contribute to the Price of Varietal Wines

Bith-Hong Ling & Larry Lockshin

This research uses James Halliday’s rating of Australian wines and wineries to understand the impact various attributes have on the prices of Australian wine. Using this data set we find several important issues for managers in the Australian wine sector. First, wineries with a better reputation can and do charge more for their wines. This result shows that long term investments in wine quality and developing a strong and positive reputation for the winery itself can pay off in allowing higher prices for all wines, not just the most famous or the rarest. We also found there is a return above the reputation effects for higher quality wine of between 9% and 14% for each quality point awarded by Halliday. It is not surprising that we also found that smaller wineries are able to charge higher prices for wines of the same quality as larger wineries. Finally, our findings show that certain wine regions command higher prices for specific varieties. This result shows that smaller and less known regions can benefit financially from working together as a region to build the regional reputation for specific wine varieties. The research points out the returns gained by better reputations for specific varieties, which can be translated into potential promotional budgets for a certain wine region.

Antecedents and Consequences of Affective Commitment

Josée Bloemer & Gaby Odekerken- Schröder

The results of this study show that affective commitment is an important determinant of word of mouth, purchase intentions, price insensitivity and to a lesser extent of complaining behavior. Affective commitment deals with having a sense of belongingness, being happy of being a customer, feeling emotionally attached and feeling part of the family of the financial service provider. A financial service provider should make sure that a customer is treated as a individual in which the organization is really interested and cares for, giving him/her a true sense of belongingness. Furthermore, the effect of position involvement in stimulating affective commitment must not be overlooked. Position involvement can be created by making sure that the image of the financial service provider comes close to the lifestyle of the customer and that the financial service provider reflects the personality of customers in terms of their values and norms. Moreover, our study indicates that the financial service provider should target those customers who are intrinsically inclined to engage in relationship with financial service providers. Relationship prone customers tend to reveal high position involvement which impacts affective commitment and finally loyalty.

A Contingency Model of Export Entry Mode Performance: The Role of Production and Transaction Costs

Ian Wilkinson & Van Nguyen

A strategic issue facing exporters is the use of different export modes to reach foreign markets. These vary in terms of how much of the export task the exporter takes on for itself versus how much it relies on other firms. At one extreme a firm can sell to a local export agent and not perform any exporting activities. It can take on more of the tasks itself by selling to foreign based agents or distributors, selling directly to foreign customers or establishing a foreign based marketing operation. Much research has examined the choice of export modes but few have examined the performance of these modes under different conditions. This paper reports the results of a study of the performance of Australian manufacturer's export modes.

The research shows how performance can be explained in terms of the efficiency with which a manufacturer can perform exporting activities internally compared to an export intermediary, and the transaction costs of coordinating the different activities within versus between firms. Many factors affect these costs, including the nature of the market transactions involved, experience curve effects, the development of relations between firms over time, the scale and scope of firms international operations, as well as various contextual and institutional factors. Furthermore, these explanatory factors do not operate in isolation from each other and various types of interaction effects occur.

Previous studies have tended to base their analysis of market entry modes on an examination of only transaction costs. But our results show that production costs, the efficiency with which exporting activities can be carried out internally or externally, must be taken into account as well. Access to specialist intermediaries with local expertise and experience and/or which operate on a larger scale and scope, can outweigh the effects of any increased transaction costs. Much variance in the performance of different entry modes, particularly direct exporting, still remains to be explained and we end by discussing some of these, including market and industry specific rules and regulations.

Philosophising on the Elusiveness of Relationship Marketing Theory in Consumer Markets: A Case for Reassessing Ontological and Epistemological Assumptions

Samir Shrivastava & Sudhir H. Kale

Theory development in relationship marketing in consumer markets lags behind applications and prescriptions. We attribute this lack of development, in part, to researchers asking the wrong questions. It appears that scholars have been searching for an objective truth or a "single reality" that would explain the phenomenon in question. A case is made for reassessing the epistemological and ontological assumptions about relationships in consumer markets for it appears that there may be no "single reality" – relationships are essentially socially constructed by people who may have a myriad of motives.

We argue that marketers should take it as axiomatic that consumers generally like to forge relationships. Instead of concentrating on the question, "Why do consumers forge relationships?" the attempt should be to understand, "How do consumers get into relationships with marketing entities?" This subtle shift in emphasis is likely to bring into relief the processes that come into play as relationships are formed and terminated. Besides, such a line of inquiry implies that attention be paid to corollary questions like: When do consumers become more amenable to forming relationships? What can be done to cajole those who are reticent about getting into relationships? What are the situational factors that undermine relationships? We believe that focusing on such questions will better serve the cause of both businesses and consumers.

Towards an Understanding of Frugal Consumers

Sarah Todd & Rob Lawson

Abstract

Consumer frugality has recently started to attract attention, with suggestions that it needs to be understood as a lifestyle. Alternative discussions of frugality posit it as either a personality trait or as a value. This research aims to further our understanding of frugality in some of these respects by examining its association with values as measured using the modified version of Schwartz' value survey. Results of an analysis of frugal and non-frugal New Zealand consumers' values indicate that, although logical significant differences in values do exist, the pattern is too unclear to indicate that frugality exists as a single value. Rather, findings appear consistent with the contention that frugality may be best viewed as a lifestyle choice.

Keywords: Frugality, Values, Lifestyle, Non-consumption

1. Introduction

Frugality, and the associated need to better understand frugal consumers, has only recently captured the attention of marketing academics. Even advocates of the need for this understanding, such as Gardels (2000), have noted that raising the notion of frugality may seem "wildly out of place" in the midst of what he terms 'the greatest consumer boom in history'. However, it is in line with the increasing recognition among consumer researchers that it is important to understand non-consumption as well as actual consumption (Gould, Houston and Mundt 1997), and the parallel move towards what some have termed 'voluntary simplicity' (e.g. Leonard-Barton and Rogers 1980; Kilbourne 1992; McDonald 1998, Craig-Lees and Hill 2002).

Despite only limited attempts by academics to understand those who pursue a frugal lifestyle, there have always been such people in what is prevalently a materialistic consumer culture (Lastovicka, Bettencourt, Hughner and Kuntze 1999). In the current literature there are several different interpretations of the concept of frugality which treat it variously as a personality trait, a single value or a lifestyle construct. Lastovicka et al. (1999), reporting on their development of a scale to measure frugality, offer a conceptual definition of frugality as "a unidimensional consumer lifestyle trait characterised by the degree to which consumers are both restrained in acquiring and in resourcefully using economic goods and services to achieve longer term goals".

The objective of this paper is to further investigate the notion of frugality itself, and in particular how it may be related to more complex and comprehensive assessments of consumer values. In examining this relationship we are aiming to determine two basic issues. Firstly, it should become more clear whether it is realistic to view frugality as a value itself as opposed to a more holistic lifestyle construct as proposed by Lastovicka et al. (1999). Secondly, if it is not strongly associated with any particular group of values, any pattern of values that does emerge from the inquiry will aid our understanding of the antecedents to frugality.

2. Background

Frugality, despite often being associated with various individuals, social groups and religions, has not only been neglected within the marketing literature but very little on the subject has been written by social scientists in general. Nevertheless, a number of perspectives on frugality are identifiable, ranging from the religious to that of 'self-help'. The latter perspective appears most relevant to the study of consumer behaviour, as it advocates the notion that achieving long term consumption goals will, for most consumers, occur only through the denial of short term whims and the resourceful use of extant resources. A key author of such self-help publications (Dacyczyn 1992, 1995, 1997 cited Lastovicka et al 1999) describes frugality as a lifestyle, and includes a number of tips on consuming wisely.

The definition of frugality adopted by those of the self-help perspective is similar to that of the psychologists, who define frugality as the "careful use of resources and avoidance of waste" (DeYoung 1986). The latter's perspective, however, is not of frugality as a lifestyle, but rather a personality trait. It can also be argued though that frugality is a value, with major religions long discouraging giving in to materialist desires, for example the introduction of Calvinism in the 1500s which advocated frugality as a path to salvation.

Self-denial with regards consumption goes against the assumption of others that acquisitiveness and possessiveness are innate characteristics, which are encouraged by contemporary capitalist cultures reliant on competition and striving (Belk 1983). While the argument as to the benefits or otherwise to society of the desire to acquire and possess is beyond the scope of this paper, even a brief look at the ongoing discussion surrounding this issue suffices to demonstrate that both frugality and acquisitiveness can be viewed as more than individual personality traits. Rather they appear to act more as guiding principles or values, driving one's ultimate consumption behaviour. In many ways, this is a similar debate to that regarding materialism (e.g. Belk 1985; Richins and Dawson 1990), which itself can be viewed as the converse of frugality.

In their look at non-consumption (of which frugality is arguably a sub-category), Gould et al (1997) suggest that non-consumption may be due to ongoing dissatisfaction with previous purchases, habit, inertia, failure to remove impediments to consumption, or self-reliance. Habits that dictate our consumption (or lack thereof) may be difficult to separate from learned responses which are then used as decision rules, and may stem from strongly held values. Self-reliance, as described by Gould et al (1997), shares some similarities with what others have termed frugal consumer behaviour. Activities within the category of self-reliance include self-production or re-organising one's available resources. Even then, there is an assumption that DIY will still involve some marketplace interaction. Alternatively, the consumer may act out of self-denial, or 'trying not to try' (Gould et al 1997), which may be motivated by a number of reasons ranging from altruism through to deferred gratification. This may or not be dependent on external motivators such as 'demarketing' (Kotler and Levy 1971), or anti-consumption campaigns.

Recent years have seen increased interest in what has been termed 'voluntary simplicity' (VS), which shares some commonalities with frugality. First coined by Gregg (1936), the term 'voluntary simplicity' is generally depicted as "both a system of beliefs and a practice, … centred on the idea that personal satisfaction, fulfilment and happiness result from a commitment to the nonmaterial aspects of life" (Zavestoski 2002:149). Marketers have responded to the apparent growth in people adopting a VS lifestyle by encouraging consumers to buy 'what they really want', (rather than necessarily buying fewer material things), while writers in the area have been quick to point out that voluntary simplicity is not a form of poverty (e.g. Craig-Lees & Hill, 2002; Zavestoski 2002). Rather than appeals to tightwads or saving the earth through responsible consumption, VS is said to be a reprioritising and a move toward reflecting the 'authentic self', or the "individuality of simplicity" (Kilbourne 1992:161). Much of the earlier work into VS tended to adopt a rather judgemental perspective, with little effort having been devoted to understanding VS as a way of life. Recent work by Craig-Lees and Hill (2002) attempts to address this, and provides a description of people living a VS lifestyle as opposed to non-VS counterparts.

The distinction between frugality (as defined by Lastovicka et al 1999) and voluntary simplicity is not completely clear, yet both have their own streams of literature which (somewhat surprisingly) do not cross-reference each other. One obvious difference is the apparent acceptance among those working in the area of VS of it as a lifestyle choice, while the role of frugality is less well defined. In terms of definitions, there appears to be more of an emphasis on non-consumption as a means of meeting long term goals among those writing on frugality, while VS is not portrayed as a means to an end. Even less understood is the relationship between non-consumption, or frugality, and people's wider value systems.

While studies of Asian cultures' values have explicitly recognised the role frugality plays as such a guiding principle underlying consumers' behaviour (e.g. Anderson and Wadkins 1991; Wang and Rao 1995),

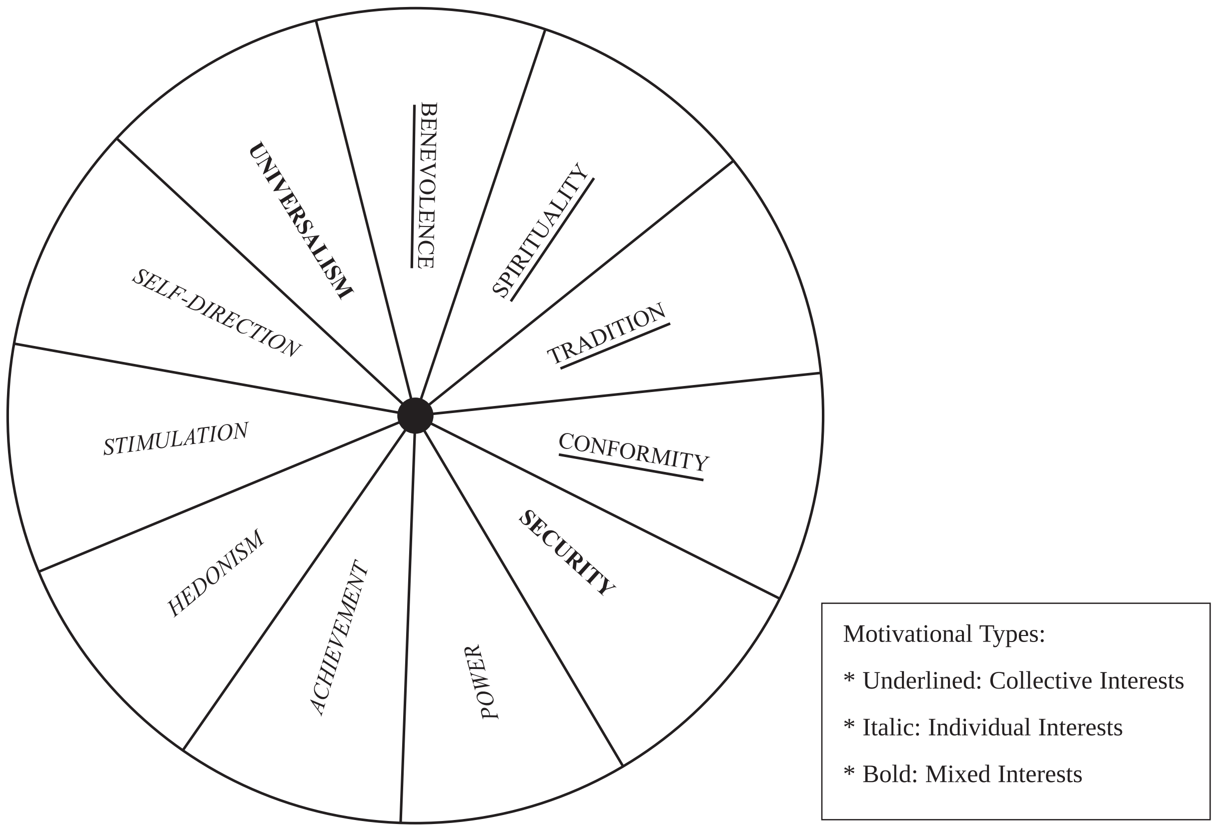


Figure 1: Schwartz' motivational types

Source: Odin, Y., Vinais, J-Y., Valette-Florence, P., 1998. Towards a Revision of Schwartz's Values Inventory: Some Exploratory Findings. In: Balderjahn, I., Mennicken C., Vernette, E. (Ed.s) New Developments and Approaches in Consumer Behaviour Research. Macmillan Press Ltd Houndsmills and London, 35-52.

frugality is noticeably absent from the various inventories designed to measure Western consumers' values. This despite the importance placed upon it by a number of major religions dominant in Western society.

Psychologists (e.g. Rokeach 1968), anthropologists (e.g. Kluckholn 1951) and sociologists (e.g. Williams 1968) generally agree that values are criteria individuals use to select and justify their actions, and to evaluate both their own and others' actions. As Schwartz and Bilsky (1987:551) state, "values are concepts or beliefs, about desirable end states or behaviours, that transcend specific situations, guide selection or evaluation of behavior and events, and are ordered by relative importance". Building on this definition, Schwartz & Bilsky (1987) identify five features specific to values. A value is (1) a belief (2) pertaining to desirable end states or modes of conduct, that (3) transcend specific situations, guide (4) selection or evaluation of behaviour, people and events, and (5) is ordered by importance relative to other values to form a system of value priorities. It is these same five features that are said to distinguish values from the concepts of needs and attitudes (Schwartz 1994). Figure 1 presents a pictorial representation of the eleven motivational dimensions that underlie Schwartz' value system. These motivational areas are said to relate to the individual's objectives (terminal or instrumental) and the interests they are intended to satisfy (individual, collective or both).

Schwartz' structure is developed from the values literature that includes the influential writings of Kluckhohn (1951) and Rokeach (1968), with the measure replicated in over 40 different countries and languages in order to determine any universal structure that might exist. While Schwartz' framework is seen as particularly useful for cross-cultural applications because of its international construction, it provides both a comprehensive list of values and a theoretical structure that can be used to assess the impact of values in any possible context.

More recently, Odin, Vinais and Valette-Florence (1998) tested Schwartz' value structure and have suggested a modified version with thirteen motivational types as its basis. The major differences between this and Schwartz' original structure are shown in Table 1, with the corresponding number of individual value items associated with each dimension in brackets.

Propositions regarding a connection between consumers' values and their actual behaviour are not new within the marketing literature. Henry (1976) and Vinson & Munson (1976), whilst using different value measures, both segmented the car market by size of car. In a similar fashion, Pitts & Woodside (1983) found value structures to be related to product and brand choice criteria for cars, deodorants and vacations. There have also been reports of values being associated with store patronage, price-quality perceptions, leisure attitudes and activities, shopping orientation and media usage (Crosby, Bitner & Gill 1990; Todd, Lawson & Northover 1998). Thus, a variety of relationships between values and actual consumption behaviour have been investigated.

It is therefore the intention of this paper to further extend that body of research by examining non-consumption, specifically the association between self-reported frugality and values as measured by Odin et al's (1998) modified version of Schwartz' (1994) survey of values. Schwartz' approach to determining and measuring values was chosen for use as it is arguably the values measure that has undergone the most rigorous international development and testing to date. Strong

Table 1:
Differences between Schwartz' value structure & the revised structure

Minor Differences	Major Differences	
	Schwartz's Structure	Revised Structure
* Stimulation (4→3)*	Security (11)**	Conservation (3)
* Spirituality (7→3)	Conformity (8)	Conformity (5)
* Achievement (7→3)	Tradition (6)	Altruism (3)
* Hedonism (3→ 2)	Benevolence (7)	Friendship (3)
* Self-Direction (7→ 4)		
* Power (6→4)	Universalism (12)	Ecology (3)
**(Number of items: Schwartz→ Revised Structure)*	***(Number of items in this area)*	Inner Peace (3)
		Humanism (3)

Source: Odin, Y., Vinais, J-Y., Valette-Florence, P., 1998. Towards a Revision of Schwartz's Values Inventory: Some Exploratory Findings. In: Balderjahn, I., Mennicken C., Vernette, E. (Ed.s) New Developments and Approaches in Consumer Behaviour Research. Macmillan Press Ltd Houndsmills and London, 35-52.

Table 2:
Measure of consumer frugality

If you take good care of your possessions, you will definitely save money in the long run.
There are many things that are normally thrown away that are still quite useful.
Making better use of my resources makes me feel good.
If you can re-use an item you already have, there's no sense in buying something new.
I believe in being careful how I spend my money.
I discipline myself to get the most from my money.
I am willing to wait on a purchase I want so that I can save money.
There are things I resist buying today so I can save for tomorrow.

Source: Lastovicka, J., Bettencourt, L., Hughner, R. & Kuntze, R., 1999. Lifestyle of the Tight and Frugal: Theory and Measurement. Journal of Consumer Research 26, 85-98.

association with any one or a small set of related values from that inventory would suggest that frugality might best be viewed from that perspective. Association with a range of diverse and contrasting value statements, however, would indicate support for frugality as a more holistic phenomenon, equating more to a behavioural systems construct such as lifestyle.

3. Methodology

Lastovicka et al.'s (1999) eight item scale of frugality, together with a modified version (Odin, Vinais and Valette-Florence 1998) of Schwartz' (Schwartz 1994; Schwartz and Bilsky 1987) values inventory, were included in a self-completion postal questionnaire sent to 10,000 New Zealanders in November 2000. The mailing list for the survey was acquired from New Zealand Post and designed to be representative in terms of gender and geographic distribution. Of the 10,000 surveys sent, 222 were returned as wrong address or deceased and 3710 fully completed surveys were returned for analysis, giving an effective response rate of 37.94%. Comparisons with census data indicate that the resulting sample provides a representative national sample, with the exception of a slight under-representation of those aged over 65 years.

The measure of frugality required respondents to indicate on a 5-point scale the degree to which 8 statements described them as individual consumers. This was a monopolar scale that varied from 1 "Describes me not at all" through to 5 "Describes me extremely well". (For a list of the eight items, see Table 2.) Responses to the multi-item frugality scale were totalled, giving each respondent a frugality score with a possible range from 5 to 40, with a higher score indicating a greater degree of frugality. It is this total score that is used as the basis for further analysis.

Respondents were also asked to rate the 42 items that comprise Odin et al.'s modified Schwartz value inventory on a scale from –1 through to 5 with regard to how much each item acted as a guiding principle in the respondent's life. Schwartz & Bilsky (1987) first introduced the –1 option to allow respondents to indicate that they were opposed to a particular value, as distinct from it merely being unimportant to them.

In their initial studies, Schwartz' respondents were instructed to first identify and rate the most important and the most unimportant value, and then to complete responses for the remainder of the 'middle ranked' items. These instructions were given in order to overcome bias in answer patterns caused by respondents only using a small section of the scale and some people responding to everything either very strongly or very weakly. While it is certainly true that some respondents have better formed value sets than do others, this has never been accepted as a justifiable reason for these response patterns, which instead are understood to be an artefact of the survey method. For reasons that are not fully understood, Schwartz' instructions unfortunately do not seem to remove the problem and therefore analysis of the values data presented here uses ipsotised scores. One possible explanation is that in a self-completion questionnaire, at least some respondents were not following exactly the instructions as issued. The ipsotised scores are calculated by subtracting each respondent's average score across all values from the scores for each value item. The resulting differences stress the values that are furthest from their average score as the most important in describing their overall values profile, as opposed to the actual raw scores entered in the questionnaire. Ipsotising data is a standard way of treating values and other variables which may be subject to social desirability responses.

4. Results & Discussion

Analysis was initially undertaken to test the reliability of each of the scales used. For Lavstovicka et al.'s 8 item measure of frugality, a Cronbach alpha of 0.76 was obtained, while alphas for the 13 dimensions of the modified Schwartz value scale ranged from 0.61 through to 0.78, with an overall alpha of 0.91. These were considered acceptable for further analysis to be undertaken on the data obtained with those measures.

It should be noted that the lowest alpha happens to be that for the two item dimension and, though generally acceptable, they are not particularly good. Partly for this

Table 3:
Reliability Analysis of Values Dimensions

Value Dimensions	Coefficient alpha
Self-Direction	.66
Power	.69
Stimulation	.73
Achievement	.73
Hedonism	.61
Spirituality	.63
Friendship	.71
Altruism	.63
Ecology	.78
Conformity	.78
Humanism	.62
Inner Peace	.62
Conservatism	.74

Table 4:
Differences between high and low frugality groups

Value	Mean	Sig	Value	Mean	Sig	Value	Mean	Sig
Self-Direction (4 values)			***Power (4 values)***			***Stimulation (3 values)***		
Self-respect	.94 a,b .97	.22c,d .23	Social power	-2.23 -2.62	**.00** **1.00**	An exciting life	.07 -.08	**.00** **.97**
Creativity	.19 .23	.21 .25	Authority	-1.18 -1.33	**.00** **.94**	A varied life	.18 .07	**.01** **.78**
Choosing own goals	.54 .61	**.01** **.69**	Influential	-.86 -.90	.31 .18	Daring	-.82 -.99	**.00** **.96**
Intelligent	.34 .38	.24 .25	Preserving my public image	-.82 -1.02	**.00** **.99**	***Spirituality (3 values)***		
Achievement (3 values)			***Hedonism (2 values)***			A spiritual life	-1.05 -.89	**.00** **.94**
Ambitious	.06 .17	**.00** **.89**	Pleasure	-.14 -.41	**.00** **1.00**	Detachment	-1.33 -1.46	**.01** **.69**
Capable	.54 .62	**.00** **.83**	Enjoying life	.83 .62	**.00** **1.00**	Devout	-1.76 -1.51	**.00** **.98**
Successful	.36 .38	.55 .09	***Altruism (3 values)***			***Ecology (3 values)***		
Friendship (3 values)			Helpful	.08 .14	.07 .44	Unity with nature	-.35 -.18	**.00** **.98**
True friendship	.89 .75	**.00** **.99**	Forgiving	.22 .19	.63 .08	A world of beauty	-.20 -1.62	.30 .18
Loyal	.89 .86	.29 .18	Responsible	.77 .88	**.00** **.99**	Protecting the environment	.06 .16	**.01** **.78**
Honest	1.04 1.09	**.03** **.61**	***Humanism (3 values)***			***Inner Peace (3 values)***		
Conformity (5 values)			Equality	.42 .38	.36 .45	Inner harmony	.53 .62	**.01** **.71**
Politeness	.50 .64	**.00** **.99**	A world at peace	.66 .71	.20 .25	Mature love	.47 .48	.83 .06
Respect for tradition	-.48 -.44	.33 .16	Social justice	.35 .39	.24 .22	A meaning in life	.47 .52	.16 .29
Honouring parents/elders	.49 .56	**.05** **.50**	***Conservatism (3 values)***			***Conservatism (3 values)***		
Obedient	-.26 -.14	**.00** **.86**	Social order	-.26 -.17	**.04** **.55**	Social recognition	-.19 -.41	**.00** **.99**
Clean	.30 .36	.16 .29	National security	-.26 -.14	**.01** **.69**			

[a] The first number in each cell refers to the group lower in frugality; [b] All statistics are rounded to 2 d.p., and are the ipsotised scores; [c] Significance value; [d] Power statistic.

reason we have not attempted to aggregate any of the value items in the analysis and instead have retained all 42 individual values from the scale for separate association with frugality. The use of all 42 items also retains all the possible data that is available to link values with frugality.

Actual scores on the frugality index ranged from 9 to 40, with a median value of 29. The 10% of the sample scoring 29 were removed to enable comparisons to be made between those with lower (42%) and higher (48%) levels of frugality. This method of performing a median split to examine contrasting groups is an accepted method that has been employed in many pieces of consumer research (e.g. Lawson, Todd and Boshoff (2001); Feick and Price (1987)) and also has an advantage in that it avoids assuming potential linearity in relationships that is implicit in other tests such as ordinary correlation and regression. Differences in the means between the two groups were tested using the General Linear Model (GLM) procedure in SPSS. Table 4 details the mean ratings of each value, and shows that 26 (62%) significant differences were observed between the two groups.

Summarising the significant differences shown in Table 4, people lower in frugality score more highly on the values of social power, authority, public image, pleasure, enjoying life, exciting life, varied life, detachment, social recognition and true friendship. The values most important to those in the more frugal group are choosing one's own goals, ambition, capability, honesty, politeness, obedience, responsibility, social order, national security, spiritual life, devout, unity with nature, protecting the environment and inner harmony. Except for a small number of values which are discussed in more detail below, the most obvious conclusion is that the values associated with low frugality are mainly in the individualistic areas of the radex (Fig. 1) representation of Schwartz' value structure, whilst those associated with high frugality fall within the collectivist areas. Considering Lastovicka et al.'s definition of frugality (and related work on voluntary simplicity), this basic pattern is understandable. Frugality involves restraints and conservation in use which is clearly at odds with values relating to power, stimulation and hedonism.

The main exceptions to this broad conclusion relate to values concerned with achievement, detachment, social recognition and true friendship. Two of the values in the achievement area (ambitious and capable) are both positively associated with higher frugality. Although they are regarded as individualistic values, the relationship is logically compatible with the definition of frugality and the items that are used to measure it. Elements of the frugality scale incorporate aspects like making better use of resources and getting the most for one's money. These are clearly related to efficiency and capability for consumption and purchasing and are compatible with achievement as an end goal in life.

According to Schwartz' inventory, the value of detachment relates to a disassociation with worldly concerns and an association with spirituality and devoutness. An alternative interpretation of detachment and removal from worldly concerns is that a person is not concerned with social issues such as protecting the environment, traditions and other collective behaviours. Such an interpretation would be more consistent with a less frugal person who was consequently less interested in conserving resources and taking care of possessions.

Social recognition is defined as a conservative value linked with social order and national security. Again, it is possible to question this interpretation of social recognition, and it can be conceivably argued that achieving approval from others is also going to be associated with preserving public image. This is a value incorporated in the power dimension and is very strongly linked with low levels of frugality. True friendship is also scored more highly by the low frugality group. Arguably, this value could be associated with social recognition and public image, as well as loyalty and honesty.

Schwartz' original value structure was derived by applying multidimensional scaling (MDS) to the values and grouping them according to their location on the resulting plot. In order to further appreciate how the underlying structure and interconnections among the individual values might be related to frugality, a similar MDS was undertaken to allow a visual assessment. It should be remembered that this research employed a reduced version of value items (using 42 values as opposed to 56) and was run on ipsotised data, and so the plot shown in Figure 2 is not directly comparable with Figure 1.

The plot does show social recognition as being much closer to public image than social order and national security. Similarly, detachment is positioned at least midway between spiritual life and devoutness, and authority and influence. The dimensions of the MDS plot are interesting to interpret. The conventional collectivist/individualist split in values can be seen along

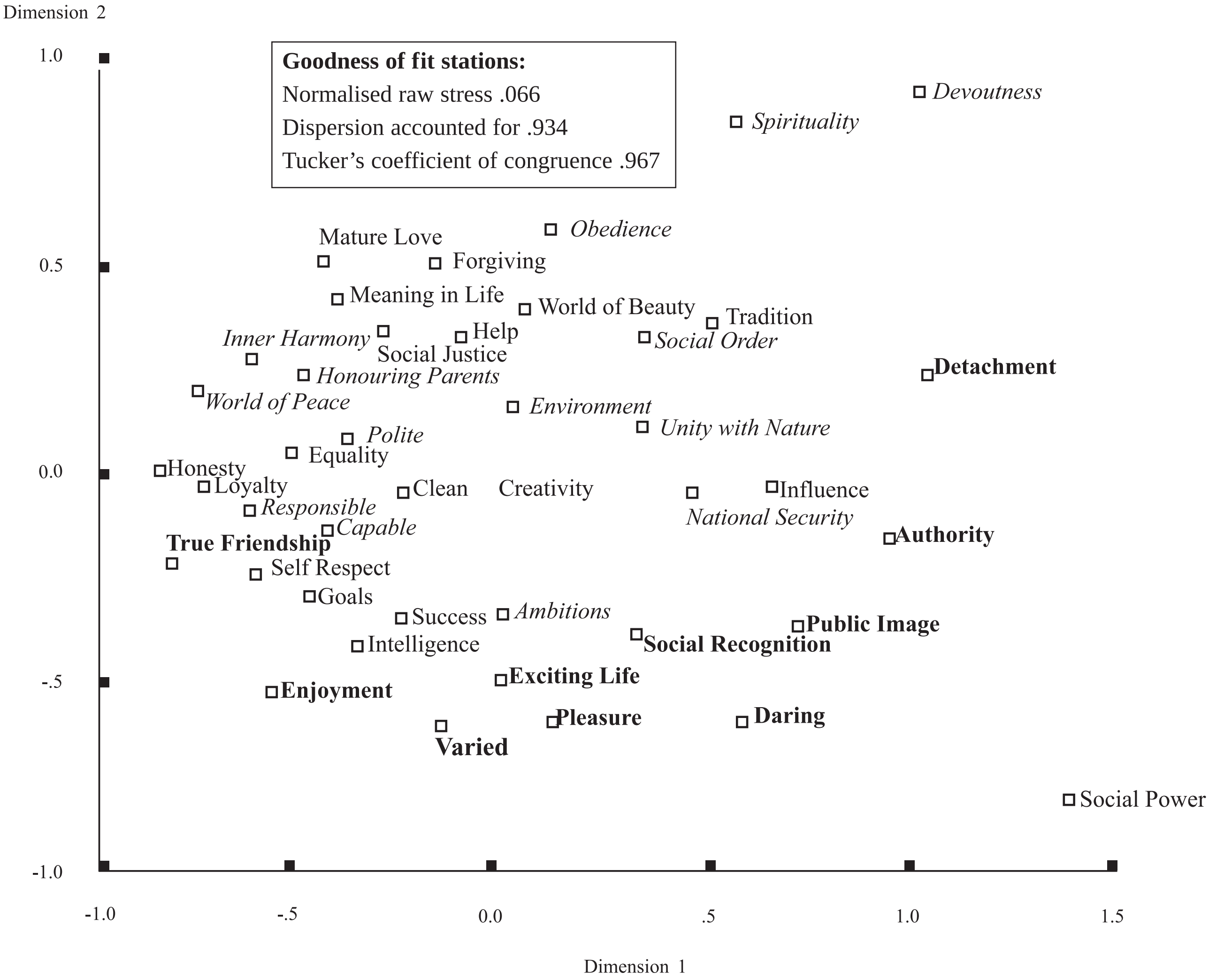


Figure 2: Multidimensional scaling plot

an axis that might be drawn from top left to bottom right. Dimension one may be interpreted as a control/influence dimension in relation to an individual's life and position in society. This would be compatible with the varied values of social power, authority, detachment, public image and devoutness, which are all positioned at the positive end of this dimension. Dimension two contrasts values such as obedience, forgiving and mature love with pleasure, daring and a varied life. These represent conformity and humanism compared with hedonism and stimulation. On the MDS plot (Fig. 2), the values associated with low frugality are in bold, while those associated with high frugality are italicised. It indicates a good separation of the values of high and low frugal respondents that accommodates achievement and social recognition. With the exception of detachment, all the values associated with respondents low in frugality are located in the bottom half of the plot on the second dimension. Interestingly, the values associated with the highly frugal group (with the exception of obedience, spirituality and devoutness) lie in the centre.

Plausible links can be developed between most of the individual items of Lastovicka et al.'s (1999) frugality scale and many of the motivational types in the modified Schwartz value inventory. Self-direction, with its components of intelligence and choosing one's own goals, logically fits with increased frugality as it describes using resources better and self-discipline. Scale items such as saving for tomorrow and looking after things for the long run may reasonably be linked to ambition and success. Other associations can be formed to ecology (protecting the environment through conserving resources), conformity, conservatism and spirituality. These motivational types cover the range of collective, mixed and individual interests at the most abstract level of the Schwartz framework. Conversely, the dimensions of power and hedonism, which are rated more highly by the less frugal, both reflect individual interests only.

5. Conclusions

The lack of a clear association between frugality and any one or two value items may be seen as supporting Lastovicka et al's (1999) contention that frugality is a lifestyle construct since, by definition, lifestyle is a systems construct that has to viewed more holistically (Lawson and Todd 2002). A more conservative interpretation is that Lastovicka et al. have been successful in developing a measure that reflects frugality as a lifestyle construct. The measure reflects attitudes towards a set of saving, shopping, consuming and recycling behaviours that provides a larger picture than would be reflected in any limited set of values. What may be instructive to understand frugality further is a direct comparison with the obviously related construct of voluntary simplicity.

In this paper, we have started to address one of the issues that Lastovicka et al. (1999) determined as worthy of further research. Viewing frugality as a lifestyle construct suggests that it is dependent on values and other psychological underpinnings. By showing that it is related to particular value types, the results offer further understanding of the motivational forces that determine frugality.

Understanding the determinants of frugality is an important issue for marketing managers, and also for those involved in aspects of social marketing, consumer policy and sustainability. It is understood that marketing is a 'value-free' organisational function that can be used to promote frugality or non-consumption where appropriate, as well as potentially stimulating demand. Furthermore, it may be that dimensions of frugality are important for understanding choice and consumption of products that have environmental associations. One interesting route to follow for managerial implications would be the potential association between frugality and adoption of innovation. It seems logical to presume that more frugal respondents would be later adopters or laggards, and less concerned about updating and revising ownership of products. Somewhat perversely, this may actually create market opportunities for smaller businesses less able to compete in R & D and product innovation, which instead rely on the application of existing technologies. Understanding values that determine frugal behaviour could thus have positive commercial benefits for marketers of older technologies, as well as the more obvious areas such as the DIY industry, which supports more frugal consumption.

References

Anderson, L., Wadkins, M., 1991. Japan – A Culture of Consumption? Advances in Consumer Research, 18, 129-134.

Belk, R., 1983. Worldly Possessions: Issues and Criticisms. Advances in Consumer Research, 10, 514-519.

Belk, R., 1985. Materialism: Trait Aspects of Living in a Material World. Journal of Consumer Research, 12, 265-280.

Craig-Lees, M., Hill, C. 2002. Understanding Voluntary Simplifiers. Psychology & Marketing, 19(2), 187-210.

Crosby, L., Bitner, M., Gill, J. 1990 Organisational Structure of Values. Journal of Business Research, 20,123-134.

DeYoung, R., 1986. Encouraging Environmentally Appropriate Behavior: The Role of Intrinsic Motivation. Journal of Environmental Systems, 15(4), 281-291.

Fieck, L., Price, L., 1987. The Market Maven: A Diffuser of Marketplace Information. Journal of Marketing, 51, 83-97.

Gardels, N., 2000. From Well-having to Well-being. New Perspectives Quarterly, 17(4), 2-3.

Gould, S., Houston, F., Mundt, J., 1997. Failing to Try to Consume: A Reversal of the Usual Consumer Research Perspective. Advances in Consumer Research, 24, 211-2216.

Gregg, R., 1936. Voluntary Simplicity. Visva-Bharati Quarterly (reprinted in Manas, Sept.4 1974).

Henry, W., 1976. Cultural Values do Correlate with Consumer Behavior. Journal of Marketing Research, 13, 121-127.

Kilbourne, W., 1992. On the Role of Critical Theory in

Moving Toward Voluntary Simplicity. Meaning, Measure and Morality of Materialism, 161-163.

Kluckholn, C. 1951. Values and Value Orientation in the Theory of Action: An Exploration in Definition and Classification. In" T. Parsons and E. Shils (eds.) Towards a General Theory of Action, Harper & Row: NY, pp.388-433.

Kotler, P., Levy, S., 1971. Demarketing, Yes, Demarketing. Harvard Business Review 49, 74-80.

Lastovicka, J., Bettencourt, L., Hughner, R., Kuntze, R., 1999. Lifestyle of the Tight and Frugal. Journal of Consumer Research 26,85-98.

Lawson, R., Todd, S., 2002. Consumer Lifestyles: A Social Stratification Perspective. Marketing Theory, 2(3), 295-307.

Lawson, R., Todd, S., Boshoff, C., 2001. Relationships Between Consumer Sentiment Towards Marketing and Consumer Lifestyles. Australasian Marketing Journal 9(7), 7-22.

Leonard-Barton, D., Rogers, E., 1980. Voluntary Simplicity. Advances in Consumer Research 7, 28-34.

McDonald, M., 1998. Doing Well, Not Doing Without. U.S. News & World Report. Dec.14, Washington.

Odin, Y., Vinais, J-Y., Valette-Florence, P., 1998. Towards a Revision of Schwartz's Values Inventory: Some Exploratory Findings. In: Balderjahn, I., Mennicken C., Vernette, E. (Ed.s) New Developments and Approaches in Consumer Behaviour Research. Macmillan Press Ltd Houndsmills and London, .35-52.

Pitts, R. & Woodside, A., 1984. Personal Values and Market Segmentation: Applying the Value Construct. In: Personal Values & Consumer Psychology. Lexington Books, 55-67.

Rokeach, M., 1968. Beliefs, Attitudes and Values. Jossey-Bass.

Richins, M., Dawson, S., 1990. Measuring Material Values: A Preliminary Report of Scale Development. Advances in Consumer Research, 17, 169-175.

Schwartz, S., 1994. Are There Universal Aspects in the Structure and Content of Human Values? Journal of Social Issues, 50(4), 19-45.

Schwartz, S. & Bilsky, W., 1987. Toward an Universal Psychological Structure of Human Values. Journal of Personality and Social Psychology, 53(3), 55-562.

Todd, S., Lawson, R., Northover, H., 1998. Value Orientation and Media Consumption Behavior. European Advances in Consumer Research, 3, 328-332.

Vinson, D. & Munson, J., 1976. Personal Values: An Approach to Market Segmentation. In: K. Bernhadt (ed.) Marketing: 1877-1976 and Beyond. Chicago AMA, 313-317.

Wang, Z., Rao, C., 1995. Personal Values and Shopping Behaviour: A Structural Equation Test of the RVS in China. Advances in Consumer Research, 22, 373-380.

Williams, R. Jr., 1968. Values. In: E.Sills(ed.) International Encyclopedia of the Social Sciences. MacMillan: NY.

Zavestoski, S., 2002. The Social-Psychological Bases of Anticonsumption Attitudes. Psychology & Marketing, 19(2), 149-165

Biographies

Sarah Todd is a Senior Lecturer in the University of Otago's Department of Marketing. Her research interests are in the broad area of consumer behaviour, with a current focus on children's consumption and consumer lifestyles, values and sustainable consumption.

Rob Lawson is Professor of Marketing at the University of Otago. His education and early career were based in the UK, including his PhD from the University of Sheffield. His main area of expertise is in consumer behaviour, especially issues relating to values, lifestyles and aspects of tourist behaviour.

Correspondence Addresses

Dr Sarah Todd, Senior Lecturer, Department of Marketing University of Otago, PO Box 56, Dunedin, New Zealand, Telephone.: +64 (3) 479 8157, Facsimile: +64 (3) 479 8172, Email: stodd@business.otago.ac.nz; Professor Rob Lawson, Department of Marketing, University of Otago, PO Box 56, Dunedin, New Zealand, Telephone: +64 (3) 479 8160, Facsimile: +64 (3) 479 8172, Email: rlawson@business.otago.ac.nz

Components of Wine Prices for Australian Wine: How Winery Reputation, Wine Quality, Region, Vintage, and Winery Size Contribute to the Price of Varietal Wines

Bith-Hong Ling & Larry Lockshin

Abstract

Australian wines are identified by the varietal names of the grapes rather than the regions as in France and other traditional wine producing countries. This paper uses the concept of hedonic price theory to investigate a range of extrinsic characteristics' ability to predict prices for different climate regions (warm and cool) and four major wine varieties of Australian wines, two reds (shiraz and cabernet) and two whites (chardonnay and riesling). The effects of winery reputation (wine company/brand), winery size (production scale), age of the wine, and region of origin (wine grape source) contributing to the relationship between price and quality attributes of Australian wines are investigated, based on 1880 observations of bottled wines. Wine quality rating and winery/brand reputation have major effects on the price, while region and size of winery have differential effects depending on the variety of grape. Vintage has only a minor effect.

Keywords: Australian wine, Wine attributes, Wine brand, Wine price, Hedonic price analysis

1. Introduction

The vibrant nature of the Australian wine sector is typified by the compound annual growth rate of exports of over 18% from 1988 to 2001. This compares to a world growth rate of just 3.6% over the same period (AWBC, 2001). Australian wines have increased from just over one percent of world wine export value to 5.5% in the same period. The growth in volume and value of exports has been accompanied domestically with an increase in the consumption of bottled wine compared to the consumption of cask (or bag in the box) wine (Anderson et al., 2001). Both of these trends have raised the price of the average bottle of Australian wine over the same 13 year period.

Australian wine production practices have differed in many key ways from those of the traditional European wine producing countries (Halliday, 1999). Wines are identified by the varietal names of the grapes rather than the regions as in France and other traditional wine producing countries. Also, wines are often blended across regions. Brands are important identifiers for the wines, and like in Europe, some producers have better reputations than others for wine quality. But there is a trend to single region wines and the establishment of the Australian-EU trade agreement for wine has resulted in the formal identification of regions, now called geographic indicators (AWBC, 1994; Ryan, 1994). This has awakened interest in the value of regions compared to wine brands (Tustin and Lockshin, 2001). Also wine companies have merged and created multiple wines under specific brand names, so the reputation that accrues to a brand may be related to a number of different wines at different price points. This vertical ranging is similar to how automobile brands seek to establish a halo effect from the higher priced models to the lower end of the range.

Hedonic price analysis has been used to measure the marginal value or contribution to the price for a number of different products. Wine is one product well suited to this type of analysis, due to its highly differentiated forms and the difficulty in objectively assessing quality (Oczkowski 2001). This paper uses hedonic price analysis to measure the impact on price of winery brand name, wine quality, region, size of the winery (processing capacity), and vintage date. These objective elements are available to consumers when making a choice of wines. The quality rating of the wine is available to consumers through ratings published by various wine writers and critics. Often these are displayed on the retail shelf. Understanding the value of each of these elements is useful for wine marketing managers. Knowledge of the relative importance of brand or region to consumers would allow marketing managers to decide how much each should be emphasized in promotion or even how to organize products on the shelves. Small producers need to know whether region is an important component, because with limited funds to spend, they could band together to promote regions rather than their own brands. Though the quality of the wine is a subjective judgment, wine writers are believed to influence consumer perceptions. Hedonic price research, using wine critics' evaluations, can estimate the value of these judgments. The results then are useful for allocation of scarce resources to the most efficient factors in informing consumers and maintaining or increasing prices.

The major difference between this paper and the previous use of the hedonic price function for Australian wines (Combris et al., 1997, 2000; Oczkowski, 1994, 2001; Schamel and Anderson, 2001) is the specification of an equation for each variety. This allows us to measure the value of the independent variables separately for each type of wine. This makes sense, as the reputations of different regions for wine quality are linked to specific varieties, and this is usually related to the climate as either cool or warm (White, 1995). One can add regions and varieties to a single equation to find the partial value of each, but this method does not allow differential values to be estimated for each variety, and therefore, we don't know if all varieties behave similarly. Following Oczkowski (2001), we also used two stage least squares (2LS) in order to first estimate the quality rating before including it in the hedonic price equation. This methodology takes explicit account of the fact that quality itself is subjective and even in the mind of the quality rater (James Halliday here) it is often influenced by the reputation (brand) and price of the wine.

We present our work in several sections. First we review the literature on hedonic pricing and follow that with the model specification and data. We present the results next along with the discussion. We conclude with implications and some ideas for future research.

2. Review of Literature

Hedonic price analysis is based on the hypothesis that any product represents a bundle of characteristics that define its quality and therefore price. The theoretical foundation for this type of research was first examined by Rosen (1974). The observed price for a good is the sum of the implicit prices for the attributes. Various independent variables, often quality indicators, are regressed on the retail price. The major issue with this type of analysis is that supply and demand factors are part of the price as well as the quality attributes (Unwin, 1999). The solution proposed by Arguea and Hsiao (1993) is to pool cross sectional data specific to a particular side of the market rather than measure a single product. We follow their recommendation.

Wine is a product that varies with vintage year, producer, region, and production technique among other factors. Consumers often find it difficult to judge the quality of wine before actually drinking the wine (Charters et al., 1999). They use label information to help make an informed choice. These extrinsic factors (Olson and Jacoby, 1972) are typically the major source of quality determination before purchase. The reputation of the winery (brand), the region of origin, the variety, and even third party quality ratings can be used by the consumer to help make the purchase decision. Shapiro (1983) modeled the reputation effects for high quality products. He showed that reputation allows some producers to sell their products for a premium, and he based this on the interpretation that these reputation effects are the outcome of investments in building that reputation. He also stated that it is costly for consumers to gain information in some environments and that learning about reputations is an effective way to reduce their decision making costs.

Oczkowski (1994) did the first hedonic pricing study of Australian wine. He showed that the log linear form was the best function to model retail prices for six wine attributes. Reputation effects were significant, but quality effects were not. Nerlove (1995) examined the Swedish wine market, a government monopoly, which allowed him to assume totally exogenous prices. His form of the equation was similar to Oczkowski with similar results. Combris et al. (1997) estimated a hedonic price equation for Bordeaux wines using intrinsic wine quality judgments of acid, fruit, palate by expert tasters, as well as the extrinsic factors of reputation and vintage. There most of the variance in price was explained by extrinsic factors, especially the reputation as measured by the classification of the winery (first growth, second growth, etc.). The same authors recently published a paper using the same methodology for Burgundian wines rather than Bordeaux wines (Combris et al 2000). The same effects were noted, with reputation as measured by ranking (rather than classification) and vintage having the largest effect, but some of the sensory measures 'boosted' these objective quality effects, because the sensory characteristics were correlated with the ranking of the wineries. Landon and Smith (1997, 1998) added extrinsic factors and intrinsic factors to their hedonic price analysis for Bordeaux wines. They found that reputation factors were most significant in explaining the price consumers were willing to pay for Bordeaux wines, but the estimated coefficients varied over vintages.

Schamel and Anderson (2001) used two separate wine quality rating sources to analyse Australian and New Zealand wines. Their method pooled all the wines and regions in a series of equations for each year. They showed that winery reputation, region, variety, and quality estimation were all significant in some of the equations using Barossa shiraz as the relative comparison point in the dummy variable estimation. The trends were similar in both data sets. They also showed that region has become more important over the 10 year period of their data.

One of the major issues in using hedonic price techniques with wine is the subjective measure of quality (Oczkowski 2001). The objective characteristics on the label are easy to define and easy for consumers to view. However, ratings or reputations of wineries and ratings of individual wines by wine writers are purported to carry weight with the consumer, but little empirical evidence exists as to their effects. The two papers by Combris et al. (1997, 2000) demonstrate that the reputation as measured by the classification of Bordeaux wineries, or the ranking of Burgundian wineries has a major effect on the price, while quality assessments by tasters have little effect. Oczkowski's paper (2001) uses multiple reputation ratings by different wine writers to demonstrate this factor has the largest effect on wine prices as well.

Oczkowski (2001) incorporated the error rates in his analysis by using multiple wine writer ratings in a confirmatory factor analysis prior to the regression. He then goes on to use 2SLS to measure both quality and reputation as attributes containing measurement error. The fit statistics and error rates show that 2SLS is superior to OLS using this specific data set. He also shows that when combined reputation and quality measures are used in the same equation, there is little price variance explained by quality added to reputation. One of the major issues with the analysis is that in order to utilize multiple indicators of quality and reputation, Oczkowski could only find 276 wines in common across the four datasets, as compared to over 1200 in his previous paper (1994). This small sample size made measuring the effects of regions or varieties with separate equations impossible. This also may have impacted the measurement of reputation and quality. We use reputation (brand name) to help predict quality and then do not use reputation in the second stage.

We are most interested in the effect of different regions on the prices of selected varieties. We use the same Halliday (1999) data set as Schamel and Anderson (2001) to investigate a range of extrinsic characteristics' ability to predict retail prices for four major varieties of grapes. We understand the criticism of using only a single wine writer's subjective measures or wine quality (Oczkowski 2001), however we strongly believe that consumers are unlikely to compare different wine writer's evaluations before buying wine. Our experience also shows that wine stores in Australia may use a single score from one writer on the edge of the shelf below a bottle of wine (shelf talker), but never use multiple writer's scores. We run equations for each variety separately in order to be able to see the effect of region and winery reputation by variety. Previous hedonic research has used interaction terms to measure the impact of region and variety (Schamel and Anderson 2001; Oczkowski 1994, 2001). However, we feel that both regions and wineries have gained reputation for specializing in a few varieties, so our method separates the effects along the lines of four major grape varieties. We also use winery size, age of winery and vintage to see how these influence price for each variety.

3. Model Specification

Several studies have attempted to estimate the relationship between the price of a wine and its various characteristics and hedonic wine functions by using the ordinary least squares (OLS) technique in recent years. Oczkowski (2001) first addressed the measurement error issue on the previous hedonic wine studies when the OLS regression was used to estimate the single measures of wine quality and reputation given the presence of regressors which contain measurement error. According to Johnson (1987) and Greene (1993), when explanatory variables are endogenous in the equation, applying OLS may lead to biased estimates of the coefficients, which are correlated with the error term. The essence of two stage least squares (2SLS) is the replacement of endogenous variables by the predicted values, which could be purged of the stochastic elements. The consistent 2SLS estimator is obtained by OLS regression of the dependent variable on predicted endogenous variables and predetermined variables in the equations.

Due to the concern that the reputations for wine quality of different wine-growing regions are linked to specific varieties, we estimate a separate equation for each type of climate region (warm vs. cool) and wine variety (red vs. white) and then make a comparison of price-quality relationships between the different equations. Our model, to be estimated by 2SLS regression for the hedonic price function for Australian wines, assumes that wine price is influenced by quality and the objective characteristics of attributes as follows in Equation 1.

The hedonic wine price equations for different climate (warm vs. cold) regions and wine varietals (two whites vs. two reds) are postulated in Equations 2 and 3, respectively.

where:

PRICE: the natural logarithm of wine retail price, recommended in the Halliday's wine guide (1999), and sourced from each wine producer.

$QUALITY_{PRED}$: the predicted values of the quality rating score of the wine (by Halliday on a 100 point scale), which is obtained from the 1st stage of 2SLS by the OLS regression of wine quality rating score (*QUALITY*) on the recommended retail price (*PRICE*) and the subjective characteristics - its associated producing winery (including wine group) reputation rating score (*WINERY*). These variable values are all subjectively judged by wine expert James Halliday.

Objective characteristics of wines:

$VARIETAL_K$: the dummy variable for wine varietal *k*, including two whites (chardonnay and riesling) and two reds (shiraz and cabernet sauvignon).

$SIZE_l$: the dummy variable for the wine producer size (tonnes of wine grapes crushed) class l, including very small size (under 100 tonnes); small size (100~499 tonnes); medium size (500~2,499 tonnes); large size (2,500~9,999 tonnes); and very large size (over 10,000 tonnes).

$$PRICE = f(QUALITY_{PRED},\ Objective\ characteristics\ of\ wines) \qquad (1)$$

$$PRICE^{CLIMATE} = \alpha + \beta_q QUALITY_{PRED} + \sum_{k=1}^{K} \beta_k VARIETAL_k + \sum_{l=1}^{L} \beta_l SIZE_l + \sum_{m=1}^{M} \beta_m AGE_m + \sum_{n=1}^{N} \beta_n ORIGIN_n + \mu \qquad (2)$$

$$PRICE^{VARIETAL} = \alpha + \beta_q QUALITY_{PRED} + \sum_{l=1}^{L} \beta_l SIZE_l + \sum_{m=1}^{M} \beta_m AGE_m + \sum_{n=1}^{N} \beta_n ORIGIN_n + \mu \qquad (3)$$

Table 1:
Means, standard deviations (S.D.) and correlations of retail price (*PRICE*) and quality rating score (*QUALITY*) for Australian wine

Classification	Sample Size	PRICE Mean	PRICE S.D.	QUALITY Mean	QUALITY S.D.	Correl. P and Q
All samples	1880	25.96	20.05	87.99	4.75	0.338
Climate of region						
Warm regions	1262	26.47	23.18	87.86	4.84	0.358
Cool regions	618	24.92	11.17	88.26	4.55	0.321
Variety of wine						
Chardonnay	637	23.25	9.66	87.31	4.95	0.501
Riesling	326	16.17	4.19	88.21	4.47	0.454
Shiraz	531	32.94	31.50	88.57	4.64	0.352
Cabernet Sauvignon	386	29.08	16.05	88.14	4.69	0.428
Rating of winery reputation						
Typically good (3 star)	90	17.40	5.47	82.50	5.02	0.302
Good (3.5 star)	257	20.68	8.33	85.53	4.30	0.329
Very good (4 star)	590	20.62	7.16	87.19	4.30	0.162
Extremely good (4.5 star)	501	28.79	17.85	88.94	4.29	0.312
Outstanding (5 star)	442	34.68	32.91	90.53	4.10	0.347
Size of wine producer						
< 100 tonnes (very small)	369	21.73	8.96	88.00	4.45	0.292
100 ~ 499 tonnes (small)	454	24.52	12.02	87.59	4.73	0.296
500 ~ 2,499 tonnes (medium)	449	30.97	23.67	88.40	4.87	0.388
2,500 ~ 9,999 tonnes (large)	188	22.67	12.42	86.92	4.84	0.288
> 10,000 tonnes (very large)	420	27.34	29.28	88.45	4.76	0.397

AGE_m: the dummy variable for the wine age class m where m = under 3 years (vintage year after 1997); m = 3~4 years (1996 and 1997); m = 5~6 years (1994 and 1995); m = 7~8 years (1992 and 1993); and m = over 8 years (before 1992). Although previous research (Combris et al., 1997; Landon and Smith, 1997 and 1998) used vintage date as a variable, according to the Australasian Wine Exchange (2000), vintage is not as important in Australia as brand and specific wine.

$ORIGINAL_n$: the dummy variable for the wine region of origin class n, which is classified into two groups - warm climate regions (including Barossa Valley, Clare Valley, Great Southern, Hunter Valley, Margaret River and McLaren Vale,) and cool climate regions (including Adelaide Hills, Coonawarra, Mornington Peninsula, Tasmania and Yarra Valley).

The parameters ($ß_q$, $ß_k$, $ß_l$, $ß_m$ and $ß_n$) are to be estimated for forming the price contribution of the product characteristics of Australian wines. The structure of hedonic price (*PRICE*) is hypothesized to be positively related to the wine quality rating score ($ß_q > 0$). According to the different objective characteristics of the wines, the positive/negative values of coefficients for dummy variables reflect relative price premiums/discounts, as compared with the dummy base variable. Moreover, the degrees of $ß_k$, $ß_l$, $ß_m$ and $ß_n$ and values respectively, represent the effects of wine varietal, production scale (producer size), age of the wine, and region of origin (wine grape source) contributing to the relationship between retail price and quality attributes of Australian wines.

The econometric package PcGive 9.0 (Doornik & Hendry, 1996) is used to generate the properties of the data and all 2SLS estimations for the study. Multicollinerity might be a potential problem when several linear relationships exist between a set of dummy variables in Equations 2 and 3. Using the Wald test statistics, the linear restrictions test on the variance-covariance matrix for the estimated parameters is performed and points to no serious problem of multicollinerity in the equation.

4. Data

The total final sample covered 1880 observations of bottled wines, including 1262 warm climate wines and 618 cool climate wines; 637 chardonnay wines, 326 riesling wines, 531 shiraz wines, and 386 cabernet sauvignon wines. Only wines from single regions and single varieties were used in our analysis; multi-region and multi-varietal blends were excluded in order to measure the impact of region on each chosen variety of wine. All basic data on technical specifications and retail prices of bottled wines selected were obtained from the database set provided by well-known Australian wine expert James Halliday (1999). The exception is that data on the production capacity of each wine company/group is collected from *The Australian & New Zealand Wine Industry Directory* (Winetitles, 2001).

Summary statistics of data on price of selected Australian wines categorized by the climate of region and wine variety are provided in Table 1. We can see that by separating the wines into varieties, quite different average prices are charged for each. Riesling has the lowest average price at AU$16.17 per 750ml bottle,

Figure 1: The impact of winery reputation on wine quality rating score

Notes: The dummy base is the five-star outstanding winery.

while the highest is for shiraz at AU$32.94. In addition, the correlation values of price and quality for chardonnay and riesling are 0.50 and 0.45 respectively, which are higher than other types of wine varieties. Overall, price does not count for a major portion of the variation in quality, even though it is positively correlated. The relatively high of standard deviation (S.D.) of wine price can be found for warm region wines, shiraz wines, and wine produced by outstanding wineries (5 star) and very large size wine producers (> 10,000 tonnes).

We can also see that even though there are fewer large wineries than small ones in Australia, the number of wines made by each size class is relatively similar. Large wineries produce many types of wines in each variety under different brand names. We should note here that the winery rating (reputation) is for the brand names, but the size class is for the parent company. For example, Southcorp is Australia's largest wine group and all brands made by that company are given a dummy variable for the largest size, but each brand has a different rating based on its long term reputation: Penfolds, Lindemans, Wynns, Seppelt, etc. We feel that the production practices (type of equipment, expertise of the wine maker, etc.) are best identified with the parent company, while the reputation effects accrue to the name the consumer sees on the bottle.

5. Results and Discussion

5.1 Winery Reputation

According to the winery star rating system of Halliday (1999), the Australian winery reputation is classified into five stars for an outstanding winery regularly producing exemplary wines; four and a half stars for an extremely good winery virtually on a par with outstanding one; four stars for a winery consistently producing high-quality wines; three and a half stars for a solid, reliable producer of good wine; and three stars for typically good producer, but may have a few lesser wines. Winery ratings are for the overall reputation of the winery, not for individual types of wines made. The impact of winery reputation on wine quality rating score, obtained from the 1st stage of 2SLS regression is shown in Figure 1. The five-star outstanding winery is used as the comparison for other four classifications of winery reputation.

As expected, each rating below five stars results in a decrease in wine quality rating score, except for riesling. The degrees of sensitivities are different for each of the regions and wine varieties. In terms of the climate for growing wine grapes, cool region wines have a relatively higher change in wine quality for each change in winery reputation than warm region wines. A one half star reduction in reputation from five to four and a half would result in a 2.5 point decrease in quality rating points (100 point scale) for riesling, 1.4 for cabernet, and only slight quality change for chardonnay (0.82) and shiraz (0.07). The effect of being a lower than four star winery becomes larger. The estimated coefficients across all four varieties are similar for being a three and one half star winery versus a five star. As the winery rating decreases to three stars, however, greater variation in the coefficients can be found, ranging from -8.2 (for cabernet), -7.0 (for shiraz), -5.7 (for chardonnay) to -1.9 (for riesling). Clearly, having a good winery reputation is relatively important for cabernet and shiraz but less so for riesling. Also, the quality effects of region (greater for cool regions than warm regions) seem to concur with the general viticultural situation; it is more difficult to achieve good quality in cool regions, due to the potential for frosts and poor ripening, but the results may warrant the difficulty.

5.2 Region: Warm vs. Cool

Table 2 presents the results of 2SLS regressions conducted based on the model in Equation 2, using the above definition for dependent variable (*PRICE*) and independent variables ($QUALITY_{PRED}$) and objective characteristics of wine. The coefficients for independent variables are directly interpreted as a percentage price effect. The regression for all regions together is shown in first column and then warm and cool region equations are reported in second and third columns. We first can look at the effect of the wine quality rating from Halliday's book (1999). The effect of the quality score out of 100 points represents an increase of 12.5% in price for each point increase in quality score for all regions and 14.5% for warm and 8.6% for cool climate regions. A larger quality effect on wine price is found for the warm climate regions. If a warm region wine increases in quality from 85 points to 90 points, we could expect a price increase of 72.5%. For a cool region wine the price increase would be only 43%. This may occur because Australian consumers prefer wines from warmer regions or perhaps because warmer regions were planted earlier and consumers have more knowledge of them and are therefore willing to pay higher prices for their wines.

Taking chardonnay as the comparative benchmark for wine variety, the coefficients for are highly significant in

Table 2:
Hedonic price equation for Australian wines by climate of region

	All regions		Warm regions		Cool regions	
$PRICE^{CLIMATE}$ (dependent variable)	Coeff.	t-value	Coeff.	t-value	Coeff.	t-value
$QUALITY_{PRED}$	0.125**	(39.00)	0.145**	(35.91)	0.086**	(19.03)
$VARIETY_k$						
Shiraz	0.181**	(9.35)	0.163**	(6.86)	0.183**	(5.72)
Cabernet	0.152**	(6.95)	0.112**	(4.10)	0.234**	(7.01)
Riesling	-0.245**	(-10.56)	-0.263**	(-8.81)	-0.209**	(-6.21)
Chardonnay	Base		Base		Base	
$SIZE_1$ [a]						
< 100 tonnes (very small)	0.168**	(6.27)	0.182**	(5.46)	0.104*	(2.21)
100 ~ 499 tonnes (small)	0.167**	(7.17)	0.163**	(5.72)	0.144**	(3.49)
500 ~ 2,499 tonnes (medium)	0.167**	(7.51)	0.149**	(5.93)	0.186**	(4.06)
2,500 ~ 9,999 tonnes (large)	-0.001	(-0.04)	0.019	(0.57)	-0.091*	(-1.60)
> 10,000 tonnes (very large)	Base		Base		Base	
AGE_m (vintage year)						
1 ~ 2 years (after 1997)	-0.136**	(-3.10)	-0.095*	(-1.77)	-0.164*	(-2.34)
3 ~ 4 years (1996 and 1997)	-0.093*	(-2.34)	-0.063	(-1.36)	-0.096	(-1.47)
5 ~ 6 years (1994 and 1995)	-0.078*	(-1.97)	-0.045	(-0.95)	-0.089	(-1.37)
7 ~ 8 years (1992 and 1993)	-0.066	(-1.60)	-0.032	(-0.64)	-0.082	(-1.22)
Over 8 years (before 1992)	Base		Base		Base	
$ORIGIN_n$ [b]						
Barossa Valley (W)	-0.053	(-1.57)	-0.040	(-1.14)		
Clare Valley (W)	-0.109**	(-3.02)	-0.098**	(-2.58)		
Great Southern (W)	-0.127**	(-3.43)	-0.122**	(-3.14)		
Hunter Valley (W)	-0.149**	(-4.20)	-0.142**	(-3.85)		
Margaret River (W)	Base		Base			
McLaren Vale (W)	-0.109**	(-3.32)	-0.090**	(-2.64)		
Adelaide Hills (C)	-0.054	(-1.36)			0.113**	(2.82)
Coonawarra (C)	-0.105**	(-2.88)			Base	
Mornington Penins (C)	-0.002	(-0.05)			0.178**	(4.04)
Tasmania (C)	-0.026	(-0.63)			0.122**	(2.91)
Yarra Valley (C)	-0.070*	(-1.89)			0.114**	(2.95)
Constant	-7.899**	(-26.86)	-9.592**	(-26.19)	-4.597**	(-11.15)
R^2	0.592		0.640		0.524	
Wald test [c]	8853.2**	(0.000)	7227.4**	(0.000)	5450.1**	(0.000)

Notes: * Significantly different from zero at the 5% level and ** at the 1% level.
[a] Measured by the tonnes of wine grapes crushed of wine producers.
[b] W referring for warm climate region and C for cool climate region.
[c] Wald statistics show the linear restrictions test (Doornik and Hendry 1996, pp.241).

all three equations. The positive sign on the coefficient for shiraz and cabernet reflects that these two red wine varieties have price premiums as compared to chardonnay. However, a negative sign indicating a price discount is found for riesling. We also investigate the price effect of winery size, which has not been part of other hedonic price research papers for wine. Our results indicate that the largest size wineries (greater than 10,000 tonnes) have no effect on price compared to the 2,500 to 9,999 tonne wineries across all four varieties. As we move to the small and medium size (less than 2,500 tonnes) wineries, we find significant and positive coefficients for , indicating that smaller wineries charge more (and presumably consumers are willing to pay more) for their wines than the largest wineries. Most interestingly, the greatest price premiums are received by the smallest wineries (less than 100 tonnes) for producing warm region wine, while the medium wineries (500~2,499 tonnes) receive a premium for cool region wine.

As compared to wines from Bordeaux (Combris et al., 1997; Landon and Smith, 1997 and 1998), where older vintages often increase in price, we find little price effect of older vintages for Australian wines. Our results show that the values of coefficients on nearly approach to zero (except for less than 3-year-old young wine), indicating not much price change for different vintages of Australian wines for two reasons. First, there are not many older wines sold in Australia. Wines are mainly made for early drinking and only a small percentage are cellared commercially and resold (Halliday, 1999). Second, the prices of Australian wines have been rising over the last 10 years (Anderson et al., 2001) and any increase in price of older wines might be hidden by overall price rises.

For the past decade, many Australian wine companies have used region along with their brand names as a wine branding and marketing tool to differentiate the quality and type of wine from a specific region and generate awareness of the region itself. (Lockshin, 1997; Rasmussen and Lockshin, 1999) The coefficients of $ORIGIN_n$ reported in Table 2 represent the regional reputation effects on the price of the wines. Compared with Margaret River as a warm region, wines from the other warm regions receive a significant price discount, ranging from 9.0% for McLaren Vale and 9.8% for Clare Valley to 12.2% for Great Southern and 14.2% for Hunter Valley. On the other hand, while Coonawarra is thought of as the comparative benchmark for cool region red wines, our results show that all other cool regions have a significant price premium, ranging from 11.3% for Adelaide Hill to 17.8% for Mornington Peninsula. These summary effects may mask effects on price for specific wine varieties.

5.3 Wine Variety: Red vs. White

Table 3 details the results of separate hedonic price equations for each of four wine varieties. Our results show that the effect of the wine quality rating for shiraz and cabernet is a 14.1% and 13.1% price rise per rating point, whereas that of chardonnay and riesling reaches 10.9% and 9.3%. Furthermore, the largest size wineries have no effect on price for cabernet and riesling as compared to all other size of wineries. However, the coefficients for the small size (100~499 tonnes) and medium size (500~2,499 tonnes) winery dummy variables for shiraz and chardonnay are significantly positive, implying that the small and medium size wineries received a premium price compared to the largest sized wineries. In particular, the premium price (26.6% and 21.7%) in the case of chardonnay is greater than shiraz (11.5% and 18.3%). In comparison to the oldest vintage for wine, the younger chardonnay commands a decreasing price premium, but the younger shiraz commands a rising price. The differences in the vintage effect suggest the existence of unequal price behaviours according to the wine variety. As stated earlier, the prices of shiraz have increased dramatically over the last decade (Schamel and Anderson 2001), while those for chardonnay have not. The increases in the prices of shiraz may mask vintage effects.

Overall, for each variety there are regions that command a higher price than other regions, given the same quality score. In Table 3 we can easily see that the magnitude of the coefficient on the wine region effect ($ORIGIN_n$) for the red varieties (shiraz and cabernet) is statistically significant and larger than for white varieties (chardonnay and riesling). Barossa is often thought of as the comparative benchmark for shiraz. In general our results show that all the warm regions, which are significantly different from Barossa, have a negative coefficient; they all have a negative effect on the price of shiraz compared to Barossa. Barossa is classed as a warm region, but the regions which do not differ significantly from Barossa are all cool (Adelaide Hills, Mornington Peninsula, and Yarra), with the exception of Coonawarra. Because shiraz doesn’t ripen as well in cool areas, the lack of a significant difference could be due to small samples from each of those regions or possibly

Table 3:
Hedonic price equation for Australian wines by wine varietal

	Shiraz		Cabernet	
PRICE ^{CLIMATE} (dependent variable)	Coeff	t-value	Coeff	t-value
QUALITY $_{PRED}$	0.141**	(18.55)	0.131**	(23.07)
SIZE $_{1}$ [a]				
< 100 tonnes (very small)	0.114	(1.64)	0.047	(0.85)
100 ~ 499 tonnes (small)	0.115*	(2.25)	0.065**	(3.13)
500 ~ 2,499 tonnes (medium)	0.183**	(3.82)	0.042**	(3.14)
2,500 ~ 9,999 tonnes (large)	0.089	(1.32)	0.024	(1.61)
> 10,000 tonnes (very large)	Base		Base	
AGE $_{m}$(vintage year)				
1 ~ 2 years (after 1997)	-0.282*	(-2.17)	-0.221	(-1.80)
3 ~ 4 years (1996 and 1997)	-0.187	(-2.09)	-0.103	(-1.91)
5 ~ 6 years (1994 and 1995)	-0.151	(-1.69)	-0.092	(-1.76)
7 ~ 8 years (1992 and 1993)	-0.160	(-1.75)	-0.117*	(-2.18)
Over 8 years (before 1992)	Base		Base	
ORIGIN $_{n}$ [b]				
Barossa Valley (W)	Base		-0.116**	(-2.71)
Clare Valley (W)	-0.172**	(-2.75)	-0.174**	(-3.02)
Great Southern (W)	-0.275**	(-3.37)	-0.214**	(-2.84)
Hunter Valley (W)	-0.281**	(-4.51)	-0.427**	(-4.78)
Margaret River (W)	-0.192**	(-2.13)	-0.018	(-0.35)
McLaren Vale (W)	-0.134**	(-2.60)	-0.114**	(-2.52)
Adelaide Hills (C)	0.049	(0.49)	-0.155	(-1.34)
Coonawarra (C)	-0.261**	(-3.67)	Base	
Mornington Penins (C)	-0.064	(-0.50)	n.a.	n.a.
Tasmania (C)	n.a.	n.a.	-0.115	(1.31)
Yarra Valley (C)	0.068	(0.76)	-0.119	(-1.73)
Constant	-6.855**	(-24.62)	-5.511**	(-23.97)
R^2	0.507		0.659	
Wald test [c]	2045.3**	(0.000)	3091.7**	(0.000)

Notes: * Significantly different from zero at the 5% level and ** at the 1% level.
[a] Measured by the tonnes of wine grapes crushed of wine producers.
[b] W referring for warm climate region and C for cool climate region.
[c] Wald statistics show the linear restrictions test (Doornik and Hendry 1996, pp.241).

higher demand due to lower availability. McLaren Vale and Hunter Valley are both thought to be good regions for shiraz, but both have a significant price discount in comparison to Barossa, 13.4% and 28.1% respectively.

The benchmark region for cabernet is Coonawarra. Our results reinforce this with all significant comparisons for cabernet from warm regions being negative, with the exception of Margaret River, which has a good reputation for cabernet wine. For instance, the price discounts range from 42.7% for Hunter Valley to 11.4% for Mclaren Vale and 11.6% for Barossa Valley. The regions that do not significantly differ in its effect on price with Coonawarra, like with shiraz and Barossa, are cool climate regions such as Adelaide Hills, Tasmania and Yarra Valley, probably for the same reason of small samples or limited availability.

Chardonnay is priced the highest from Margaret River, which is classed as a warm region, especially in comparison to Adelaide Hills, Yarra Valley and Tasmania. Surprisingly, we find that the coefficient on the regional effect ($ORIGIN_n$) for almost all other wine regions as compared to Margaret River is statistically insignificant (except for Clare Valley) and approach to zero, which can not support the existence of the regional reputation effect on the price of the Australian chardonnay wines. The story with riesling is not so clear. Clare Valley is thought by some to be Australia's premiere riesling region. But our analysis shows that Clare only receives a 13.9% premium by compared to Tasmania and is actually discounted by 10.6% ~ 12.7% in relation to riesling from Coonawarra, Margaret River and Yarra Valley.

6. Implications and Future Research

Our research has added to the use of hedonic pricing for wine by adding several new parameters: winery reputation and size and by calculating quality as a function of the other characteristics before using it in the hedonic pricing equation. We also derive equations for two climate regions and four major wine varieties separately, rather than treat all the regions or varieties as one. Keeping the varieties in one equation probably makes sense for European regions, where there are restrictions on which varieties can be grown, but it still mixes up white and red varieties. When a range of varieties are put into one equation for a country like Australia, we only can see the price effect of the varieties in general; we cannot untangle the effects of different varieties in each region.

Our first table shows that across three of the four varieties, Halliday's rating of winery reputation is highly correlated with quality. This gives credence to his rating system, that wineries with higher ratings do indeed produce better quality wine. This could be an artifact of his system, where he gives higher quality scores to his higher rated wineries, but the fact that reputation is significant in the hedonic price equations shows that wineries that have invested in better quality over the years command higher prices. Shapiro's (1983) observation of reputation effects does hold in the Australian wine industry. This should give heart and direction to wine marketing managers to keep investing in long term brand building at the same time as their wine making colleagues strive to make better quality wines. The analysis shows that wines from wineries with the highest (five star) reputations charge an average of $6.00 more per bottle than a comparable four and a half star winery, and an amazing $14 more than a four or three and a half star winery. This price differential when multiplied over the production capacity of the winery shows the value of a top reputation and gives some indication of how much a wine company could invest in both production and promotion to gain this level of status.

There is also a return to quality above winery reputation (Table 2). Each quality point increases the price of the wine between 9% and 14%, which again gives some measure of how much a winery could invest to improve quality and make a reasonable return for that investment. The word 'quality' is mentioned too often in the wine industry without regard to its costs or to its benefits. Our analysis puts some real numbers on quality as rated by James Halliday. For example, if a winery had done some small batch experiments and shown that by reducing yields on a certain shiraz vineyard from 6 tonnes per hectare to 3 tonnes would result in the quality rising from 88 points to 91 points, they should be able to raise their prices by 14% X 3 (points) or 42%. If their bottle price for shiraz was $18, they might be able to raise their price to $25. This would mean about $3.50 more per bottle at the winery wholesale price. If they made about 3000 cases of this wine, this would mean an increase in gross margin of $105,000, which could be compared to the cost of the reduced yields in the vineyard to see if this is a feasible investment.

Our research has shown that winery size can have an effect on the price of the wines sold. Wineries crushing greater than 2,500 tonnes of grapes get substantially less for each bottle of wine than smaller sized wineries, and the effect is fairly constant down to the smallest size

(Table 2). Large wineries are more efficient and probably charge lower prices as a competitive measure (Wollan, 1998). Smaller wineries are not as efficient, but may charge prices. Small and medium sized wineries most likely must charge a higher price for their wines in order to make a profit, and yet they also must use distributors rather than sell direct. We have no evidence that the wines from small and medium sized wineries are perceived to be better than the wines from large wineries, but it may be that these sized wineries are large enough to develop a national reputation and yet are perceived as relatively small or as boutique by consumers. If this is the case, then wineries within these size groups can benchmark their prices against others and some of them may find that they are undercharging and can raise prices and profits. The price premiums are substantial at between 10 and 18% across the various sizes compared to the largest two categories of wineries. Also, wineries that are larger cold take advantage of consumer's perceptions by positioning individual brands as coming from boutique-style wineries.

One of the key areas of interest is the effect of region on wine price. We decided to separate the varieties and run an equation for each, so that we could see what effect regional reputation has on the wines by variety. Even though there are no restrictions of what can be grown where in Australia, anecdotally, different regions have better reputations for different varieties of wines. Our research gives weight to that observation. Barossa for shiraz, Coonawarra for cabernet and Clare Valley for riesling all show increased value compared to other regions producing that variety. Along with Schamel and Anderson's observation (2001) that region is gaining in importance in Australia, we find that different regions certainly are valued more highly for different grape varieties than others.

From a marketing manager's point of view our results provide some direction for both promotion and pricing. There certainly is evidence that region can add to the price consumers are willing to pay for wine. Wineries from regions with a comparably positive price impact should utilize that fact on the label and in promotions. Probably the most important advice is for wineries in each region to keep working together. This collaborative effort is relatively unique in Australia, but seems to have borne fruit and can continue to do so. Wineries with strong reputations for specific varieties can emphasize this fact in group promotions.

More importantly, regions where the wine quality is good, but suffer from lower prices need to engage in activities to build the reputation for their regions wines, and consequently be able to raise prices. McLaren Vale is a good example. Here the shiraz wines have won many awards and are highly demanded within Australia. However, the reputation for the region is lower than for Barossa, and this is especially true in export markets (Murphy 2001). Some idea of the price increase can be predicted, which would help decide what a regional promotional budget might be over a period of years. McLaren Vale wineries have begun to promote their wines in Australia with festivals, dinners, and a new visitor's center. However, the prices paid domestically for Australian wines are partly determined by their international value, and obviously McLaren Vale needs to do more international promotion. At the beginning of the 1990s, Barossa Valley wineries made several trips as a group to the UK market to conduct tastings, dinners, music and wine events, and Barossa food and wine events. McLaren Vale should follow in this same mode. With prices 13% lower than Barossa, but similar climate and quality, wineries in McLaren Vale can calculate the returns to improving their reputation through promotional activities. Although these are not as high as those returns to winery reputation, they are substantial. The same advice can be given to the other newer regions with good quality, but relatively lower prices. Regional promotions are less expensive per winery than individual wineries conducting the same events and over a period of time, raising the regional reputation will help all the wineries achieve higher prices.

Of course hedonic price analysis does have some shortcomings. We must assume that the quality and reputation ratings have validity, since they are subjective judgments. We used James Halliday (1999), one of the foremost authorities on Australian wine. We could use the same logic as Schamel and Anderson's (2001) and accord Halliday influence status, so that his wine and winery ratings actually help create the prices charged. In our opinion, the quality of the wine and the winery reputation do have a relationship with price, regardless of which is cause and which is effect. We also must assume a balance of supply and demand for the equations to have meaning.

There is scope for future research. In the area of hedonic price analysis, a simple but powerful confirmation would be to use a different set of quality and reputation indicators, like Schamel and Anderson (2001) did, which showed similar relationships. One might also use separate equations for each variety over a historical period in order to confirm Schamel and Anderson's observation that overall region is gaining in importance in Australia. Outside of hedonic price analysis, conclusions on the various indicators of value, like winery reputation, wine quality, and region could be tested with different techniques. Preliminary research by Tustin and Lockshin (2001) showed that region and brand did have a significant impact on consumer choice, but the pattern differed for low and high involvement consumers. A well known wine region added about $5.00 to the price consumers were willing to pay for a bottle in a choice-based conjoint experiment. More research using actual choice situation experiments could confirm the effects of the variable found significant in this analysis. This is important for wineries, so management can decide whether focusing on the brand or the region has the largest payback in price received.

It is also important to know what consumers actually have in their minds when choosing wine. Do they have Halliday or other quality ratings in their mind when buying wine? What is the effect of putting those ratings on the shelf? This is done more regularly in the US with Wine Spectator ratings than in Australia. How many consumers use winery reputation as part of their decision process? Looking at the process a different way, does price act as a signal, rather than as an outcome of the other factors? Does merely setting a higher price result in greater sales or a higher reputation? These are just a few of the useful questions remaining to be answered in future research.

7. References

Anderson, K., Norman, D., Wittwer, G., 2001. Globalization and the world's wine markets: An overview, CIES Workshop Paper 01, Centre for International Economic Studies, University of Adelaide, Adelaide.

Arguea, N., Hsiao, C., 1993. Econometric issues of estimating hedonic price functions. Journal of Econometrics 56, 243-67.

Ashenfelter, O., Ashmore, D., Lalonde, R., 1995. Bordeaux wine vintage quality and the weather. Chance 8 (4), 7-14.

Australasian Wine Exchange, 2000. http://www.aawx.com.au/newsletters/news001.html, Website accessed on 11 December 2002.

Australian Wine and Brandy Corporation (AWBC), 2001. Wine Export Approval Report, Winetitles Publisher, Adelaide.

Australian Wine and Brandy Corporation (AWBC), 1994. Guidelines for applicants for the determination of Australian geographical indications, Winetitles Publisher, Adelaide.

Charters, S., Lockshin, L., Unwin, T., 1999. Consumer responses to wine bottle back labels. Journal of Wine Research 10 (3), 183-196.

Combris, P., Lecocq, S., Visser, M., 2000. Estimation of a hedonic equation for Burgundy wine. Applied Economics 32, 961-967.

Combris, P., Lecocq, S., Visser, M., 1997. Estimation of a hedonic price equation for Bordeaux wine: Does quality matter? The Economic Journal 107, 390-402.

Doornik, J.A. and Hendry, D.F., 1996. Empirical Econometric Modelling Using PcGive 9.0 for Windows. London, International Thomson Business Press.

Greene, W.H., 1993. Econometric Analysis, Macmillan Publishing Company, New York.

Halliday, J., 1999. Australia and New Zealand Wine Companion 2000, Harper Collins, Sydney.

Johnson, J., 1972. Econometric Methods, McGraw-Hill Book Company, New York.

Landon, S., Smith, C.E., 1997. The use of quality and reputation indicators by consumers: The case of Bordeaux wine. Journal of Consumer Policy 20, 289-323.

Landon, S., Smith, C.E., 1998. Quality expectations, reputation, and price. Southern Economic Journal 64 (3), 628-647.

Lockshin, L., 1997. Branding and brand management in the wine industry. Australian and New Zealand Wine Industry Journal 12 (4), 386-387.

Murphy, H., 2001. Personal Communication of the results of a survey of wine consumers at Australian tastings in the UK.

Nerlove, M., 1995. Hedonic price functions and the measurement of preference: The case of the Swedish wine consumers. European Economic Review 36, 1697-1716.

Oczkowski, E. 2001. Hedonic Wine Price Functions and Measurement Error. The Economic Record 77 (239), 374-82.

Oczkowski, E., 1994. A hedonic price function for Australian premium table wine. Australian Journal of Agricultural Economics 38, 93-110.

Olson, J.C. and Jacoby, J., 1972. Cue utilization in the quality perception process. Proceedings of the Third Annual Conference, Association for Consumer Research, Ann Arbour, pp. 167-179.

Rasmussen, M. and Lockshin, L., 1999. Wine choice behaviour: The effect of regional branding. International Journal of Wine Marketing 11 (1), 36-46.

Rosen, S., 1974. Hedonic prices and implicit markets: Product differentiation in pure competition. Journal of Political Economy 82, 34-55.

Ryan, D., 1994. The protection of geographical indicators in Australia under the EC/Australia wine agreement. European Intellectual Property Review 16 (2), 521-524.

Schamel, G. and Anderson, K., 2001. Wine Quality and Varietal, Regional, and Winery Reputations: Hedonic Prices for Australia and New Zealand. CIES Workshop Paper 20, Centre for International Economic Studies, University of Adelaide, Adelaide.

Shapiro, C., 1983. Premiums for high quality products as returns to reputations. Quarterly Journal of Economics 98 (4), 659-679.

Tustin, M., Lockshin, L., 2001. Region of origin: Does it really count? The Australia and New Zealand Wine Industry Journal 16 (5), 139-143.

Unwin, T., 1999. Hedonic price indexes and the qualities of wine. The Journal of Wine Research 10 (2), 95-104.

White, T., 1995. Fine lines in Coonawarra. Financial Review, Friday, 17th March, 15.

Winetitles, 2001. The Australian & New Zealand Wine Industry Directory. Winetitles Publsiher, Adelaide.

Wollan, D., 1998. The Australian Wine Industry- a Sceptic's view? The Australia and New Zealand Wine Industry Journal 13 (1), 22-24.

Biographies

Bith-Hong Ling is an associate professor in the Department of Marketing at the National Chung Hsing University in Taiwan. She received her Masters in Agribusiness from the Arizona State University and a Ph.D. in Agricultural and Resource Economics from the University of Hawaii. Her research interests are in the areas of wine economics, marketing in the Asia-Pacific, global marketing strategy, international business and brand management. Bith-Hong holds a 2003 visiting fellow of Dentsu Ikueikai and Yoshida Hideo Memorial Foundation (Japan) in the Center of Business and Market Studies of the Faculty of Economics at the University of Tokyo and works on the brand choice decision and strategic brand marketing.

Larry Lockshin is Professor of Wine Marketing at the University of South Australia. He has spent more than 20 years working with the wine industry, first as a viticulturist and now as a marketing academic and consultant. He received his Masters in Viticulture from Cornell University and a PhD in Marketing from Ohio State University. His research interests are consumer choice behaviour for wine and wine industry strategy. Dr. Lockshin is the Associate Editor for Wine Marketing for the Australia and New Zealand Wine Industry Journal and a regular marketing columnist for the last 5 years. He writes monthly for Harpers, The Wine and Spirit Weekly, in the UK and he is also the Associate Editor for Business and Economics for the Journal of Wine Research.

Correspondence Addresses

Dr. Bith-Hong Ling, Associate Professor, Department of Marketing, National Chung-Hsing University, 250 Kuo Kuang Road, Taichung, Taiwan, R.O.C., Telephone: +886 (4) 2284 0392 ext 43, Facsimile: 886 (4) 2285 6691, Email: bhling@dragon.nchu.edu.tw; Dr. Larry Lockshin, Professor and Director, Wine Marketing Research Group, University of South Australia, GPO Box 2471, Adelaide, South Australia 5001, Telephone: +61 (08) 8302 0261, Facsimile: +61 (8) 8302 0442, Email: larry.lockshin@unisa.edu.au

The Stochastic Nature of Purchasing a State's Lottery Products

Dick Mizerski, Rohan Miller, Katherine Mizerski & Desmond Lam

Abstract

Legal State Lotteries have significant effects on those state's revenues, their residents' behaviours and their ultimate welfare. Reported Lottery product purchase appears to reflect patterns that suggest high levels of habitual behaviour. Analysis of a US State's Lottery data found that this pattern was exhibited early in a game's introduction, and was evident in three apparently different product offerings: six-number and three-number Lotto, and Instant (scratch-off) games. These findings have important implications for understanding gambling behaviour, lottery marketing and gambling regulation.

Keywords: Lotteries, Gaming, Habit, Stochastic modelling

1. Introduction

Worldwide lottery sales in 1999 were estimated to be over US$124,185,000,000 and are arguably the largest and most popular form of legalized gambling. US lotteries account for over 35% of this total (National Gambling Impact Study Commission, 1999; Productivity Commission, 1999), with a growth rate of more than 8% per annum (Miyazaki, Brumbaugh and Sprott, 2001). The importance of lottery revenues to US state governments is clear with lotteries accounting for between the fourth and sixth largest source of state revenue for most of the 37 states with lotteries.

These impressive sales are backed by sophisticated marketing and promotion budgets that are often over $50 million per year. State lotteries offer a range of games in addition to Lotto that usually have relatively high levels of use in a population (penetration) compared to almost all other repeat purchase consumer goods. For example, US lottery games generally have in excess of 52% of the adult population buy at least one game over the year (National Gambling Impact Study Commission, 1999). Nonetheless, there are few empirically-based reports that investigate the decision-making or behaviour of gamblers when they purchase lottery games.

2. Background

2.1 Problem and Regular Gambling

The vast majority of the published research on gambling, including lottery product decision-making and behaviour, has taken a psychological model for its study. The research tends to focus on how cognitions, affect and the gambler's perception of the control they have in the process lead to problem gambling. Problem gambling is also known as pathological gambling (National Gambling Impact Study Commission, 1999) or compulsive gambling, and is typically defined on some clinical measures such as The Southern Oaks Gambling Screen (SOGS). These problem gamblers account for approximately 2% of gamblers, although their rates of prevalence are affected by the group collecting the data, the scale used to determine problem gambling, and the venue where the information is collected. Lottery play has been viewed as the "softest" form of gambling, with a relatively low proportion of problem gamblers associated with Lottery products (Productivity Commission, 1999; National Gambling Impact Study, 1999).

2.2 Cognitive Based Gambling Models

The influential role of cognitive processes has been well documented in the gambling literature. For example, Langer (1975) used an experimental method to show that gamblers display an "illusion of control" and believe in luck when gambling. Ladouceur and Walker (1996) proposed that gamblers have two types of cognitive bias. They believe they can influence the outcome of their gambling, and that they can often predict it.

A considerable body of literature has explored the application of expectancy-value, the Theory of Reasoned Action and other attitude model variants as ways to explain gambling behaviour. For example, Miyazaki et al. (1998) suggest that general attitudes toward gambling are likely to influence attitudes and behaviours related to Lotto play.

Landman and Petty (2000) proposed a theory suggesting that counterfactual thinking ("the process of imaging what might have been …") plays a role in repeat purchase of lottery games, particularly where they most often lose:

"Some of those that buy a lottery ticket and lose may be hooked into continuing to purchase through the desire to escape the adverse reality by engaging in useful counterfactual thoughts of winning" (p.303).

Heavy buyers of lottery games are also suggested to fantasize more and thus produce more counterfactual thoughts. Unfortunately, no empirical tests of these cognitions and their effects were provided.

Forrest, Simmons and Chesters (2002) tested an economic model with results that would counter the assumptions about counterfactual thought. They cite evidence in derived price elasticities that would support the argument that Lotto players do act rationally to make use of the best information available when they purchase Lotto games. Scott and Gulley (1995) provide additional economic modeling support for the existence of rational consumers in their analyses of Lotto data from the US states of Kentucky, Ohio and Massachusetts.

For both problem and regular gamblers, the most popular present paradigm for studying gambling behaviour is Ajzen and Fishbein's 1980 Theory of Reasoned Action, and its present successor, Ajzen's (1991) Theory of Planned Behaviour (Rogers, 1998). Application of these cognitive-based models typically view the core beliefs of all gamblers as flawed, and continued gambling behaviour as being maintained by irrational thinking (Walker, 1993), "misconceptions" about the random nature of gambling on Lottery products, and gamblers mistaken beliefs they can control the outcome of games like Lotto (Miyazaki et al., 2001).

Although cognitive based theories and measures have explained some variance in primarily problem gambling behaviour, they have had little support for their efficacy in explaining or predicting gambling behaviour in a market. For example, research investigating whether marketing activities were associated with developing favourable beliefs about, and affect toward Lottery games, found only ethnic background (Mizerski et al., 1998) explained reported Lotto game purchase. Daswani (2003) found that no significant attitudinal responses were associated with the purchase of instant Lottery games. Heiens (1993) analysed the State of Colorado's Lotto sales in the sixth year after its introduction. He looked for the relationship of marketing activities like media advertising, jackpot size, publicity and point of purchase with Lotto game sales. The Lotto jackpot size explained almost all of the variance, with publicity the only other significant (but small) effect on sales. DeBoer (1990) found similar effects of jackpot size in New York State Lotto sales. Population growth has been the only other factor that has shown to be an effect in gambling purchase for Lotto products (Gullay and Scott, 1995; Mason, Steagall and Fabitius, 1998)

2.3 The Effect of Past Behaviour

Several researchers have argued that past behaviour should be included in testing the applicability of Reasoned and Planned Action models for frequent decisions. Ouellette and Wood (1998) used a meta-analysis across a range of behaviours that are done frequently (e.g., brushing teeth, seatbelt use) and infrequently (donating blood). They found that past behaviour was a significantly stronger direct effect and more predictive than cognitive factors when the behaviours were undertaken frequently (up to every two weeks). The frequent behaviours usually occurred in relatively stable contexts, so the effect of past behaviour was termed habit by the authors. Norman, Conner and Bell (2000) found frequent past behaviour a better predictor, than cognitive factors, of future health behaviours like physical exercise.

Oh and Hsu (2001) tested the Theories of Reasoned / Planned Action against past gambling behaviour in predicting future gambling. While many of the cognitive constructs had a significant influence on future gambling behaviour, the direct path of past gambling behaviour to future gambling was almost twice the size effect as the direct path behavioural intention to future behaviour. They found no significant direct effect of attitude to future behaviour. Although Oh and Hsu found that past gambling behaviour was a better predictor, there has been little research into the form that past gambling takes in this process.

2.4 A Stochastic Explanation

One possible reason for finding little effect of promotion on sales (Heiens, 1993; Mizerski et al., 1998) is that most

State lotteries have reached the maturity stage of their Product Life Cycle (PLC) and there is little beyond large jackpots that affect these rather stable product markets. The "jackpot effect" also appears to have no influence on sales following the winning (lag effect) of a large Lotto jackpot (Heiens, 1993). In the few areas where lotteries compete, such as the border areas of adjoining states, these markets quickly stabilize in terms of brand share for competing lottery products. Because lottery games are a stable and mature product, usually rely on retailers, require shelf space and are frequently purchased, they exhibit the salient factors that identify a fast moving consumer package good. If they act in that manner, the purchase of these lottery games may reflect an underlying stochastic pattern often observed in many consumer and industrial markets (Ehrenberg, 1972; East, 1997). If lottery products reflect an NBD pattern, that could have an impact on industry and public policy marketing strategies, and the efficacy of those strategies. For example, warnings about gambling or information odds would appear to have little impact on future gambling with strong habitual patterns of play (Mizerski and Mizerski, 2001).

The general theory associated with the recognition and application of patterns of behaviour is often referred to as NBD-type models or Stochastic Preference (Massy, Montgomery and Morrison, 1970; Morrison and Schmittlein, 1988; Wagner and Taudes, 1986). These models are often very accurate in predicting usage, future purchase incidence and brand choice based on only behaviour or reported behaviour over a period of time. Because no attitudinal or marketing variables (e.g., advertising expenditures) are input to the models, explanations for the patterns are not addressed.

2.5 The NBD Model

The negative binomial distribution (NBD) is perhaps the most widely reported of the stochastic models. Initially discussed by Greenwood and Yule (1920) in terms of the incidence of reoccurring diseases and accidents, it was first introduced into the marketing literature by Ehrenberg in 1959. Typically, the NBD model has been applied to study purchase incidence for the total product category or for a single brand. A derivation of the NBD, the Dirichlet, is used to predict brand shares in a product category. The outcome of applying the NBD to data about past behaviour are estimates of future penetration of population use, and estimates of usage by groups (e.g., nonusers, heavy and light users) over time (see East, 1997). This model is often quite accurate (c.f., Morrison and Schmittlein, 1988), and can be more accurate than using cognitive data (Ehrenberg, Goodhardt and Barwise, 1990) to explain and predict future purchase behaviour. Given the characteristics of Lottery product purchase, it is expected that there should be no difference between the proportion of buyers of Lottery games and their expected purchase derived from the NBD model.

3. Methodology

3.1 Sample

The data came from a quarterly nine-wave series of phone surveys conducted by a commercial market research firm for the Florida State Lottery Commission. The surveys collected self-reported demographics, psychographics, attitudinal and purchase information from quota-based samples of approximately n=800 each (total n=7401) Florida residents. The samples were developed to represent the demographic profile of the state resident population, and used different respondents and often different questions on each quarterly survey. Therefore, the survey data provided cross-sectional data over time.

3.2 Measures

Interviewers asked the respondents in all nine surveys if they had played Lotto, Instant and/or Cash-3 in the last two weeks. They also asked how many games of each the respondent had purchased over those 14 days. Respondents that provided a yes or no about their play in the previous two weeks, and also reported the number of games they purchased, were used to determine the 'penetration' and 'purchase frequency' (Ehrenberg, 1972) of each Lottery game. The use of number of games rather than frequency of purchase does not invalidate the use of the NBD (Ehrenberg, 1972; Morrison and Schmittlein, 1988).

3.3 The State of Florida Lottery Products

Lotteries can be defined as games of chance in which a large number of players produce a fund from which prizes, whose worth greatly surpasses the value of individual contributions, are distributed by lot (Weiss and Weiss, 1966). Each State Lottery typically has a number of different lottery brands in their product portfolio that differ on a number of characteristics.

The State of Florida Lottery has been one of the most successful of the sellers of lottery games in the United States (Mason, et al., 1997). It began by selling tickets for its first Instant (scratch-off) game, MILLIONAIRE, on January 12, 1988. First week Instant game sales totaled approximately $95 million and exceeded the previous national record (set by the California Lottery in 1985) by approximately $15 million. COOL MILLION, the Florida Lottery's second Instant game, was introduced on January 28 of that same year, beginning a cycle of successful Florida lottery games. On January 29, 1989, 17 days after sales began, the Florida Lottery paid back over $15 million to the General Revenue Fund for the Lottery's start-up loan plus interest.

In April 1988, the Florida Lottery introduced Lotto and Cash-3 products through a network of 3,100 retailers. By June 1988, Lotto and Cash-3 generated $52 million of sales in just one month. The Florida Lottery added other game products over the subsequent years.

3.3.1 Instant Lottery Tickets

'Instant' lotteries are widely considered easier to purchase than all other forms of gambling in the lottery product portfolio, and are commonly referred to as "paper slot machines" (Abt, Smith and Christiansen,1985). In 1999, Instant game sales from the Florida Lottery exceeded $663 million and represented around 25% of the Florida Lottery's revenue. As simple games of chance, 'Instant' lotteries offer the immediate winning of prizes with better odds than other Lottery games. Perhaps as important in driving instant sales is the opportunity for winners to reinvest immediately (Triplett, 1994). Unlike other lottery products that have their numbers periodically drawn and announced (e.g., Florida's Lotto was initially drawn each Saturday), Instant tickets provide consumers the opportunity of an immediate reward after scratching off the numbers (Triplett, 1994).

3.3.2 Cash-3

Cash-3 is played by choosing any three-digit number from 000 through 999, and matching those with three numbers drawn by the Lottery. There is the potential to win prizes up to $500, depending on the type of play purchased and the amount wagered. As such, it is a form

Figure 1: Penetration of Lottery Games Over Nine Quarterly Surveys
(Penetration = reported purchase in last14 days)

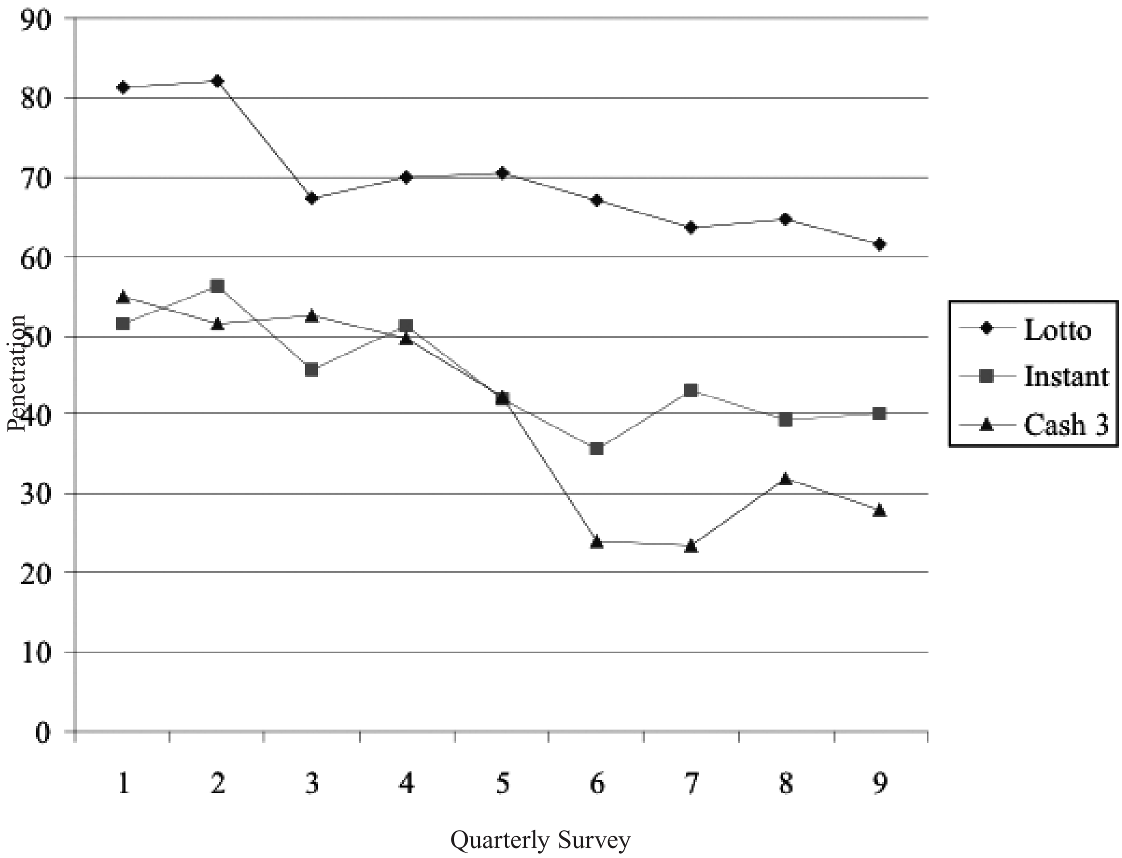
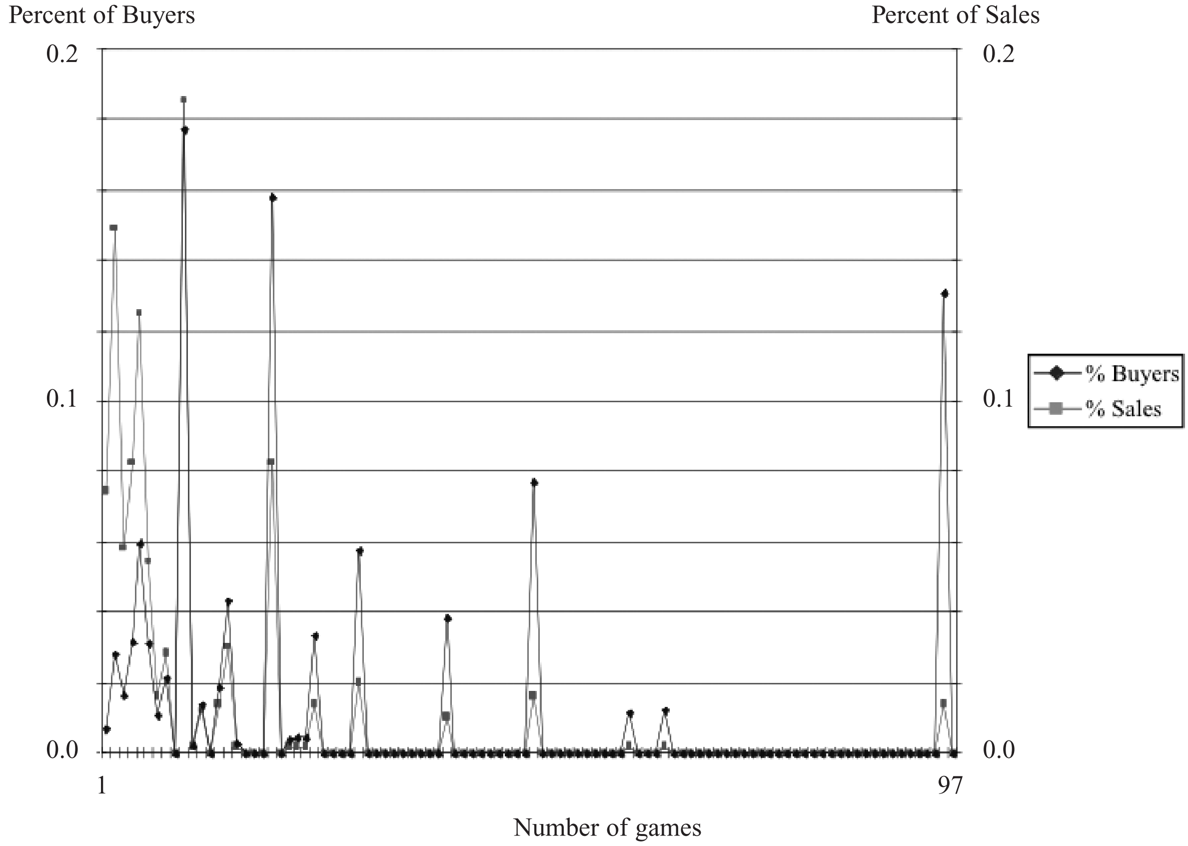


Figure 2: Number of Lotto Games Purchased and Their Proportion of Total Sales



of lotto, but the winning player may immediately collect most levels of winning from the lottery retailer where they purchased the game.

3.3.3 Lotto

Lotto, or "Big" Lotto, is generally the most popular Lottery game, in percent of the population who play (penetration) and in State Lottery sales. Lotto uses the game players' choice, or a random "machine pick" of 6 numbers, to determine a winner. Variations of the Lotto game tend to involve 60-80% of a state's population (Roy Morgan Research, 2001; Productivity Commission, 1999).

4. Results

Figure 1 provides a plot of the reported penetration of Lotto, Instant and Cash-3 play over nine surveys of Florida state residents. The first survey began in June 1988, approximately six months from the start of Instant game sales. For all three games, the penetration of purchase in the population had a downward trend during the first 27 months covered by the quarterly surveys. This trend has largely continued. The Cash-3 game tended to lose share to the Lotto and Instant games from the sixth survey.

Figure 2 is an example of the sample's reported Lotto purchases in wave four, and is similar to those for the other waves and the other products (Cash 3 and Instant) over those waves. Note that a disproportionate number of respondents tend to report patterns of purchase in multiples of games (10 for this game) over the previous two-week period. This is quite common in self-reports of gambling product purchase. The NBD phenomenon, where a large number of purchasers buy a small number of the product, and a small number of buyers account for most of the sales, appears to be reflected in the data.

4.1 Penetration and Number of Games Purchased

Table 1 provides the data for determining the penetration and 'frequency' of the Lotto games for each survey (in this study frequency of purchase is represented by 'number of tickets purchased'). As an example of the information, note the characteristics of survey one. That initial survey was the largest of all the surveys with n=1001 final respondents. Of the 1001 individuals in the total sample, 847 provided: (1) a yes or no response to the question that asked if they had purchased a Lotto game in the last 14 days, and (2) reported the number of games they had purchased over that two-week period. Therefore, 688 of those 847 respondents who had purchased Lotto represented 81% of the sample of relevant respondents. The average number of games purchased in the relevant population (n=847) was 13 (see East, 1997 for a discussion of NBD application).

Of the 688 purchasers in survey one, 293 respondents reported buying from one to five games in the last 14 days. These will be labeled the 'light buyers' based on previous research (East, 1997; Mizerski and Mizerski, 2001). The 'heavy buyers' are those who purchase six or more Lotto games over the 14-day period. Six of the nine waves had a median purchase of six games so this break is reasonable. Other partitions of the data (e.g., 1 to 7 and 8+) did not change the findings. Non-purchasers are the 159 respondents who reported not buying a Lotto game over the previous two weeks. A similar procedure was used to determine the penetration and frequency of Cash-3 and Instant game purchases (not displayed).

4.2 Observed vs NBD Expected

For purposes of further explanation, the tests for significant differences between the observed (reported) purchases and the NBD predicted proportions of buyers and of their proportion of sales are shown in Table 2. The NBD statistic requires three inputs: penetration of use in the potential market, the average frequency of purchase (or number of items/games) by those who purchased, and the time period of behaviour. Although the predicted and actual are not identical, the distributions are similar in this first survey and all the following eight surveys. Using a 3 (user groups) x 2 (reported vs expected) χ^2 statistic on each survey's data, none of the comparisons had statistically significant ($p>.05$) differences between the distribution of observed and NBD predicted proportions of purchases in the two Lotto user and one non-user groups. Figure 3 is an example of the fit of the NBD to the data, and shows the reported and NBD expected profile of purchases for each number of Lotto games bought in wave four using Wright's NBD software (1999). Even with the tendency of the sample to report ten based multiples of games, the NBD provides a very good statistical explanation ($r=.68$, $p<.001$) of the samples' reported Lotto game play. The stochastic pattern appeared within 24 weeks after the introduction of the game of Lotto. This finding provides support for a strong stochastic element in Lotto play.

4.3 Distribution of Volume by User Group

The percent of games accounted for by the light (one to five) and heavy (six plus) buyers, derived from the NBD

Table 1: Nine Sample Profiles and Lotto Purchase Last 14 Days

	Survey Number								
Characteristic	1	2	3	4	5	6	7	8	9
Total sample	1001	800	800	800	800	800	800	800	800
14 day purchase data[1]	847	703	700	710	746	676	638	637	610
No	159	126	228	213	219	223	232	225	234
Yes (% Penetration)	688 81%	577 82%	472 67%	497 70%	527 71%	453 67%	406 64%	412 65%	376 62%
Light[2]	293	232	208	243	223	206	179	201	182
Heavy[3]	395	345	264	254	304	247	227	211	194
Average games purchased	13	14	13	10	12	10	11	11	10

[1] If purchased, gave number of games

[2] Light =1 to 5 games in last 14 days

[3] Heavy = 6+ games in last 14 days

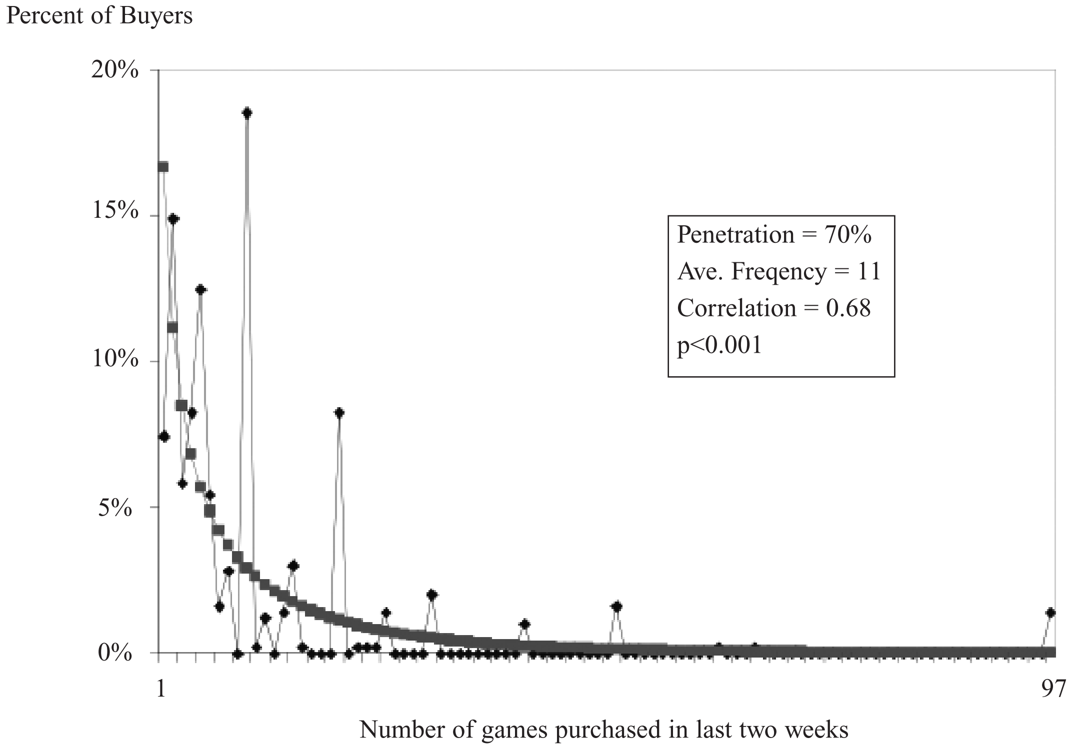
Table 2: Observed to NBD Expected Proportions of Lotto Buyers and Games Played

	Survey 1		Survey 2		Survey 3	
	Observed	*NBD Expected*	Observed	*NBD Expected*	Observed	*NBD Expected*
Proportion of Buyers						
Non	19	*19*	18	*18*	33	*33*
Light	35	*32*	33	*32*	30	*30*
Heavy	47	*49*	49	*50*	38	*37*
X^2	0.33		0.05		0.02	
df	2		2		2	
p	<.85		<.98		<.99	
Proportion of Games						
Light	10	*8*	9	*7*	11	*9*
Heavy	90	*92*	91	*93*	89	*91*
X^2	0.58		0.67		0.72	
df	1		1		1	
p	<.45		<.41		<.40	

	Survey 4		Survey 5		Survey 6	
	Observed	*NBD Expected*	Observed	*NBD Expected*	Observed	*NBD Expected*
Proportion of Buyers						
Non	30	*30*	29	*29*	33	*33*
Light	34	*34*	30	*32*	31	*35*
Heavy	36	*36*	41	*39*	37	*32*
X^2	0.003		0.22		1.23	
df	2		2		2	
p	<.99		<.89		<.54	
Proportion of Games						
Light	14	*11*	11	*9*	15	*13*
Heavy	86	*89*	89	*91*	85	*87*
X^2	1.17		0.40		0.51	
df	1		1		1	
p	<.28		<.53		<.47	

	Survey 7		Survey 8		Survey 9	
	Observed	*NBD Expected*	Observed	*NBD Expected*	Observed	*NBD Expected*
Proportion of Buyers						
Non	36	*36*	35	*35*	38	*38*
Light	28	*32*	32	*33*	30	*33*
Heavy	36	*32*	33	*32*	32	*29*
X^2	0.89		0.11		0.58	
df	2		2		2	
p	<.64		<.95		<.75	
Proportion of Games						
Light	14	*11*	16	*12*	17	*13*
Heavy	86	*89*	85	*88*	83	*87*
X^2	0.64		1.18		1.31	
df	1		1		1	
p	<.42		<.28		<.25	

Figure 3: Wave Four NBD Expected and Reported Lotto Game Purchase



and actual data, are also presented in Table 2. Looking again at survey one, the observed data shows that the light buyers account for 10% of sales while the heavy buyers were responsible for 90% of the sales. Non-users obviously account for no purchase so they are not shown.

The NBD statistic predicted that light buyers would purchase 8% of the game, while heavy buyers would account for 92% of the sales. The actual and NBD predicted figures were not significantly different from one another in any of the nine waves of surveys. The closeness of fit for the NBD for both the proportion of buyers and the proportion of games by user group, for all nine surveys (over 27 months) supports the second view that the NBD appears to provide a close approximation for predicting the distribution of Lotto game purchase.

It may help to put the importance of heavy use in Lotto in a form often cited in marketing discussions, the "80-20 rule of thumb". This "rule" (see Anschuetz, 1997) suggests that 80% of a brand's sales are bought by 20% of its buyers. While the veracity of this guideline is suspect given that the relationship is usually based on the brand's penetration and frequency in a population, it may help to know that 20% of the buyers accounted for about 57% of the sales of Lotto games. This relationship of the heavy 20% to the sales they generate was quite consistent (r=.82) over the nine waves of surveys.

Table 3 provides the same data for the Instant and Cash-3 games except that the specifics of the χ^2 results are not shown to conserve space. As with the Lotto games, there were no significant differences (p>.05) between the observed and the NBD expected proportions of buyers that comprised the Light and Heavy buying groups for either game, for any of the nine surveys over the 27 months of data collection. Also, there were no significant differences (p>.05) in the proportion of game sales accounted for by Heavy and Light buyers in the observed, as compared to the NBD expected figures over the same surveys. Figures 4 (Cash 3) and 5 (Instant) show the correlation between the NBD expected and reported game play by number of games purchased for one wave (Instant, r=.83, p<.001; Cash-3, r=.89, p<.001). These results for these two other games provide additional support for the generalized stochastic explanation of Lottery product game play.

It may be argued that the patterns of purchasing the Instant and Cash-3 lottery games are simply a by-product

Table 3: Observed to NBD Expected Proportions of Instant and Cash-3 Users and Games Played

Survey Number

INSTANT	1		2		3		4	
Proportion of Users	Observed	*Expected*	Observed	*Expected*	Observed	*Expected*	Observed	*Expected*
Non	49	*49*	44	*44*	54	*56*	49	*49*
Light 1-5	30	*28*	33	*30*	25	*23*	32	*30*
Heavy 6+	21	*24*	24	*26*	21	*19*	19	*21*
Proportion of Games								
Light 1-5	17	*13*	18	*14*	22	*15*	23	*18*
Heavy 6+	83	*87*	82	*86*	78	*85*	77	*82*
	5		6		7		8	
Proportion of Users	Observed	*Expected*	Observed	*Expected*	Observed	*Expected*	Observed	*Expected*
Non	58	*58*	64	*64*	57	*57*	61	*61*
Light 1-5	27	*29*	20	*21*	23	*24*	21	*22*
Heavy 6+	15	*13*	16	*15*	20	*19*	18	*17*
Proportion of Games								
Light 1-5	27	*29*	21	*16*	19	*14*	20	*14*
Heavy 6+	73	*71*	79	*84*	81	*86*	80	*86*
CASH-3	1		2		3		4	
Proportion of Users	Observed	*Expected*	Observed	*Expected*	Observed	*Expected*	Observed	*Expected*
Non	45	*46*	49	*49*	48	*49*	50	*51*
Light 1-5	34	*31*	30	*25*	34	*28*	32	*26*
Heavy 6+	21	*22*	22	*27*	19	*23*	18	*23*
Proportion of Games								
Light 1-5	25	*17*	13	*8*	20	*13*	17	*12*
Heavy 6+	75	*83*	84	*92*	80	*87*	83	*88*
	5		6		7		8	
Proportion of Users	Observed	*Expected*	Observed	*Expected*	Observed	*Expected*	Observed	*Expected*
Non	58	*58*	76	*77*	77	*74*	68	*68*
Light 1-5	24	*22*	10	*12*	11	*14*	16	*17*
Heavy 6+	18	*20*	14	*11*	12	*12*	16	*15*
Proportion of Games								
Light 1-5	14	*11*	10	*8*	11	*9*	14	*11*
Heavy 6+	86	*89*	90	*92*	89	*91*	86	*89*

of Lotto purchase. If most Lotto purchasers also purchase the Instant and Cash-3 games, then Lotto could be largely determining the NBD pattern evident in the purchase data for the other two games. Figure 6 provides plots of the proportion of reported purchasers who also purchased either Instant or Cash-3 games. The Instant game has a higher level of cross-play than the Cash-3 game, but both games show this relationship is going down over the nine surveys. Although cross-play is significant, the influence of the Lotto pattern of play is not a factor in over 50% of most purchases.

4.4 Relationship between Penetration and Frequency

The gradual decrease in penetration of the Florida population purchasing the three Lotto games over the 27 months of the surveys (Figures 2 and 3) revealed quite

Figure 4: Wave Four NBD Expected and Reported Cash 3 Game Purchase

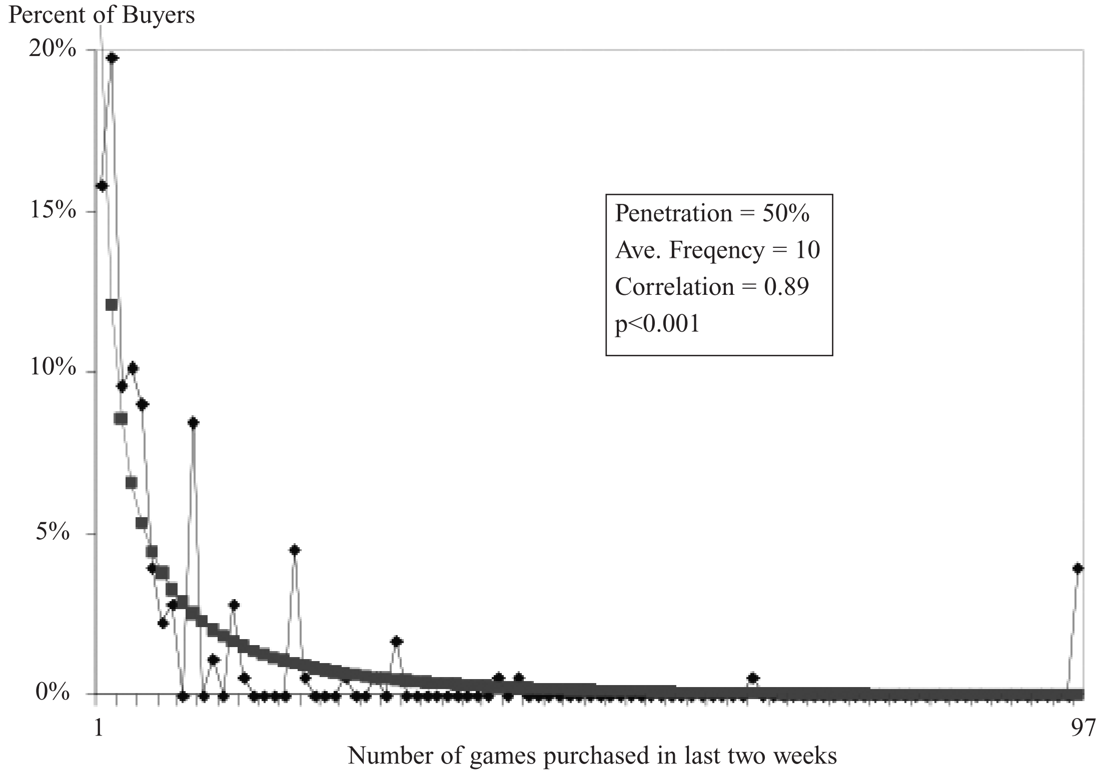


Figure 5: Wave Four NBD Expected and Reported Instant Game Purchase

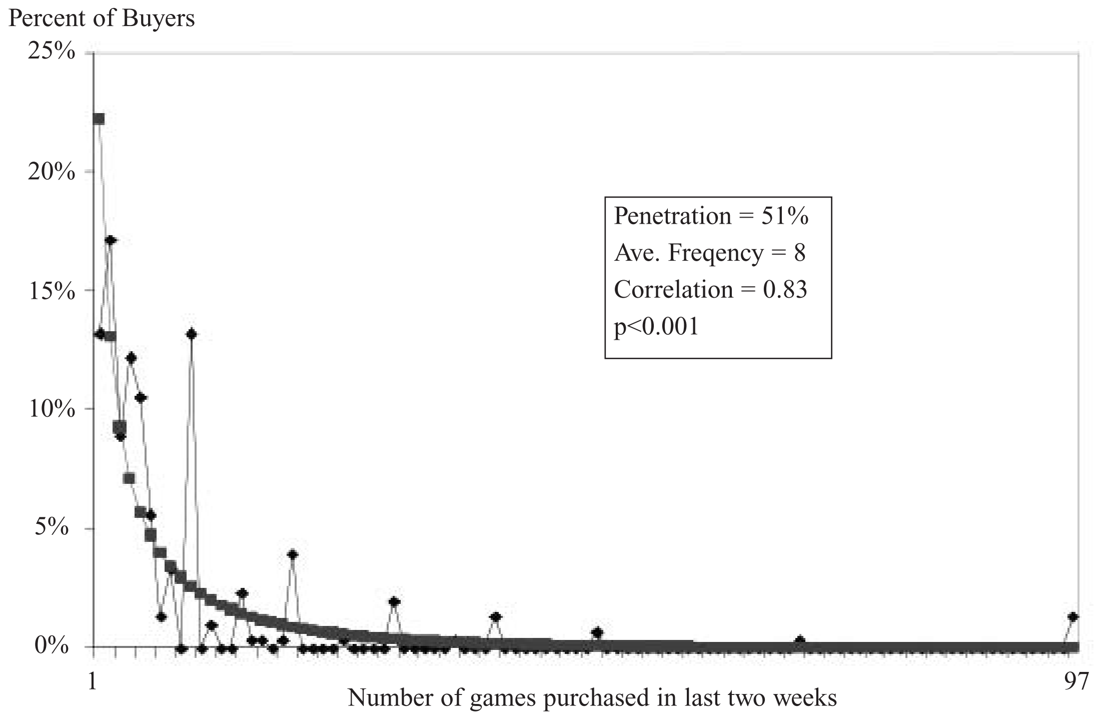
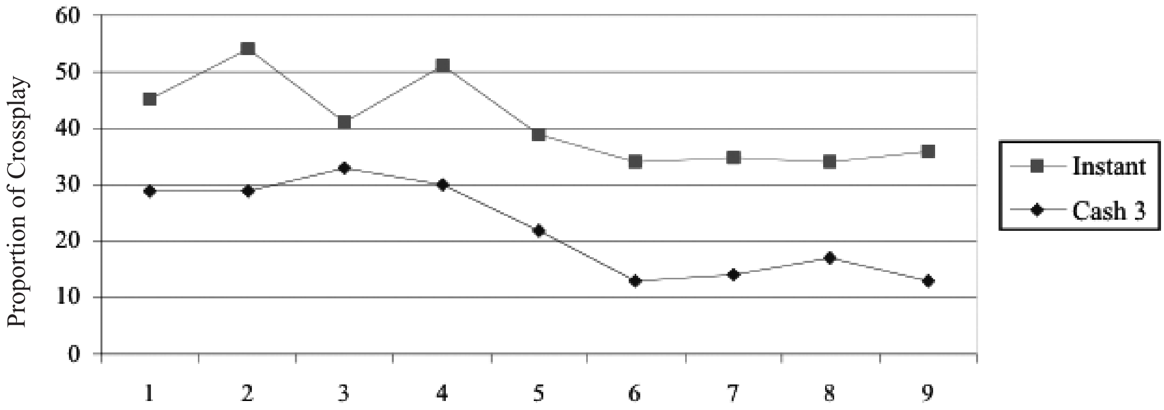


Figure 6: Cash 3 and Instant Game Crossplay with Lotto



different relationships with the average frequency of those purchasing each game form. Lotto went from the initial 81% penetration and an average of 13 games purchased in the last14 days, to 62% penetration and 10 games in the last survey. The Lotto penetration and average frequency of buyers were highly associated at r=.81. The instant game went from a high of 56% penetration and a 10 game average purchase in the last two weeks to 39% penetration and a nine game average purchase. The penetration and frequency of instant games had a weak association of r=.30. For both Lotto and to some extent Instant games, fewer buyers were buying fewer games over time.

Cash-3 penetration went from 54% of the population and an average of eight games purchased over the last two weeks, to 27% penetration and an average of 13 games purchased over the last14 days. The correlation between the two measures was r=-.73, a strong negative relationship. As Cash-3 participation / penetration decreased, those that stayed increased their average frequency of purchase by over 60%. This would appear to run counter to the generalization that penetration and frequency are positively related (Ehrenberg et al., 1990). However, this generalisation refers to brands in a category. The prevalence of negative associations between penetration and frequency in other categories, brands or product forms is unclear as little has been reported. That this negative association occurs with a lottery game may be potentially dangerous and will be discussed later.

5. Summary and Conclusions

The results from an application of the NBD statistic to reported lottery product game purchase supports an expected generalized stochastic pattern of buying the games. Lotto, Cash-3 and Instant game purchases reflected this pattern early in their product life cycle, and failed to deviate from this pattern over the next two and one quarter years of sales. This consistent pattern reflects what some term habit (East, 1997; Ouellette and Wood, 1998) and what would be expected to be an environment of weaker cognitive-based decision-making and purchase prediction. However, a cognitive-based alternative was not tested in this study, so future research needs to test the relationship between planned behaviour and habituation in gambling (Ajzen, 2002).

The observed and expected distributions of lottery game users and usage tested were based on self-reported purchase over the last 14 days. However, the influence of repeated purchase may be projected over a longer period of 365 days. Table 4 shows the predicted minimum and maximum penetration and average number of games purchased by players when extrapolated to one year using NBD predictions (see East, 1997). These types of NBD projections are quite accurate when markets tend to be stable (Morrison and Schmittlein, 1988). The figures differ by survey so the survey number is also provided.

These projections suggest very high penetration rates often unmatched by any other consumer repeat purchase package good including toilet paper (Roy Morgan, 2001; Simmons, 1999). In addition, the average number of games purchased by those who bought that year runs between 100 and 200, depending on the game. This high frequency of purchase behaviour, in turn, would be expected to reinforce the consistency of the habitual response.

Table 4: Predicted Game Penetration and Average Number of Games Over One Year

	Penetration of Population				Average Number of Games			
	Minimum		Maximum		Minimum		Maximum	
Game	Percent	Survey	Percent	Survey	Times	Survey	Times	Survey
Lotto	86	9	97	1	176	9	249	5
Cash 3	39	6	77	1	168	1	225	6
Instant	60	6	82	2	80	5	172	2

Before the implications of these findings are discussed, some limitations of the methodology should be noted. The samples were collected to represent the residents of the State of Florida so extrapolations to other populations and other time periods must be made with caution. Product, marketing and cultural differences in a market may exert strong effects on the choice and frequency of play (see Mizerski et al., 1998).

The validity of predicted game play over a long period like a year with the NBD has not been tested. Moreover, the effect of jackpot size for the Lotto has been reported as strong in the short run (Heiens, 1993), but it is unclear if the surveys used to collect the data were able to capture this effect. Finally, the purchase of lottery games was based on respondent retrospective reports of their behaviour. These reports are known to have relatively consistent biases, where light users tend to overestimate, and heavy users underestimate their purchases (Lee, Hu and Toh, 2000).

6. Implications

For lottery marketers, the implications of stochastic preference primarily influence the relative effect of the marketing mix through the gambling product's Product Life Cycle. Given the high level of habit exhibited in game purchase for the three forms studied, the ability of advertising and promotion to affect the aggregate size of the market is questionable (Barnard and Ehrenberg, 1997) beyond the early stages of the PLC (Borden, 1942). Distribution appears to be the most important of the mix factors (National Gambling Impact Study Commission, 1999; Productivity Commission, 1999), perhaps even more important than jackpot size.

A strong habit-driven consumer franchise presents some public policy challenges. To the extent that cognitive-based information processing is limited, the role of warning information about addiction and its manifested problems would appear to be of little influence. Efforts to address buyer misconceptions about the random nature of the game would also be compromised by habitual buying. Where distribution may be controlled in land-based operations, cyber-play with online betting has opened up a vast number of new options for the potential consumer. This form of "distribution" is being met by moratoriums and promised bans, but it is not clear it can be controlled.

The area of stochastic models may offer policy makers more appropriate tools to judge when game play deviates from the "normal" purchase patterns expected. Using the NBD as a "baseline" measure needs more validation, but it may offer a more accurate measure than the present instruments, when judging an acceptable level of compulsive play in a population (Mizerski et al., 2000). The strong negative association between penetration and frequency of purchasing the Cash-3 game (r=-.73) suggests a shrinking market that is increasing their average purchase. Could this be a sign of compulsive and possibly dangerous buying behaviour? Future research also needs to test for the applicability of a stochastic perspective for other gambling products as its potential contribution to the study of gambling and other habit-driven marketing behaviour could be significant.

References

Abt, V., Smith, J.F. and Christiansen, E.M., 1985. The Business of Risk. University Press: Kansas.

Ajzen, I. and Fishbein, M., 1980. Understanding Attitudes and Predicting Social Behavior. Prentice-Hall.

Ajzen, I., 1991. The theory of planned behavior. Organizational Behavior and Human Decision Processes 50, 179-211.

Ajzen, I., 2002. Residual effects of past on later behavior: Habituation and reasoned action perspectives. Personality and Social Psychology Review 6 (2), 107-122.

Anschuetz, N., 1997. Profiting from the "80-20 Rule of Thumb". Journal of Advertising Research 37 (6), 51-56.

Barnard, N. and Ehrenberg, A., 1997. Advertising: Strongly persuasive or nudging. Journal of Advertising Research 37 (1) (January/February), 21-32.

Borden, N., 1942. The Economics of Advertising. Irwin: Chicago.

Daswani, D., 2003. Comparing explanations for lottery purchases. Honours Dissertation, University of Western Australia.

DeBoer, L., 1990. Lotto sales stagnation: Product maturity or small jackpots? Growth and Change 21 (1), 73-77.

East, R., 1997. Consumer Behaviour. Prentice-Hall, UK.

Ehrenberg, A.S.C., 1972. Repeat-Buying: Theory and Applications. London: North-Holland Publishing.

Ehrenberg, A.S.C., Goodhardt, G. and Barwick, T.P., 1990. Double jeopardy revisited. Journal of Marketing 54 (July), 82-91.

Forrest, D., Simmons, R. and Chesters, N., 2002. Buying a dream: Alternative models of demand for lotto. Economic Inquiry 40 (3), 485-496.

Green, P.R., 1991. The whole world guide to lottery. A World Media Brokers Publication, 4th edition, Toronto, Canada.

Greenwood, M. and Yule, G., 1920. An inquiry into the nature of frequency-distributions representative of multiple happenings with particular reference to the occurrence of multiple attacks of disease or of repeated accidents. Journal of the Royal Statistical Society 83, 255-79.

Gulley, D. and Scott, F., 1987. The effect of maturity and competition on state lottery markets. Journal of Public Analysis and Management 6, 251-53.

Heiens, R., 1993. The influence of newspaper, radio and television publicity on sales of the state of Colorado's lottery product, lotto. Unpublished Doctoral dissertation, Florida State University.

Hodgson, V., Mizerski, D. and Mizerski, K., 2000. The effect of cigarette advertising through its product life cycle. ANZMAC 2000 Conference, Gold Coast, Queensland.

Kaplan, H.R., 1987. Lottery winners: The myth and reality. Journal of Gambling Behaviour 3 (3), 168-178.

Ladouceur, R. and Walker, M., 1996. A cognitive perspective on gambling. In Sekovskis, P.M. (ed.), Trends in Cognitive and Behavioural Therapies. John Wiley & Sons: Chichester, 89-98.

Landman, J. and Petty, R., 2000. "It could have been you": How states exploit counterfactual thought to market lotteries. Psychology and Marketing 17, 299-321.

Langer, E. J., 1975. The illusion of control. Journal of Personality and Social Psychology, 32, 311-321.

Langenderfer, J., 1996. Lotteries and education: The mediating effect of illusion of control," Marketing and Public Policy Conference Proceedings.

Lee, E., Hu, M. and Toh, R., 2000. Are consumer survey results distorted? Systematic impact of behavioral frequency and duration on survey response errors. Journal of Marketing Research 27 (1) (February), 125-133.

Mason, P. M., Steagall, J. W. and Fabritius, M., 1997. The elasticity of demand for lotto tickets and the corresponding welfare effects. Public Finance Review 25 (5) (September), 474-90.

Massy, W.F., Montgomery, D.B. and Morrison, D.G., 1970. Stochastic Models of Buyer Behaviour. MIT Press: Boston.

Miyazaki, A. D., Hansen, A. and Sprott, D.E., 1998. A longitudinal analysis of income-based regressivity of state sponsored lotteries. Journal of Public Policy and Marketing, Fall, 161-72.

Miyazaki, A.D., Brumbaugh, A.M. and Sprott, D.E., 2001. Promoting and countering consumer misconceptions of random events: The case of perceived control and state sponsored lotteries. Journal of Public Policy and Marketing, Fall, 254-267.

Mizerski, R. and Mizerski, K., 2001. The effect and implications for a stochastic pattern of lotto game play. Journal of International Gambling Studies.

Mizerski, R., Mizerski, K. and Miller, R., 2000. A new paradigm to evaluate pathological gambling behaviour. National Association for Gambling Studies National Conference, Mildura, Australia.

Mizerski, R., Mizerski, K., Williams, J. and Forrest, E., 1998. Lottery advertising and ethnic group play of lottery games. Proceedings of the ACR-Asia Pacific Conference, Hong-Kong.

Morrison, D. and Schmittlein, D., 1988. Generalizing the

NBD model for customer purchases: What are the implications and is it worth the effort? Journal of Business and Economic Statistics 6 (12), 145-59.

National Gambling Impact Study Commission, 1999. Gambling Impact and Behavior Study. http://cloud9.norc.uchicago.edu/dlib/ngis.htm

Norman, P., Conner, M. and Bell, R., 2000. The theory of planned behaviour and exercise: Evidence for the moderating role of past behaviour. British Journal of Health Psychology 5, 249-261.

Oh, H. and Hsu, C., 2001. Volitional degrees of gambling behaviors. Annals of Tourism Research 28 (3), 618-637.

Ouellette, J. and Wood, W., 1998. Habit and intention in everyday life: The multiple processes by which past behaviour predicts future behaviour. Psychological Bulletin 124 (1), 54-74.

Productivity Commission, 1999. Australia's Gambling Industries: Draft Report. Canberra, Australia, July.

Rogers, P., 1998. The cognitive psychology of lottery gambling: A theoretical review. Journal of Gambling Studies 14 (2) (Summer), 111-134.

Roy Morgan Research, 2001. Roy Morgan Product and Media Data, Melbourne, Australia.

Scott, R. and Gully, O.D., 1995. Testing for efficiency in lotto markets. Economic Inquiry 33 (2), 175-188.

Simmons,1999. The Simmons Study of Media and Markets.

Triplett, T., 1994. Marketers eager to fill demand for gambling. Marketing News, June 6.

Tsal, Y., 1985. On the relationship between cognitive and affective purchases: A critique of Zajonc and Markus. Journal of Consumer Research 12 (December), 357-62.

Uncles, M., Ehrenberg. A. and Hammond, K., 1995. Patterns of buyer behaviour: Models and extensions. Marketing Science 14 (3), part 2, G71-G78.

Wagner, U. and Taudes, A., 1986. A multivariate model of brand choice and purchase incidence. Marketing Science 5, 219-44.

Walker, M., 1993. The Psychology of Gambling. Pergamon Press, UK.

Weiss, H.B. and Weiss, G.M., 1966. The Early Lotteries of New Jersey. Past Times Press, Trenton, N.J.

Wright, M., 1999. NBDNORMS. Microsoft Excel Based Software.

Zajonc, R.B. and Markus, H., 1982. Affect and cognitive factors in preferences. Journal of Consumer Research 9 (September), 123-31.

Zajonc, R.B. and Markus, H., 1985. Must all affect be mediated by cognition? Journal of Consumer Research 12 (December), 363-64.

Biographies

Dick Mizerski, BS, PhD, is a Professor of Marketing in the School of Business, University of Western Australia, Perth. His research interests include: gaming and gambling on the internet, habit in the marketplace, the influence of marketing activity on the initiation and use of gambling, tobacco and alcohol.

Rohan Miller, PhD, is a marketing lecturer at the University of Sydney. His research seeks to better understand the initiation and maintenance of consumer habits, problem consumption and how marketing communications may influence consumption. His current studies investigate socially contentious product categories such as gambling and alcohol. Prior to becoming an academic, Rohan founded and operated a consultancy in management and marketing, and previously worked in the advertising and hospitality industries.

Katherine Mizerski is at Edith Cowan University, Perth. **Desmond Lam** is a PhD candidate at the University of Western Australia, Perth.

Correspondence Addresses

Dick Mizerski, Marketing M261, School of Business, The University of Western Australia, Perth, WA 6009. Phone: +61 (8) 6488 7210. Facsimile: +61 (8) 6488 1055. Email: dickm@biz.uwa.ed.ua. Rohan Miller, Lecturer in Marketing, School of Business, The University of Sydney, 540 The Economics & Business Building H69, Sydney, NSW 2006. Phone: +61 (2) 9351 3637. Facsimile: +61 (2) 9351 6732. Email: r.miller@econ.usyd.edu.au. Katherine Mizerski. Email: k.mizerski@ecu.edu.au Desmond Lam. Email: desmond@student.ecel.uwa.edu.au

A Contingency Model of Export Entry Mode Performance: The Role of Production and Transaction costs

Ian F. Wilkinson & Van Nguyen

Abstract

A contingency theory of entry mode performance is developed based on transaction cost analysis as well as production cost theory and the temporal and embedded nature of exchange relations. This is tested using the results of a nationwide survey of Australian manufacturers export entry modes and, unlike much previous research, correction is made for self selection bias in the sample using the Heckman procedure. The results demonstrate the importance of production as well as transaction costs in determining the most profitable export entry mode and that failing to correct for self selection bias can lead to misleading results and incorrect normative recommendations for management.

Keywords: Market entry modes, International marketing, Transaction costs, Relationships, Production costs, Heckman, Australia

Introduction

The main theory used to explain foreign market entry modes is transaction cost analysis (TCA) (Brouthers 2002, Chen and Hu 2002). This theory is primarily normative yet most studies do not explicitly examine its performance effects. Instead, it is assumed that in competitive markets only the most profitable organisational forms survive. This has led to calls for additional research (Brouthers 2002, Chen and Hu 2002, Delios and Beamish 1999, Rindfleisch and Heide 1997).

Here we develop and test a contingency theory of entry mode performance that incorporates the effects of production as well as transaction costs and the way market entry modes are used to access key assets as well as to protect them. Our research addresses a number of the problems raised in the review of TCA by Rindfleisch and Heide (1997). We incorporate the temporal nature of interfirm relations as part of transaction cost theory; show how the frequency of transactions is a form of market size constraint; examine the effects of different types of environmental uncertainty; and examine various interaction effects. Furthermore, we use Heckman's (1979) two-step regression procedure to control for selection bias that undermines the results of previous studies (Shaver 1998). To our knowledge, this method has not been used before in marketing.

The paper is organised as follows. First, we describe the nature of market entry modes, particularly exporting, in terms of how vertically integrated they are and consider the meaning of performance. We then review the factors affecting the production and transaction costs of entry modes, which provides the basis for the contingency theory. Following this, the research methodology is described and the results are presented. The implications of the research are considered in a concluding section.

Foreign Market Entry Mode

Many forms of market entry are available to firms to enter international markets. One classification first distinguishes between equity and non-equity modes (Pan and Tse 2000). Equity modes involve firms taking some degree of ownership of the market organisations involved, including wholly owned subsidiaries and joint ventures. Non equity modes do not involve ownership and include exporting or some form contractual agreements such as licensing or franchising. Each type of modes comprises sub-types. Because of the nature of our empirical study, our focus is on export entry modes, which is a non-equity type in which firms serve a foreign market from products manufactured in their home market. While, the theory is developed in terms of exporting, it is relevant to all forms of market entry and draws on research focused on other types of entry modes.

Export entry modes may be distinguished in terms of the level of a firm's forward integration into exporting activities. The least forward integrated mode is when a firm sells to an export agent or to a local buying office of a foreign customer. Here, the firm does not perform any exporting activities. Next is when a firm takes on some exporting activities and sells to foreign based import agents or distributors. Third, a firm can sell directly to foreign customers. Finally, it can establish a foreign based marketing operation. Beyond this it can establish various forms of a local manufacturing, which are not forms of exporting.

Entry mode performance is defined here in terms of efficiency or profitability. Non profit motives, such as resource and knowledge development or strategic moves against competitors, are assumed to be reflected in long term profit. Profitability depends on costs and revenues. Production costs arise from carrying out the exporting activities involved in linking producer and consumer, whether this is done internally or outsourced. Transaction costs arise from the problem of coordinating different activities within and between firms. The problem is that of trading off the total transaction and production costs of using external specialists against the total transaction and production costs of internalising the activities (Dixon and Wilkinson 1988, Williamson 1981, 1985).

Revenues depend on the value created for intermediate and final customers compared to alternatives and on the share going to different members of the export distribution channel. For the purposes of this research we assume that entry modes result in comparable values being created and delivered to customers and that firms operate in competitive markets. This is in line with previous research examining TCA. Under these conditions profitability depends primarily on costs and this is our focus. However, in interpreting our results we consider revenue based explanations.

Transaction Costs

Williamson (1975, 1985) identifies three dimensions of transactions that affect the nature and extent of the coordination task and the efficiency of governance modes: (a) asset specificity, the degree to which durable transaction specific investments are involved; (b) the frequency with which transactions recur; and (c) the level of uncertainty.

TCA distinguishes between two basic types of governance - markets and vertical integration (or hierarchies). Intermediate modes have also been identified that depend on the nature of the relations between transacting parties such as relational contracting or relational governance. Vertical integration is assumed to be more efficient in minimising transaction costs but the gain from internalising activities has to be weighed against the production cost economies that could be foregone by not using specialist firms such as marketing intermediaries. Firms are able to exercise greater control and monitor performance better than markets and can detect and curb opportunism more effectively. Firms also provide longer-term rewards that reduce opportunism and the atmosphere or culture of firms more closely aligns the interests of members.

Three recent studies have examined entry mode performance. Shaves (1998) used the survival of different manufacturing entry modes as an indicator of performance and finds some support for TCA. But his measure of performance is suspect, as he acknowledges, because entry modes may not survive for a variety of reasons not related to economic efficiency. Chen and Hu (2002), find support for TCA in a study of foreign direct investment in China, in which successful ventures are identified by an Honour Roll of outstanding performance. As they note, this indicator is limited due to under reporting of profits for tax reasons. Lastly, Brouthers (2002), in a study of subsidiaries and joint ventures, uses management perceptions of performance, as we do in this study, and finds support for an extended version of TCA including institutional and cultural factors.

In the following we consider each of the three dimensions of transactions and examine how they affect entry mode performance. We then consider the temporal nature and embeddedness of interfirm relations, production costs, and the institutional and industry context.

Asset Specificity

TCA focuses attention on durable transaction specific investments or asset specificity, which could be in the form of specialised products and services, plant and equipment or expertise tailored to the needs of an exchange partner which have limited value in other relations. Such assets make a firm vulnerable to opportunistic behaviour and, to protect themselves, safeguards are introduced. Contracts cannot exhaustively define in advance every contingency and the enforcement of contracts at a geographic and cultural distance, i.e. in foreign markets, is not cost effective (Macaulay 1963). Under these conditions TCA argues that vertical integration is more efficient than markets. By vertically integrating a firm is able to reduce the risk of opportunism because of the advantages described. Adaptations to unforeseen conditions can be made sequentially without the need to renegotiate agreements (Klein, Crawford and Alchian 1978; Rugman 1986; Williamson 1985). Empirical studies provide support for these arguments (Monteverde and Teece 1982, Anderson 1985).

Size and Frequency of Transactions

Limited attention has been given to this in previous studies and Rindfleisch and Heide (1997) excluded it from their review. One reason for this lack of attention is that it has been interpreted narrowly in terms of the frequency of transactions, whereas it should be seen more generally as a form of market size constraint. As Williamson (1985) argues: “the cost of specialized governance structures will be easier to recover for large transactions of a recurring kind” (p 65). The size and frequency of transactions are two dimensions of market size and, as Adam Smith explained, market size limits the division of labour.

Market size limits specialisation, because of the costs in setting up and fully utilising specialised people, systems and equipment (Stigler 1951). This applies to transaction and production costs (Dixon and Wilkinson 1986). The size and frequency of transactions are dimensions of a firm’s sales to a customer or distributor and this limits the degree of specialisation that is possible in coordinating the relationship. For example, vertical integration or relational governance involves using more specialised labour and capital inputs such as partner specific EDI systems and key account managers, that cannot be fully and efficiently used if sales levels are low. As Florence (1933) pointed out many years ago, economies of specialization are only potential economies because they depend on firms being able to fully utilize specialist inputs which have various efficient scales of operation (Dixon and Wilkinson 1986).

The economic principle involved here is the economy of bulk transactions, which is a form of scale economy (Florence 1933, Dixon and Wilkinson 1986). Transaction costs do not rise in proportion to transaction size because the time to negotiate, monitor and control an exchange does not increase directly with the amount of business involved. Communication and transport cost economies arise and specialised people and resources can be more fully utilised.

Williamson (1985) points to an interaction effect between asset specificity and the size and frequency of transactions. When asset specificity is low, market contracting can be used for both low and high frequency transactions. But, when asset specificity is high, vertical integration becomes more efficient as the amount and/or frequency of transactions increases, because larger sales (market size) supports a specialised governance structure.

Firm size also affects transaction costs (Nooteboom 1999). Search costs are higher for smaller firms due to lack of specialised staff and resources and this “makes the set-up costs of governance expensive relative to the size of the transaction” (p20). This reduces the efficiency of vertically integrated modes for smaller firms.

Uncertainty and Cultural and Geographic Distance

Uncertainty arises due to a firm’s bounded rationality, which limits its ability to anticipate all the consequences of its actions and hence to write comprehensive contracts. Two types of uncertainty are distinguished in TCA. Environmental uncertainty relates to the risks associated with entering less familiar markets and cultures. Behavioural uncertainty is transaction partner focused and concerns the problem of determining whether an agreement has been adhered to.

Environmental and behavioural uncertainty also interact with asset specificity. The former causes adaptation problems in the presence of asset specificity (Rindfleisch and Heide’s 1997). When there are no such assets firms are not subject to potential hold-up costs and can more easily replace one exchange partner with another as conditions change. The more complicated or technology and knowledge intensive a product is, the greater is behavioural uncertainty and the more costly is market contracting (Anderson and Gatignon 1986, Teece 1986).

The literature on internationalisation has focused attention on two additional dimensions of uncertainty - geographic and cultural distance (Johanson and Vahlne 1977). Geographic distance includes the physical and time separations between countries that complicate and delay communication and coordination tasks and increase behavioural and environmental uncertainty.

Cultural distance stems from the heterogeneous and multicultural world of international business and increases the problems of communication and misunderstandings among market participants. This makes the monitoring and controlling of foreign counterparts more difficult and costly (Rosson 1984). Cultural distance comprises differences in national culture, as depicted in the work of Hall (1959), Hofstede

(1980) and Trompenaas (1994) and includes differences in language, psychological and socio-economic characteristics and business customs and practices. It also involves differences in industry and market cultures that emerge over time in different locales.

Both cultural and geographic distance increase the importance of transaction costs and hence, by TCA logic, increase the efficiency advantage of vertical integrated modes. But uncertainty can also favour market relations because they are more flexible. For example, Klein et al (1990) found that Canadian firms were more likely use vertically integrated modes in the geographically and cultural close US market, which is inconsistent with TCA. A transaction cost explanation comes from organization theory (Klein et al 1990). To be flexible in response to unforeseeable future conditions firms use intermediaries rather than forward integration, as this converts the fixed costs of establishing internal operations into variable costs. Also, it is easier to hire and fire intermediaries than it is to establish and de-establish an internal organisation structure (Shelanski and Klein 1995, Rindfleisch and Heide 1997), which makes reliance on markets more efficient when uncertainty is high.

We summarise the foregoing in terms of two general hypotheses. The first reflects the main effects of each of the three dimensions of transactions:

H1: *The performance of vertically integrated entry modes will be greater, a) the greater the asset specificity, b) the greater the size and more frequent the transactions, and c) the greater the uncertainty associated with the transactions.*

The second reflects the interaction effects.

H2: *There are significant interaction effects among asset specificity, the size and frequency of transactions, and uncertainty on entry mode performance*

The Temporal Nature and Embeddedness of Exchange Relations

In TCA the unit of analysis is the individual transaction and the development of exchange relations over time tends to be ignored (Rindfleisch and Heide 1997). But the temporal dimensions of exchange relations and the way they are embedded in broader business, social and cultural networks can have important effects on the coordination task and the efficiency of different types of governance modes.

Firms that have been trading for some time have a shared history or "shadow of the past" (Axelrod 1984, Miner 1992, Rooks et al 2000) that enables them to manage their interactions more efficiently. There is also a "shadow of the future," in terms of expectations about the amount of trade with an exchange partner, which affects expected market size and the willingness to invest in specialised resources.

The temporal nature of exchange relations is reflected in part in the frequency of transactions and TCA focuses on the efficiencies of more specialised governance with increased frequency. But long term relations also reduce opportunism and promote more cooperative norms due to greater mutual understanding and trust and mutual investments in the relationship (Axelrod 1984, Dwyer Schurr and Oh 1987, Fehr and Gachter 2002, Ford 1980, Hakansson and Snehota 1995, Miner 1992).

Experience in relations and markets not only reduces behavioural uncertainty, it also affects management perceptions of cultural distance and environmental uncertainty, which is reflected in the concept of psychic distance (Hallen and Wiedersheim-Paul 1979). Psychic distance depends on actual cultural distance, as reflected in Hofstede's (1980) or Trompenaas' (1994) work and the experience and knowledge a firm has in conducting business in a focal country. These experience curve effects, plus increases in the scale and scope of international operations, reduce the firm's costs of carrying out exporting activities and reduce the need for acquiring knowledge externally. This has been confirmed in empirical studies of Japanese firms' internationalisation by Chang (1995) and Delios and Beamish (1999).

International experience affects both production and transaction costs but in competing directions. The development of relations improves the efficiency of markets because it reduces behavioural uncertainty. At the same time, as a firm's experience and knowledge of a foreign market grows, environmental uncertainty is reduced and the firm does not have to rely as much on specialists for access to local knowledge. This makes vertical integration more efficient, at least for some activities. Which is the greater effect will depend on the nature of the relevant scale and scope economies and how relations develop over time.

Studies of international business relations provide support for the impact on relationship performance of the development and connectedness of interfirm relations. (Blankenburg-Holm et al 1996, Kalwani and Narayandas 1995, Reinartz and Kumar 2000). For example, Blankenburg-Holm et al (1996) found that perceived performance was directly linked to relationship commitment and understanding and indirectly, through relationship commitment, to the way the focal relation was connected to other relations.

Three general hypotheses emerge from this discussion:

H3: *The performance of market relations will be greater and transaction costs lower the longer the time firms have been trading with each other.*

H4: *The performance of vertically integrated modes will be greater the more experience a firm has of international operations, both generally and with respect to a focal market.*

H5: *There are interaction effects on entry mode performance between the international experience of a firm and asset specificity, the size and frequency of transactions and uncertainty.*

Production Costs

Factors affecting production costs have been given limited attention in previous studies (Rindfleisch and Heide 1997). An exception is Klein et al (1990). But the decision to vertically integrate or not depends on the total of transaction and production costs (Klein et al 1990, John and Weitz 1985, Williamson 1975, 1985). Production costs refer to the costs of performing a value adding activity and applies to manufacturing as well as marketing and exporting activities.

Two production costs are relevant - the firm and specialist intermediaries, such as a domestic export agent or a foreign distributor or import agent. The mode with the lowest production costs is the one with the greatest access to scale and scope economies in performing the relevant export activities. The larger the scale and scope of a firm or intermediary the greater their production cost advantage (Dixon and Wilkinson 1986).

Three dimensions of scale and scope seem particularly relevant. The effect of firm size is reflected in a number of studies (e.g. Ford and Slocum 1977; Hirsch and Adar 1974; Munro and Beamish 1987; Reid 1982). Second, a firm's international experience and involvement affects its ability to efficiently carry out international marketing activities (Dixon and Wilkinson 1986). Third, a firm's sales to a target market affects its ability to invest in more market specific governance and marketing systems.

Firms not only need to protect their assets when entering foreign markets, they also seek access to valuable assets (Delios and Beamish 1999). Firms are embedded in domestic and international networks of business and non-business relations (Anderson et al 1994, Granovetter 1985, Wilkinson and Young 2002) through which they gain access to valuable assets (Delios and Beamish 1999, Dunning 2001, Johanson and Mattsson 1988). For example, studies of ethnic business and social networks have demonstrated the important role they play in facilitating foreign market entry and in reducing the risks and uncertainty involved (e.g. East Asian Analytical Unit 1995, Redding 1993). Studies of internationalisation also demonstrate the importance of business networks. Martin et al (1998) show how Japanese firms' patterns of market entry have been affected by domestic relations with actual and potential customers, suppliers and competitors and Chen and Chen (1998) describe the network impacts on Taiwanese firms foreign direct investment.

Knowledge and networks are the means by which uncertainty is reduced, competitive advantage is enhanced and sustained and international customers are reached (Dunning 2001, Dwyer 1998, Wilkinson and Young 2002). An intermediary's access to such assets is a function of its experience in local markets and the history of its relations with customers, suppliers, competitors and regulators. Also, its costs of carrying out marketing and exporting activities is affected by various types of economies of specialisation. These include economies of bulk transactions and pooled risk, that arise because an intermediary can spread costs across the firms they serve (Dixon and Wilkinson 1986), and the economies of being able to develop and efficiently use market specific assets, such as local experts, networks and data bases.

Production efficiencies of this type provide an alternative explanation to the results of Klein et al (1990) discussed above, regarding the use of vertically integrated modes by Canadian firms exporting to the USA. When cultural and geographic distance is low, the ability of specialised U.S. intermediaries to provide better access to valuable knowledge and network assets is limited. Hence firms are more likely to forward integrate into these activities.

A final consideration is that market knowledge is often tacit and embedded in networks and relations that are built up over time (Badaraco 1989, Dunning 2001, Nonaka and Tekeuchi 1995) These cannot easily be reproduced or acquired (Anderson et al 2001, Dwyer 1998). In these

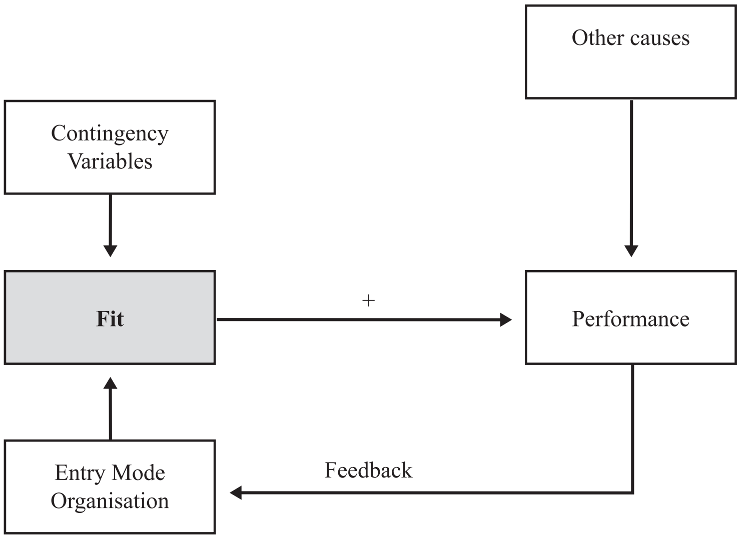


Figure 1: A Contingency Model of Entry Mode Performance

Source: adapted from Donaldson (2001) p12

circumstances the lower transaction costs from forward integration are irrelevant as what matters is developing relations with key market players (Dunning 2001).

The general hypotheses resulting from this discussion are:

H6 *The performance of vertically integrated entry modes is greater the greater the scale and scope of the firm's operations compared to specialist international marketing intermediaries.*

H7 *The more valuable and embedded are the assets of intermediaries the greater the performance of entry modes involving market relations*

Institutional and Industry Factors

In addition to their effect on uncertainty, as discuss above, cultural, institutional and industry factors directly affect entry mode choice and performance (Delios and Beamish 1999, Brouthers 2002, Kogut and Singh 1988). They affect the efficiency of local intermediaries and may mandate particular forms of market entry, which are not necessarily the most profitable. For example, agents and distributors in less developed countries may lack access to modern technologies, which limits their efficiency and some countries require joint ventures rather than fully owned subsidiaries in order promote technology sharing. The institutional context further complicates entry mode choice and adds to the risks involved and problems and costs of management (Brouthers and Brouthers 2000, Delios and Beamish 1999).

Industry factors also affect entry mode performance. The profitability of industries depends on the type of rivalry between firms and the impact of suppliers, customers, substitutes and new entrants (Porter 1980).

We do not offer any hypotheses for the effect of institutional and industry factors because the effects are too market, industry and entry mode specific. Instead, we treat them as control variables.

A Contingency Theory of Entry Mode Performance

Contingency theories assume that firm performance depends on the degree of fit between contingent conditions and the attributes of an organisation or strategy (Donaldson 2001), where a contingency is "any variable that moderates the effect of an organization characteristic on organizational performance" (ibid p7). The general form of contingency theory is depicted in Figure 1. Performance is lower the greater the misfit between the type of organization used and the contingent conditions. This leads to organizational change until an acceptable fit and performance level is obtained.

The foregoing discussion has identified several types of contingencies that affect entry mode performance. We have also specified the performance implications of aligning more of less vertically integrated entry modes with these contingent conditions i.e the fit between entry modes and contingencies. The theoretical model resulting is summarised in Figure 2. This shows the impact of contingent factors on the fit and performance of vertically integrated modes and includes the impact of some contingent factors on others. For the sake of clarity, interaction effects are not shown.

Research Methodology

Research Instrument and Sampling

The data used to test the model is taken from a nationwide mail survey of international competitiveness carried out in Australia. The questionnaire covered many aspects of firms' domestic and international marketing activities and used questions derived from previous studies, including Layton and Dunphy (1970), Barrett and Wilkinson (1986) and Bilkey (1987). Other results have been reported elsewhere (Fletcher et al 1997, Wilkinson 2002).

All exporters from a list of Australian manufacturing firms supplied by Dun and Bradstreet were mailed a questionnaire. Useable responses were received from 403 exporters after one reminder, giving a response rate 19%, which is in line with other published surveys. An analysis of late responding firms indicates no significant non-response bias, except that late responders were likely to be larger firms, which probably reflects the time it took to complete the survey and gain approval for participation.

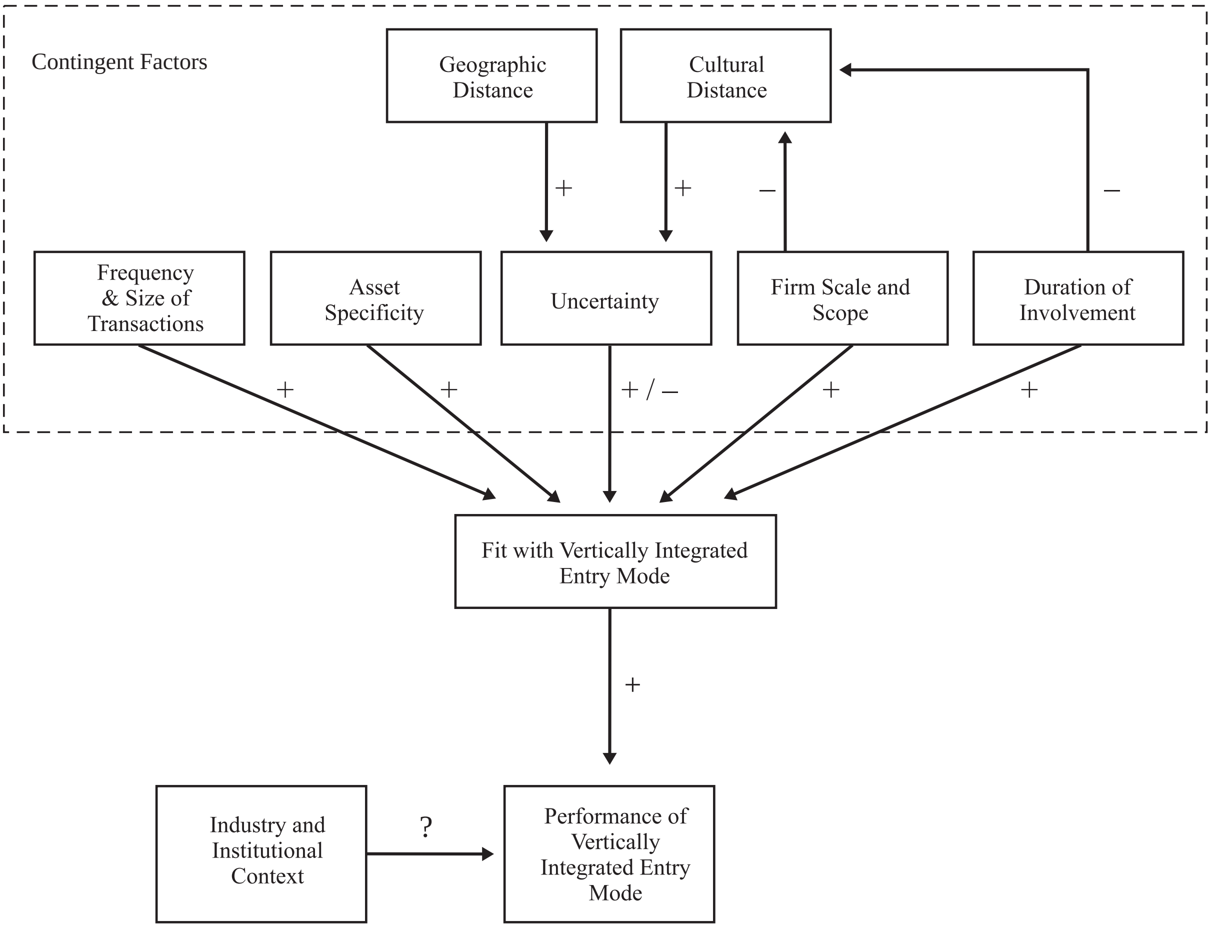


Figure 2: A Contingency Theory of Foreign Market Entry Mode Performance (excluding interaction effects)

Measures

a) Export Entry Mode. Firms were asked to describe the entry mode used in up to five countries. The modes were grouped into four types: a) domestic export agents, including buying offices of foreign firms; b) foreign based intermediaries, including import agents, distributors and retailers; c) direct exporting to customers; d) exporting via a firm's foreign branch offices. Other types of entry modes are not considered here.

The classification reflects different levels of vertical integration, with a) being the least vertically integrated and d) the most vertically integrated. 100 firms reported using more than one of the modes in the same market, which raises issues for theory development (Pedersen and Welch 2002). These cases were excluded from analysis, as did Klein et al (1990). The remaining sample of 1088 comprised 9% using local agents, 50% foreign intermediaries, 25% exporting direct and 14% using a foreign branch office.

The sample of market entry modes is not independent because firms can be exporting to more than one country. To reduce potential bias, one export market was chosen for analysis. We randomly selected export markets with probabilities inversely proportional to the sample frequency of the mode i.e. 1 minus the probability of the entry mode reported in the sample. This over sampling of less frequently used modes was done in order to improve the balance of different types modes in the analysis sample. The analysis sample of 343 market entries comprised 40 (11.7%) using a local agent, 137 (39.9%) a foreign intermediary, 97 (28.3%) exporting direct and 69 (20.2%) using a foreign branch office.

b) Entry Mode Performance. Firms were asked to rate the profitability of the target market using an index in which the Australian domestic market is 100. Thus a score of 110 indicates that the performance is 10% better than domestic activities.

c) Asset Specificity. Two multi item measures (taken from Cavusgil and Nason 1990) were used based on a factor analysis of ratings of the main export product. Hitech, is a four item measure ($\propto = 0.76$) reflecting advanced technology and uniqueness of the product, including items such as 'the product is unique, differentiated or represents advanced technology' and 'the production process is exclusive to our firm.' Service is a two item scale ($\propto = 0.69$) reflecting the extent of pre and post sales support required, i.e. 'requires extensive training to operate and use,' and 'requires considerable after sales support.' The hitech measure is in line with other measures of asset specificity, such as the percentage of sales spent on R&D (Brouthers 2002, Delios and Hennart 1999). The service measure is similar to that used by others of the human relationship dimension of asset specificity (Rindfleisch and Heide 1997).

d) Foreign Market Size and Experience. A measure of foreign market sales was developed based on the percentage of a firm's total exports to a market, the percentage of its total turnover accounted for by exports and the firm's total turnover in the previous year (rated on a seven point scale from 1= up to $100,000 to 7 = more than $20,000,000). We estimated foreign market sales by multiplying the percentages together and multiplying them by the midpoint value of the rating of a firm's total turnover. For ratings of more the $20 million an estimate of $50 million was used. This procedure is similar to that used by Klein et al. (1990). We measured foreign market experience by the years a firm had been exporting to a foreign market.

d) Uncertainty. This was measured in terms of cultural and geographic distance and management's perceived risk of exporting. Cultural distance was measured using a separate questionnaire distributed to a convenience sample of 100 staff and part time business students at two universities in Sydney. They were asked to rate various countries in terms of their socio-cultural distance from Australia on a 5 point scale from 1 = very close to 5= very distant. A response rate of 47 percent was obtained. Mean distance ratings were used as an indicator of cultural distance but, because of the convenience sample used, the mean scores were not used. Instead, the mean scores were used to group countries into low (e.g. New Zealand, U.K., Germany), medium (e.g. Fiji, Hong Kong, Taiwan) and high (e.g. India, Vietnam, Burma) culturally distant countries.

Geographic distance was measured using Airline distances between capital cities and Sydney. These were classified into 3 groups: close (less than 5000 kms), medium distance 5000 to 10,000 kms) and distant (greater than 10,000 kms)

In addition, a four item Likert scale measure of perceived risk ($\propto = 0.88$) was used based on agreement with the following items: 'there is too much risk involved in exporting;' 'exporting is too different from marketing in Australia;' 'the quality of my company's products could never be good enough to sell in overseas markets;' and 'exporting should only be considered

Table 1:
Decision Equations: Logit Regression of Entry Mode on Model Variables (Unstandardised Coefficients)

mode	Domestic Agent	Foreign Intermediary	Direct to User	Foreign Branch
n	37	115	78	55
Profit index mean	85.43	87.85	100.46	84.31
Profit index standard deviation	26.2	26.49	43.79	42.6
constant	-.14	.50	-1.48	-2.81
Product Asset Specificity				
Hitech	-.02	-.00	-.06	.07
Service	-.21	-.02	-.02	.30*
Foreign Market Size and Experience				
Foreign Market Sales	-.03	-.02	-.01	.10
Years Exporting to Market	-.01	.00	-.02	.01
Uncertainty				
Cultural Distance	.15	-.35*	1.26***	-1.42***
Geographic Distance	.38	.20	-.79***	-.04
Perceived risk	-.41	-.04	.14	.27
Firm Scale, Scope and International Experience				
Firm Size	-.00	-.00	.00	.002***
Percentage of Exports	-.70	-.04	.96	-.60
Years in Exporting	.11	-.16*	.22**	-.06
No. of countries exported to	-.27*	.01	-.01	.26*
No. of Products Exported	.34	-.06	-.21	.27
Industry Type				
Consumer	.74	.56*	-.98**	-.39
Industrial	.24	.14	-.48	.11
Cox and Snell R Square	.06	.06	.16	.17
Chi Square (df)	16.60	17.47	49.46***	50.95***
	(14)	(14)	(14)	(14)

*=P<0.1 **=P<0.05 ***=P<0.01

Note: missing data in some predictor variables reduces analysis sample

when opportunities in Australia are completely exhausted' (Dunphy and Layton 1969, Barrett and Wilkinson 1986).

e) Firm Scale and Scope. This was measured in terms of the firm's overall size and in terms of various measures of the scale and scope of its exporting operations. Firm size is measured on a five point scale from 1= under 10, 2= 10-19, 3=20-49, 4=50-99, 5= 100-500 and 6=500+. In order to convert this to a scale with more interval scale properties, the scale points were recoded to the midpoints of their respective size range, with a value of

750 used for the 500 and over category. Four indicators of the scale and scope of a firm's international operations were used: exports as a percent of turnover; years in exporting; number of countries exported to; number of different products exported. These measures are similar to those used by Brouthers (2002) and Delios and Beamish (1999).

f) Type of Industry. On the basis of the main product exported, firms were grouped into consumer, industrial or mixed product industries. Dummy variables were constructed for consumer and industrial product industries. While the main export product may not be the one exported to a focal market, it indicates the main type of industry in which a firm operates.

Results

Heckman Two Stage Regression Analysis

The impact of a strategy on performance is usually assessed by regressing performance on strategy choice and using the coefficient for strategy choice to identify superior strategies (Shaver 1998). But this results in biased estimates because the choice of strategy is not random but biased in terms of expected performance, given firm and market conditions. "If firms choose the strategy that is optimal given their attributes and those of their industry, then empirical models that do not account for this choice process are potentially miss-specified and the normative conclusions drawn for them may be incorrect" (Shaver 1998, p571).

To overcome the problem a technique developed by Heckman (1979) can be used that incorporates strategy choice into estimates of strategy performance. Others have used TCA to predict entry mode choice and to compare the performance of firms whose choice is predicted by TCA with those that are not (Brouthers 2002, Chen and Hu 2002). But this does not allow direct estimation of the performance effects of particular variables, including non TCA variables. Hence we use Heckman's method here, which, to our knowledge, has not been used before in marketing.

Heckman's method involves estimating two regression equations: a "decision equation" predicting entry mode choice for each mode and an "outcome equation" predicting performance for each entry mode. The procedure is described in an appendix.

Heckman Regression Results

Table 1 shows the mean profit index and standard deviation for each of the four types of entry modes and the logistic regression results used to estimate the decision equations in the Heckman procedure. Mean performance is highest for those exporting direct to users and indicates that this is seen as slightly more profitable compared to the domestic market. Other modes are perceived as less profitable than the domestic market, but the variance is greater for more vertically integrated entry modes.

Turning now to the results of the logistic regression, the inclusion of interaction effects did not significantly improve the results for any mode and were dropped from this part of the analysis. The distribution of residuals was transformed into probit form, i.e. a normal distribution, for the purposes of calculating the measure of unobserved factors in the second stage of the Heckman procedure.

The logit models for the choice of domestic agents and foreign intermediaries are not significant, although a few of the coefficients are marginally so. The number of countries exported to is inversely related to the use of domestic agents, consistent with H6. Foreign intermediaries are more likely to be used when cultural distance is lower, the firm is a more recent exporter, and when consumer products are involved. These results are consistent with H1 and H6 because uncertainty is lower and firms have less international experience to carry out their own exporting. The industry factor could indicate the effect of lower levels of asset specificity compared to industrial products (H1).

Significant equations result for direct exports and for establishing a foreign branch office. Direct exports is more likely when cultural distance is higher and geographic distance is lower, when exporters have been involved in exporting longer and when consumer products are not involved. These accord with H1 in that this is a more vertically integrated mode used to deal with uncertainty, and geographic closeness reduces transport costs. Foreign branches are more likely to be established for products that are more service intensive, when cultural distance is lower, when firms are larger and they export to more countries. These support H1 and H6. The negative sign for cultural distance reflects problems of firms gaining access internally to local knowledge in a less familiar market and supports H7. For a more detailed examination of entry mode choice, in which a two stage model is estimated using the same data set, see Wilkinson (2002).

OLS regression was used to identify the main factors

Table 2:
Outcome Equations With and Without Heckman Selection Correction Factor
(Standardised Regression Weights and t-statistics)

mode	Domestic	Agent	Foreign	Intermediary	Direct to User[a]	Foreign	Branch
Selection Correction Factor	-.44 (2.75)		-.17 (1.75)			-.28 (1.62)	
Service	.37 (2.23)	.12 (.82)			not significant		
Geographic Distance			-.15 (1.60)	-.12 (1.25)			
Firm Size	.41 (2.20)	.40 (2.57)					
Percentage of Exports			.29 (2.53)	.32 (3.13)			
Consumer						.51 (3.11)	.40 (3.03)
Industrial					0.20 (1.87)		
Goegraphic Distance*Hitech					-0.29 (2.26)		
Cultural distance*Hitech					0.20 (1.61)	.26 (1.53)	.13 (1.00)
Perceived risk *Hitech	.26 (1.51)	.33 (2.10)					
Cultural distance*years in exporting	-.25 (1.54)	-.06 (0.43)		.21 (2.16)			
Foreign Market Sales *years in market	.42 (4.72)	.58 (4.24)	.26 (2.73)				
Adjusted R Square	.51	.38	.20	.18		.16	.13
F (df)	6.97***	5.42***	6.86***	8.68***	.06**	4.10***	4.68**
	(6,28)	(5,29)	(4,93)	(3,103)	3.79 (3,79)	(3,47)	(2,51)

**=P<0.05 ***=P<0.01

a = The correction factor was not significant for this mode so only one regression equation is shown.

explaining the performance of each mode, including both main and interaction effects and the selection bias correction factor. Inclusion levels were set at 0.1 to allow marginally significant factors to enter. The variance inflation factor was used to screen for multicollinearity, and variables correlating highly with ones already in the equation were excluded. The resulting outcome equations are shown in Table 2. This shows that the selection bias correction factor is significant for all modes, except direct exports, indicating that unobserved factors have a significant impact on performance.

The effect of the correction factor on the estimated regression coefficients is shown by the changes that result when it is excluded. There are substantial changes in some of the coefficients. For example, the service intensity (asset specificity) of the product or the interaction of cultural distance and years in exporting are no longer significant predictors of performance among those firm's using domestic based agents. Geographic distance is no longer a significant predictor of the performance of foreign intermediaries and the interaction of cultural distance and the hitech nature of products is no longer a significant predictor of performance of the foreign branch office entry mode. Other variables remain significant predictors but the magnitude of the coefficient changes.

Discussion

Domestic agents are more profitable for larger firms and when asset specificity is greater in terms of service levels. The significant interaction effect between perceived risk and asset specificity also indicates that performance is greater when uncertainty and asset specificity are high. This is contrary to H1 as, under these conditions, firms should gain transaction costs savings from internalising exporting activities and domestic agents should be less profitable. A partial explanation is that larger firms may use their bargaining power and negotiate more favourable contracts. The other results can be viewed as support for H7 and the use of entry modes to gain access to the valuable assets of a specialist agent, especially in conditions of uncertainty and asset specificity. Further support for H6 and H7 comes from other interaction terms that show that domestic agents are more profitable for less internationally experienced firms dealing with culturally close countries and for firms with less market experience and lower sales. In these conditions the firm is limited in its ability to internalise required export activities efficiently and hence gains more from using specialist agents working on behalf of many exporters.

For foreign intermediaries, performance is greater when the market is geographically closer, the percent of exports is larger and market sales and experience are greater. Under these conditions a firm is able to make more efficient use of a local specialist and supports H1, H2, H3 and H4. A large geographically close market reduces transport costs and makes it easier to monitor and control foreign intermediaries. Market experience further increases the efficiency of market relations and reinforces the market size effect. These results support H1; size and frequency of transactions lead to the more efficient use of a local specialist.

No variables significantly predict the performance of direct exporters, even though there is greater variance in the performance of this mode (Table 1), and hence more to explain. Self selection bias will reduce variance in the explanatory variables and thus we may not be able to detect their impact on performance. But there still remains substantial unexplained variance.

The selection bias correction factor is significant indicating that unobserved factors have a significant impact. If this correction factor is excluded some explanatory factors may falsely appear to be significant because they are correlated with the unobserved factors and catch some of their impact. For example, when we ran a stepwise regression excluding the correction factor three factors appeared to be significant as shown in Table 2:

If these variables give a clue as to the nature of the unobserved factors, they suggest that this mode is more profitable in two situations, which supports H1 and H2, i.e. the export of products with low asset specificity to culturally similar countries and the export of products with high asset specificity to geographically distant markets.

These results seem to reflect the pattern of much Australian trade. The first situation reflects trade in simply transformed products, which dominates due to extensive mining and agricultural industries, to culturally close countries such as the USA and UK. Simply transformed commodities and raw materials can be shipped efficiently in bulk directly to such foreign customers. It is likely that the profitability of such exports depends more on the size and growth of the foreign market's economy and international exchange rate and commodity price movements, which are not measured in this research, than on transaction and production cost efficiencies.

The second situation reflects the export of more elaborately transformed products, such as specialty steels and components to geographically distant markets in America and Europe. Unobserved factors such as exchange rate movements, local tax rules, competition and tariff rates may have a large impact on the profitability of such exports.

Lastly, the performance of foreign branches is greater for consumer product industries and when cultural distance is combined with higher asset specificity (hitech), which supports H1 and H2. The uncertainty associated with culturally distant markets reinforces the need to safeguard such assets through greater levels of vertical integration. This reduces the risks of opportunistic behaviour such as counterfeit products and allows the firm to provide services efficiently in the target market. Misfits with this entry mode occur when technical asset specificity, and uncertainty is lower, in exports to culturally similar countries. In these situations the additional costs of setting up a more elaborate internal governance structure reduces profitability.

Conclusions and Future Research Directions

Our results support the impact of various contingent factors on entry mode performance and underscore the need to consider both transaction and production costs. We have shown how entry modes are used not only to safeguard firm assets, as TCA logic emphasises, but also are a means to gain access to valuable assets, including the knowledge, skills and networks of specialists intermediaries in the form of local agents of foreign distributors. We have also found significant interaction effects between several types of factors. These include interactions between asset specificity and uncertainty arising from cultural and geographic distance and between uncertainty and a firm's experience in the foreign market and in exporting generally. The results in general support those of Brouthers (2002) and Chen and Hu (2002), although our measures of the dependent and independent variables are different.

Our results underscore the importance of including production costs as well as transaction costs. They show how the value of outsourcing exporting activities depends in important ways on factors affecting the scale, scope and experience economies of specialist firms compared to the firms they serve. This is important because many studies focus only on transaction costs and are in danger of confounding production cost effects with transaction cost effects.

Environmental and institutional factors not included in this study that affect export revenues and costs, may have a important impacts on the performance of direct exporting. These include macro economic conditions, exchange rates, commodity price movements and specific regulations in force in specific markets. These need to be included in future studies.

Our results also indicate that the contingency theory is more complex than we first envisaged. The basic premise is that the greater the misfit between the attributes of an entry mode and contingent conditions the lower is performance. However, in some cases the degree of apparent misfit may actually improve performance because, for any mode, certain factors always tend to reduce transaction or production costs. Thus lower levels of uncertainty, due to cultural distance for example, tend to reduce transaction costs and boost performance. Geographic closeness reduces transport costs and size increases a firms ability to negotiate better trading terms. This makes the testing of a contingency theory more difficult, as we need to distinguish between variation in performance among entry modes as well as variation for each mode. Switching cost may prevent or delay a firm establishing a more efficient mode, especially if conditions tend to boost the performance of current modes.

For these reasons it may be necessary to use other methods to examine the efficiency of different modes, such as activity based costing, similar to the way it has been used to examine customer relations (e.g. Reinartz and Kumar 2000). A basis for this already exists in models of the cost components of different entry modes developed by Buckley and Casson (1998).

Correcting for self selection bias has been shown to be important. But a large amount of variance is left unexplained, especially in terms of direct exports. To some extent this is to be expected because, as noted, we did not consider potentially important environmental and institutional factors and we focused on costs rather than revenue effects. Future research needs to include measures of revenue and other performance dimensions as well as the factors affecting them. Two kinds of factors seem particularly relevant: (a) the competencies of exporting firms and intermediaries, including their market and network orientation, management skills and other aspects of their marketing strategies (Cavusgil and Zhou 1994, Deshpande 1999, Ritter 1999); (b) foreign market characteristics, such as tax rules, macro economic indicators, and exchange rate variations that affect the profitability of markets.

Finally, there are some additional limitations to be acknowledged. First, it is based on a study of manufacturing firms carried out in one country and may reflect, in part, the peculiarities of Australian conditions. Second, we focused on exporting and did not examine other modes. Third, the study did not attempt to measure transaction or production costs directly but only the factors theory suggests impact on them. Better measures of some of the constructs are required, such as asset specificity, for which there is no widely accepted scale. Lastly, an alternative measure of cultural distance could be used based on Hofstede's (1980) dimensions, or ratings of business risk offered by various agencies. Another approach would be to use managers perceptions rather than general country measures. Hence there is plenty of scope for further research.

Appendix: Heckman Two Stage Regression Analysis

For a particular entry mode i we can write

$$M_i^* = z_i\gamma' + \mu_i \qquad \text{decision equation (1)}$$

$$P_i^* = x_i\beta' + \varepsilon_i \qquad \text{outcome equation (2)}$$

M_i^* is the unobserved probability of selecting entry mode i, z_i is a vector of observed explanatory variables and μ_i is an unobserved error term. We only observe whether the mode is chosen (=1) or not (=0), not the actual propensity to select the mode. P_i^* is the performance of entry mode i and x_i is a vector of observed explanatory variables, that can include variables in z_i from Equation (1).

Two kinds of problems arise. First, because firms choose entry modes based on expected performance they necessarily restrict the variance of conditions in which we can observe the performance of a given entry mode. This may suppress the significance of particular factors in the outcome equation because we lack sufficient variation in the explanatory variables.

Second, unobserved factors may affect a firm's choice of entry mode such as management characteristics, the nature of competition as well as other network or environmental characteristics. If these factors are correlated with performance, but are not included in the outcome equation, they may result in unreliable estimates of the effects of observable factors. The coefficients may be inflated because they catch some of the effects of these unobserved factors.

The Heckman method overcomes the second problem by developing a measure of the impact of unobserved factors in the selection equation. The procedure assumes the error terms of the choice equation are normally distributed and hence a probit or logit model, with appropriate transformations, is used to estimate the effects of the observed factors on choice. (Aldrich and Nelson 1984, Shaver 1998). For this analysis the entire sample is used. The unexplained residuals are used to construct a measure of the unobserved factors that is used in the outcome equation as follows:

$$P_i^* + x_i\beta + \sigma_{\mu\varepsilon}\phi(Z_i\gamma')\Phi(z_i\gamma') + \delta_i \qquad (3)$$

Where $\sigma_{\mu\varepsilon}$ is an estimated regression coefficient and $\phi(z_i\gamma')/\Phi(z_i\gamma')$ is the selection bias correction factor in which $\phi(z_i\gamma')$ and $\Phi(z_i\gamma')$ are the standard normal probability density function and cumulative distribution function respectively. The γ' is estimated from Equation (1). Equation (3) is estimated by OLS regression using only those cases where the focal entry mode is used. This results in unbiased parameter estimates for the predictor variables but the standard error estimates are biased due to heteroschedasticity, which requires different estimates of standard errors (see Smits undated for details).

References

Aldrich, J.H. and Forrest D.N., 1984. Linear Probability, Logit, and Probit Models, Sage Publications, Beverly Hills: CA.

Anderson E. 1985. The Salesperson as Outside Agent or Employee: A Transaction Cost Analysis. Marketing Science 4 (Summer), 234-254.

Anderson E. and Gatignon, H. 1986. Modes of Foreign Entry: A Transaction Cost Analysis and Propositions. Journal of International Business Studies 17 (3), 1-26.

Anderson, C., Hakansson, H. and Johanson, J. 1994. Dyadic Business Relationships Within a Business Network Context. Journal of Marketing 58 (October), 1-15.

Anderson, H., Havila, V. and Salmi, A., 2001. Can you Buy a Business Relationship? Industrial Marketing Management 30 (October), 575-586.

Axelrod R.M., 1984. The Evolution of Cooperation, Basic Books, New York.

Badaracco Jr, J.L., 1989. The Knowledge Link: How Firms Compete Through Strategic Alliances, Harvard Business School Press, New York.

Barrett N.J. and Wilkinson, I.F. 1986. Internationalization Behavior; Management Characteristicss of Australian Manufacturing Firms by Level of International Development. In Turbull P.W. and Paliwoda, S.J. (Eds.), Research in International Marketing, Croom Helm, Kent, 213-233.

Bilkey, W.J. 1978. An Attempted Integration of the Literature on Export Behaviour of Firms. Journal of International Business Studies, 12 (Spring Summer), 33-46.

Blankenburg-Holm, D., Eriksson, K. and Johanson, J. 1996. Business Networks and Cooperation in International Business Relationships. Journal of International Business Studies, 27 (5), 1033-1053.

Brouthers, K.D. 2002. Institutional, Cultural and Transactional Cost Influences on Entry Mode Choice and Performance. Journal of International Business Studies 33 (2), 203-221.

Brouthers, K.D. and Brouthers, K.E. 2000. Acquisition or Greenfield Start-up? Institutional, cultural and Transaction Cost Influences. Strategic Management Journal 21 (1), 89-97.

Buckley, P.J. and Casson, M.C. 1998. Analyzing Foreign Market Entry Strategies: Extending the Internalization Approach. Journal of International Business Studies 29 (3), 539-561.

Cavusgil S.T. and Nason, R.W. 1990. Assessment of Company Readiness to Export. In Thorelli, H. and Cavusgil, S.T., International Marketing Strategy, 3rd edition, Pergamon, Oxford, 129-139.

Cavusgil S.T. and Zou S. 1994. Marketing Strategy performance relationship: An Investigation of the empirical link in export marketing ventures. Journal of Marketing 58 (January), 1-21.

Chang, S.J. 1995. International Expansion Strategy of Japanese Firms: Capability Building Through Sequential Entry. Academy of Management Journal 38 (2), 383-407.

Chen, H. and Chen, T-Y. 1998. Network linkages and location choice in foreign direct investment. Journal of International Business Studies 29 (3), 445-467.

Chen, H. and Hu, M.Y. 2002. An Analysis of Determinants of Entry Mode and its Impact on Performance. International Business Review 11 (April), 193-210.

Delios, A and Beamish, P.W. 1999. Ownership Strategy of Japanese firms: Transactional, institutional and Experience Influences. Strategic Management Journal 20 (10), 915-933.

Despande, R. (Ed.) 1999. Developing a Market Orientation, Sage, Newbury Park:CA.

Donaldson, L. 2001. The Contingency Theory of Organizations, Sage, Thousand Oaks, CA.

Dixon, D.F. and Wilkinson, I.F. 1986. Toward A Theory of Channel Structure. In Sheth, J. (Ed.) Research in Marketing, Volume 8, JAI Press, CA., 27-70

Dunning, J.H. 2001. Global Capitalism at Bay? Routledge, London.

Dwyer, F.R., Schurr, P.H. and Oh, S. 1987. Developing Buyer-Seller Relations. Journal of Marketing 51 (April), 11-28.

Dwyer, J. 1998. The Relational View: Cooperative Strategy and Sources of Interorganizational Competitive Advantage. Academy of Management Review 23 (4), 660-679.

East Asian Analytical Unit, 1995. Overseas Chinese Business Networks in Asia, Department of Foreign Affairs and Trade, Canberra: Australia Government Printing Service.

Fehr, E. and Gachter, S. 2002. Altruistic punishment in humans. Nature 415 (6868, Jan 10), 137-140

Fletcher, R.F., Barrett, N.J. and Wilkinson, I. F. 1997. Countertrade and Internationalization: An Australian Perspective. Journal of Global Marketing 10 (3), 5-25.

Florence, P.S. 1933. The Logic of Industrial Organisation, Routledge and Kegan Paul, London.

Ford, D. 1980. The development of buyer-seller relations in industrial markets. European Journal of Marketing 14 (5/6), 339-354.

Ford J. D. and Slocum, J.W. 1977. Size, Technology, Environment and the Structure of Organizations. Academy of Management Review 2 (October), 561-575.

Granovetter, M. 1985. Economic Action and Social Structure: The Problem of Embeddedness. American Journal of Sociology 91, 481-510.

Hakansson, H. and Snehota, I. 1995. Developing Relationships in Business Networks, Routledge, London.

Hall, E.T. 1959. The Silent Language, Fawcett Publications, Greenwich Conn.

Hallen, L. and Weidersheim-Paul, F. 1979. Psychic Distance and Buyer Seller Interaction. Organization Marknad och Samhalle, 16 (5), 308-324

Heckman, J.J. 1979. Sample Selection Bias as a Specification Error. Econometrica 47, 153-161.

Hirsch S. and Adar, Z. 1974. Firm Size and Export Performance, World Development, 2 (7), 41-46.

Hofstede, G. 1980. Culture’s Consequences: International Differences in Work Related Values, Sage, Beverly Hills, CA.

Johanson, J. & Mattsson, L.-G. 1993. Internationalization in industrial systems - a network approach. In Buckley, P.J. and Ghauri, P. (Eds.), The Internationalization of the Firm. Dryden Press, London, 303-321.

Johanson, J. and Vahlne, J-E. 1977. The Internationalization Process of the Firm: A Model of Knowledge Development and Increasing Foreign Market Commitments. Journal of International Business Studies 8, (Spring/Summer), 305-322.

Kalwani, M.U. and Narayandas, N. 1995. Long Term Manufacturer-Supplier Relationships: Do They Pay Off for Supplier Firms? Journal of Marketing 59 (January), 1-16.

Klein, S., Frazier, G.L. and Roth, V. 1990. A Transaction Cost Analysis Model of Channel Integration in International Markets. Journal of Marketing Research, 27 (May), 196-208.

Kogut, B. and Singh, H. 1988. The Effect of National Culture on the Choice of Entry Mode. Journal of International Business Studies, 19 (Fall), 411-432.

Layton, R. A. and Dunphy, D.C. 1970. Export Attitudes, Management Practices and Marketing Skills, Australian Export Development Council.

Macaulay, S. 1963 Non-Contractual Relations in Business: A Preliminary Study, American Sociological Review 28, 57-66.

Martin, X., Swaminthan, A. and Mitchell, W. 1998. Organizational Evolution in the Interorginizational Environment: Incentives and Constraints on International Expansion Strategy Administrative Science Quarterly 43 (September), 566-601.

Miner, A.S. 1992. The Shadow of the Future: Effects of Anticipated Interaction and Frequency of Contact on Buyer-Seller Cooperation. Academy of Management Journal 35 (2), 265-91.

Niraj, R., Mahendra G. and Chakravarthi, N. 2001. Customer Profitability in a Supply Chain. Journal of Marketing 65 (July), 1-16.

Nootebom, B., 1999. Inter-Firm Alliances: Analysis and Design, Routledge, London.

Nonaka, I. and Takeuchi, H., 1995. The Knowledge Creating Company, Oxford University Press, New York.

Pedersen, B. and Welch, L. 2002. Foreign Entry Mode combinations and Internationalization. Journal of Business Research 55 (February), 157-162.

Porter, M.E. 1980. Competitive Strategy: Techniques for Analyzing Industries and Competitors, The Free Press, New York.

Redding, G. 1993, The Spirit of Chinese Capitalism, de Gruyter, New York.

Reid, S.D. 1982. The Impact of Size on Export Behaviour in Small Firms. In Czinkota M. and Tesar, G. (Eds.), Export Management, Praegar Publishers, New York, 18-38.

Reinartz, W.J. and Kumar, V. 2000. On the profitability of Long-Life Customers in a Noncontractual Setting: An Empirical Investigation and Implications for Marketing. Journal of Marketing, 64 (October), 17-35.

Rindfleisch, A. and Heide, J.B. 1997. Transaction cost analysis: Past, present, and future applications. Journal of Marketing 61 (October), 30-54.

Ritter, T. 1999. The Networking Company: Antecedents for Coping With Relationships and Networks Effectively. Industrial Marketing Management 28 (5), 467-479.

Rooks, G., Raub, W., Selten, R. and Tazelaar, F. 2000. How Interfirm Co-operation Depends on Social Embededness: A Vignette Study. Acta Sociologica 43 (2), 123-137.

Rosson, P. 1984. Success factors in Manufacturer-Overseas Distributor Relationships in International Marketing. In Kaynak, E. (Ed.), International Marketing Management Praeger, New York, 91-107.

Rugman, A.M. 1986. New Theories of the Multinational Enterprise: An Assessment of Internalization Theory. Bulletin of Economic Research 38 (2), 101-18.

Shaver, J. M. 1998. Accounting for Endogeneity When Assessing Strategy Performance: Does Entry Mode Choice Affect FDI Survival? Management Science 44 (April), 571-585.

Shelanski, H. and Klein, P.G. 1995. Empirical Research in Transaction Cost Economics: A Review and Assessment. Journal of Law, Economics and Organisation 11 (2), 335-61.

Smits, J. Undated. Estimating the Heckman two-step procedure to control for selection bias with SPSS, http://home.planet.nl/~smits.jeroen/selbias/selbias.html.

Stigler, G.J. 1951. The Division of Labor is Limited by the Extent of the Market. Journal of Political Economy 95 (June), 185-193.

Teece D.J. 1986. Transaction Cost Economics and the Multinational Enterprise. Journal of Economic Behavior and Organization, 7, 21-45

Tronpenaas, F. 1994. Riding the Waves of Culture, Irwin, New York.

Wilkinson, I.F. and Young, L.C. 2002. On Cooperating: Firms, Relations and Networks. Journal of Business Research 55 (2), 123-132

Wilkinson, I.F. 2002. A Hierarchical Model of Export Entry Mode Choice. Proceedings: Australian New Zealand Marketing Academy Annual Conference, Deakin University, Melbourne, December 2002 (CD Rom)

Williamson, O.E. 1975. Markets and Hierachies: Analysis and Antitrust Implications, The Free Press, New York.

Williamson, O.E. 1981. The Modern Corporation: Origins, Evolution, Attributes. Journal of Economic Literature 19 (December), 1537-1568.

Williamson, O.E. 1985. The Economic Institutions of Capitalism, The Free Press, New York.

Acknowledgements

We would like to thank Torben Pederson, Gary Gregory and Chris Styles for their helpful comments on drafts of this paper as well as the anonymous reviewers.

Biographies

Ian Wilkinson is a Professor in the School of Marketing at the University of New South Wales. He was educated in the UK and Australia and has held academic posts at a number of universities in Australia, USA, Europe and China. His current research focuses on the nature and role of interfirm relations and networks in business markets and their implications for strategy and on the dynamics and evolution of marketing systems. He has published three books and over 50 journal articles, as well as numerous conference papers. His 2001 AMJ article "A History of Channel and Network Thinking in Marketing" won the Roger A Layton Award for outstanding article of the year.

Van Nguyen completed his doctorate in the School of Marketing at the University of NSW in 1993. He is a lawyer by prior training and obtained degrees in law in Vietnam and the University of Sydney as well as a Masters of Commerce from UNSW specialising in Organisation Behaviour. After his doctorate he returned to industry to manage a large multinational firm.

Correspondence Address

Ian F. Wilkinson and Van Nguyen, School of Marketing, University of New South Wales, Sydney, NSW, Australia, 2052, Telephone: +61 (2) 9385 3298, Facsimile: +61 (2) 9663 1985, Email: i.wilkinson@unsw.edu.au

Philosophising on the Elusiveness of Relationship Marketing Theory in Consumer Markets: A Case for Reassessing Ontological and Epistemological Assumptions

Samir Shrivastava & Sudhir H. Kale

Abstract

Relationship marketing in consumer markets came to the forefront of marketing in the 1990s. However, theory development in this area lags behind applications and prescriptions. We attribute this lack of development, in part, to researchers asking the wrong questions. A case is made for reassessing the epistemological and ontological assumptions about relationships in consumer markets. We argue that humans appear to be genetically predisposed to forming relationships. Instead of concentrating on why consumers seek relationships, researchers should ask, “How do consumers get into relationships with marketing entities?” The rephrased research question will prove more apt in consumer markets where reality is socially constructed. Finally, we assert that a discovery-oriented phenomenological approach should be adopted to answer the rephrased question.

Keywords: Relationship marketing, Ontology, Epistemology, Consumer markets

1. Introduction

The concept of relationship marketing (RM) clearly managed to capture the imagination of scholars in the 1990s. Editors of a number of journals across continents (Journal of the Academy of Marketing Science 1995; European Journal of Marketing 1996; Asia-Australia Marketing Journal 1996; and Journal of Marketing Management 1997) were impressed enough to devote special issues to the topic. Indeed, about a decade ago the excitement amongst the scholarship was palpable. A paradigm shift in marketing at the expense of four Ps was foreshadowed (Grönroos, 1994); and new schools of thought – the Anglo-Australian School, the Emory School, the Nordic School – emerged (Möller and Halinen, 2000; also see Coote 1994). Inevitably, as the dust begins to settle, questions are being asked about how much of RM is rhetoric and how much reality. Detractors point out that the term is being overused as a “catch all phrase” and is “prone to an abundance of vague interpretations” (Brodie, Coviello, Brookes, and Little, 1997, p. 385). Moreover, not all are entirely convinced about the applicability of RM in the context of consumer markets (O’Malley and Tynan, 2000).

Tracing how RM in consumer markets shed its obscurity, O’Malley and Tynan (2000) credit Sheth and Parvatiyar (1995) for giving impetus to the area. They observe that prior to 1995, a majority of marketers were reluctant to transfer learning from services and business-to-business markets to the consumer market domain. The authors note that it was Sheth and Parvatiyar’s (1995) article – hereafter referred to as S&P – which laid the conceptual framework for theory development in the area. Writing in the same special issue of JAMS as S&P, Bagozzi (1995) applauds S&P’s effort and predicts that their framework would take marketers far toward a theory of RM. Eight years on scholars have not made much headway. Why should this be the case? Is it because researchers have been unable to successfully grapple with complex and ambiguous constructs involved in consumer relationships? Or is there a more fundamental reason? Could it be that the central research question that academics have been asking is inapt?

In this article, we explore why a theory of RM in consumer markets has thus far proven elusive and offer some pointers that could remedy the situation. It appears that in their rush to develop a theory of RM, scholars ceased paying as much attention to philosophical assumptions implicit in their stance as they should have.

We concur with Möller and Halinen (2000) who suggest that in order to move forward, we need to look backwards and understand the roots and foundations of our knowledge. As Boyd (1991) asserts, it is the theoretical position held by researchers that determines what gets construed as a research problem, what theoretical procedures are used, and what constitutes evidence. Accordingly, we make our case by focusing on the theoretical positions of scholars and the assumptions which underpin their respective positions.

In the sections that follow, we discuss S&P's conceptual framework and later use it to illustrate the importance of examining the underlying ontological and epistemological assumptions about relationships found in extant literature. Thereafter, we contend that the nature of relationships in consumer markets may be better understood through the ontological perspective of constructivism. We then suggest that given the ontology of relationships, the central research question in the area should be rephrased. Finally, we show why a discovery-oriented phenomenological approach should be adopted to build RM theory in consumer markets.

2. S&P's Conceptual Framework

A content analysis of 117 different sources produced as many as 26 definitions of RM (Harker, 1999). Since there is no consensus over a definition of RM, it might be pertinent to briefly discuss what relationship means to marketers. All exchanges, by definition, involve a relationship (Czepiel, 1990). These relationships, according to Czepiel, may involve one-off transactions as witnessed between a tourist and a souvenir shop, or the relationship may be complex and long-term as between large computer systems users and their suppliers. The former type of exchange is seldom thought of as a relationship even though it meets the technical requirements of being one – it is an association or connection between two parties that benefits both of them. Most marketing scholars assert that relationships encompass an extended series of interactions and transactions over time. For instance, Shani and Chalasani (1992, p.44) define relationship marketing as:

An integrated effort to identify, maintain, and build up a network with individual consumers and to continuously strengthen the network for the mutual benefit of both sides through interactive, individualized, and value added contacts over a long period of time.

Most businesses, unlike souvenir shops, do not primarily rely on one-time-only customers. It is in the seller's interest to have long term relationships with clients who provide repeat business. Intuitively, one can appreciate that benefits would accrue to businesses that enjoy a loyal customer base. However, the benefits that individual customers might enjoy are not always very clear. In fact, the desire on the part of individual consumers to get into relationships could be deemed irrational in one sense. After all, getting into relationships with marketers reduces choices, thereby foreclosing potentially attractive options. It is also true that relationships can sometimes be one-sided and are not always mutually beneficial. Consumers on certain occasions do attempt to dissolve or extricate themselves from bad relationships; any theory on relationships should account for such outcomes. These complexities partly explain why developing a theory of RM in consumer markets has proven troublesome. Scholars have engaged themselves in trying to explain why consumers get into relationships. This line of inquiry could be unavailing as different consumers may get into relationships for different reasons and there may be no all-encompassing explanation as to why consumers get into relationships (see Smith and Higgins, 2000).

According to S&P, relationships over time construe brand, product, or service patronage, and unless consumers are motivated to reduce their choice set, they will not be inclined to manifest brand, store or product/service loyalty. S&P further declare that it is important for a theory on relationships in consumer markets to take the perspective of consumers, "The fundamental axiom of relationship marketing is, or should be, that consumers like to reduce choices by engaging in an ongoing loyalty relationship with marketers" (p.256). Appraising S&P's work, Bagozzi (1995, pp.272-3) succinctly paraphrases their contention thus:

…The authors advocate that the parties to the relationship should purposefully reduce choices and cultivate long-term relationships because they will improve effectiveness and efficiency of the parties in the relationship… S&P seem to be saying also that any theory of relationship marketing must integrate the psychological side of behavior with the sociological (or, more broadly, with the social). The consumer is both (a) pushed by a need to simplify and make sense of his/her consumption situation, avoid risk, and reduce psychological tension and cognitive dissonance, and (b) pulled by goals with global and local consequences for satisfaction. These motivational and purposive aspects of consumer behavior are inextricably embedded, S&P maintain, in a social context that contains well-defined inhibitors and facilitators, augmenting individual action.

Bagozzi (1995) acknowledges S&P's effort as a tour de force in RM in that it lays an intellectual foundation for relationship ideas in consumer markets. He also notes that S&P's article makes several vital connections to ideas from basic research in psychology and sociology. But he is equally quick to point out that choice reduction is often a byproduct, and an unintended one at that, of a relationship. He adds that consumers may often form relationships as a means for fulfilling or facilitating the fulfillment of a goal, and not for choice reduction per se.

The competing explanations could not be more divergent. On the one hand S&P state that consumers get into relationships because they like to reduce their choice set, on the other Bagozzi (1995) conjectures that reduction in a consumer's choice set could be a fait accompli of his or her decision to get into a relationship. According to both viewpoints however, there is an implicit acknowledgement that any theory of RM should attempt to analyse why individual consumers get into relationships with businesses. S&P and Bagozzi seem to believe that resolution of this research question is a central issue. Prima facie, this belief appears reasonable but as we argue shortly, there may be a case for scholars to consider rephrasing the central research question. In order to put our argument in perspective, it is imperative that we first examine the epistemological and ontological underpinnings of the competing viewpoints.

3. Examining Ontological and Epistemological Assumptions: An Illustration

Scholars from most vantage points seem to agree that while one may not be able to directly observe a relationship; its manifestations (e.g., repeat purchases or positive word-of-mouth communication) are readily observed. Further, most marketers, including S&P and Bagozzi, would concur that individual consumers who are in relationships with businesses would continue to remain in one irrespective of whether observers (interested or uninterested) are conscious of the relationships' existence or not. Thus there is some convergence of opinion between the ontological stances of the competing viewpoints – both viewpoints are essentially "objectivist" in nature. To an objectivist, meaning, and therefore, meaningful reality exists independently of consciousness. A tree in a forest is a tree, regardless of whether anyone is aware of its existence or not. As an object of that kind ("objectively," therefore), it carries the intrinsic meaning of "tree-ness." When human beings recognise it as a tree, they are simply discovering a meaning that has been lying there in wait for them all along (Crotty, 1998).

While S&P and Bagozzi appear to agree on the nature of reality (i.e. the ontology) of relationships, they do not do so with regard to their epistemological positions. A post-positivist stance seems to be implicit in S&P's approach. They have, perhaps unintentionally, taken an instrumentalist position. Instrumentalism incorporates and admits to the value of incorporating unobservables in scientific theories. But this value is merely akin to that of "useful fiction" – while the unobservables may facilitate our understanding of the observed world, they continue to remain fictitious (Chalmers, 1998, p.148). To an instrumentalist, the main use of a theory is to assist in making predictions, and in making the transition from one set of data to the other (Penguin's Dictionary of Philosophy, 1997). Instrumentalism in effect asserts that the ultimate truth or falsity of a scientific theory is irrelevant; only the ability of a theory to explain empirical reality is of value (Nagel, 1979). To amplify with the help of an example – iron filings are a reality, as is the observation that filings get attracted to a horseshoe shaped piece of steel, but the concept or theory of "magnetic field" is not reality. As long as magnetic field theory can explain observable reality, the theory is acceptable. The real reason for attraction of filings may be something very different, but an instrumentalist does not care about the real reason. In similar vein, it is implicit in S&P's theory that they do not care whether consumers in reality want to reduce their choice set, if this contention of theirs is taken as axiomatic, then observable reality as it exists between consumers and businesses can be explained.

It must have been noticed that instrumentalists make a clear distinction between "observation" and "theory". But such a distinction seldom exists. Objects like iron filings or steel – observed realities to instrumentalists – are themselves theory-dependent. How would one, for example "prove" that one was really observing "iron filings" and nothing else? One could perhaps take recourse to the theoretical concept of metals and their place in the periodic table. To further demonstrate the ferrous nature of metal in question, one could show how reaction with oxygen causes the filings to rust. Notice that each step of the "proof" is an appeal not only to further observations but also to theoretical concepts. Godfrey and Hill (1995) argue that strictly speaking, a true instrumentalist would have to reject all observations based on electron microscope as the device uses "electron theory" to observe reality. Thus the notion that observation and theory are separable does not appear to be tenable.

On close examination, S&P's fundamental axiom that consumers like to reduce choices by engaging in an ongoing loyalty relationship with marketers runs into trouble on philosophical grounds. Their axiom is derived from a theoretical notion that it is rational for consumers to reduce their choice. Harper Collins Dictionary (1992; emphasis added) defines an axiom as "a fundamental statement that cannot be deduced from other statements." What complicates the issue further is that S&P appear to be deriving the axiom from the self-same theory in support of which they intend to use the axiom. One can insist that the very act of reducing choice or foregoing options is tantamount to getting into a relationship. S&P seem to have entangled themselves in a "chicken-and-egg" argument. This we believe makes their axiom flawed. We now turn our attention to the epistemology implicit in Bagozzi's (1995) proposition.

Bagozzi's (1995) observations that reduction of choice is often a byproduct of consumers' decision to get into a relationship, and that consumers often get into relationships because relationships can help them achieve their goal of acquiring a product or using a service, appear to broadly embrace realism. To quote Godfrey and Hill (1995, p.525), "The hallmark of realism is a belief that theories of science give us knowledge about the unobservable, and that under certain circumstances we may have good reason for believing statements about unobservable entities to be true. Thus realists are willing to take 'leaps of faith' regarding unobservables." According to realists, propositions are true as long as they correspond to actual conditions in the real world. Popper (1969) for example, has realist aspirations and uses truth in this way. In contrast to the instrumentalists, most realists are willing to accept and apply "approximate truths". Such realists are said to practice scientific realism, a form of realism quite popular with marketers (see Hunt, 1990). Scientific realism argues for fallibilistic realism. It accepts that some of our perceptions may be illusions or even hallucinations but by the same token some of our perceptions may be true and others false, or alternatively "more accurate" or "closer to the truth" than are others (Hunt, 1990).

Though we had earlier speculated that Bagozzi's (1995) stance embraces realism, it must be pointed out that Bagozzi did not attempt to develop a theoretical framework in his article. Unlike S&P, Bagozzi (1995) does not probe the topic in sufficient detail to enable us assess with certainty, the research methodology he would have favored if he were to undertake an empirical study. However, Bagozzi's prolific contribution in the field of causal modelling suggests that he would probably have chosen reflective measures to operationalise the abstract construct of "relationship" in consumer markets. This, by Hunt's (1991) reckoning, would have taken Bagozzi closer to scientific realism. There is thus some indirect evidence that our speculation about Bagozzi being a realist is accurate. Bagozzi's stance is perhaps more defensible than the instrumentalism of S&P in the current context. Nonetheless, the underlying premise of realism, including scientific realism, is that although we may not be equipped to understand the true nature of reality, there is a single objective reality out there (see Chalmers, 1998). This premise of realism, as we shortly discuss, is nugatory in the context of relationships in the consumer domain.

4. Social Construction of Reality

Scientific realism may be described as a middle ground position between "direct realism" and "constructivism" (Hunt, 1990). Direct realism maintains that our perceptual processes always produce truthful representations of external objects, resulting in accurate knowledge about them (Hooker, 1985). Thus direct realism as an epistemology is consistent with the ontology of objectivism. Constructivism on the other extreme rejects the objectivist view of human knowledge and holds that there is no objective truth waiting for us to discover. Like objectivists, constructivists hold that shoppers have always existed and will continue to have exchanges with retailers whether one observed them or not; where they part company with objectivists is when they insist that these exchanges "become" relationships only when someone describes them as such and ascribes relational properties to them. Until this is done, it is immaterial whether "relationships" existed previously or not. Relationships surely did not exist in any "meaningful" way. How can something exist prior to its conception?

To constructivists then, the world we experience, prior to our experience of it, is meaningless. Meaning is never inherent in objects – it emerges only when a conscious mind engages objects. To reiterate, a tree may have been whatever, but it came to be called a tree and had "tree-ness" ascribed to it only when humans discovered and chose to engage it. Meaning therefore is constructed; however constructivists are quick to point out that meaning cannot be created. According to them, we do not impose our own arbitrary meanings on our surroundings – that would amount to creating meaning (Crotty, 1998). Instead, we construct meaning through the interplay of our imagination and creativity (i.e. subjective faculties) with animate and inanimate things (i.e. objects). During the interplay, we do not trivialise objects; if anything, we treat them very seriously. Meaning therefore comprises of subjective and objective elements that cannot be teased apart; the elements are "indissolubly bound up with each other" (Crotty, 1998; p.48).

In the world of constructivists, meaning is not only at once objective and subjective but it is also at once realist and relativist. Some scholars however insist that one cannot be a realist while being a relativist. These, to them, are mutually exclusive positions (see Hunt, 1990). But Crotty (1998) disagrees; he argues that constructionism is as realist in its orientation as it is relativist. To underline the realism of social constructions, he cites an example used by the philosopher, Stanley Fish. In an article in New York Times (21 May 1996), Fish writes that "balls" and "strikes" are social constructs. They exist as rules of baseball written by society. But who can argue they are not real? Players are paid millions of dollars to produce them or prevent their production. Some people remain unconvinced. They argue that only social reality – and not physical or natural reality – can be socially constructed. This argument merits further scrutiny.

The argument of those skeptical about the realism of constructionism (or constructivism) implies that since the concept of sport is an abstract one created for social interaction, it is acceptable for constructivists to claim that the concept of baseball as a game has been socially constructed. It is however, not acceptable for constructivists to claim that the concept of a natural object such as a "tree" has been socially constructed. But Crotty (1998) clarifies that the "social" in front of social constructivism or constructionism is about mode of meaning generation and not about the kind of object that has meaning. Those who reject the realism of constructivism should realise that the tree is as real to constructivists as it is to objectivists – it is not as if tree to the former is a figment of their imagination. The point of departure between constructivists and objectivists does not pertain to reality per se; it pertains to when things become real. We have briefly discussed why constructivists insist that there is realism in their world. What about the contention that their world also contains relativism? We now turn our attention to this issue.

Relativism of constructivism recognises that different people may inhabit different worlds and that their respective worlds may contain different ways of knowing, distinct sets of meanings, and separate realities. To an adult born and brought up in an artists' colony, a tree may be a focal point of aesthetic pleasure, but to another individual born and brought up in an animist community, a tree may be a source of deep reverence, even fear. Relativism in effect, introduces the second major point of departure between constructivists and objectivists. Unlike objectivists, constructivists, owing to their relativistic orientation are willing to accommodate multiple realities. While on this subject, we must note that relativism of constructivism is not to be confused with subjectivism. Unfortunately, it often is. Subjectivism gives one the mandate to conjure up reality out of nothing; constructivism is more conservative, its reality is firmly rooted in objects that "really" exist. Recollect that meaning to a constructivist is subjective and objective at the same time. Those who espouse scientific realism will do well to make room for relativism in their study of relationships in consumer markets. Researchers are likely to discover that approximate truth of RM in consumer markets contains multiple truths. Relationships often mean different things to different people. Marketers need to understand the values each participant brings to an exchange and start treating consumers as "socially embedded" individuals (Smith and Higgins, 2000, p. 92).

RM lends itself to being studied by a constructivist viewpoint. Humans are needed to not only observe and give meaning to the concept of relationships but also to engage in relationships. Zinkhan and Hirscheim (1992) point out that it may be questionable to focus on truth in a domain where truth is socially constructed. Because human beings cannot transcend their language and culture, they cannot obtain any absolute viewpoint. In the current context, a search for an objective all encompassing truth may prove futile. In all probability, such a truth does not exist. We feel that the central research question in this area should be rephrased if scholars are to successfully unravel the nature of socially constructed truth or reality that exists in consumer markets.

5. Rephrasing the Central Research Question

In our opinion, extant literature on relationships in consumer markets suffers from two shortcomings. Firstly, it uncritically imports findings and constructs from business-to-business markets. Secondly, its emphasis on understanding why people get into relationships appears to be misplaced. An analysis of these shortcomings may partly explain the elusiveness of RM theory in consumer markets. O'Malley and Tynan

(2000) observe that constructs like trust, mutuality, co-operation, and commitment from social exchange theory are readily applied by marketers in the context of consumer markets despite a dearth of conceptual and empirical justification. The assumption is that business-to-consumer relationships are similar to business-to-business relationships, which in turn are similar to interpersonal relationships. O'Malley and Tynan (2000) draw attention to the stark contextual and structural differences between consumer and business domains and urge marketers to challenge this assumption.

Undeniably, a general theory of RM valid across domains would be useful; perhaps it is the allure of such a theory that tempts scholars to import variables from the business domain with impunity. We agree with Möller and Halinen (2000) who sate that by increasing the level of abstraction one could attempt to create a general theory of RM, but that would mean losing much of the valuable knowledge content that is idiosyncratic to the two domains. Differences between the two domains range across, but are not limited to, issues such as switching-costs, availability of alternatives, relative economic value, type and frequency of interactions, level of interdependency, underlying motives, relative size and legal protection, and the overall importance buyers and sellers attach to relationships (cf. Gruen, 1995; Möller and Halinen, 2000). Additionally, we believe that while it may be fruitful to focus on why businesses forge relationships in business-to-business settings, it may not be as important to understand why consumers get into relationships with businesses.

The starting premise of RM in consumer markets should be that most consumers are in, or would like to be in, relationships. There is overwhelming evidence from diverse disciplines such as anthropology, sociology, and psychology to indicate that human beings are social animals (Homans, 1958; Thibault and Kelley, 1959). As such, consumers, being humans are genetically predisposed to forming relationships. They do it instinctively, even if taking such a step is sometimes tantamount to irrational behaviour. The point is that scholars should accept it as axiomatic that relationships exist in consumer markets. Gummesson's (1999, p.73) observation that relationships have always been "omni present" in the past and will continue to exist in the future, seems to echo similar thoughts. The author states that society, as indeed life itself, is a network of relationships and laments that marketers were slow to acknowledge this fact – had they acknowledged it earlier, RM would have made much greater headway than it has.

Although Bagozzi (1995) states that a marketing relationship may be an end in and of itself to certain consumers, he too expresses the need to explain the motives of customers for getting into a relationship. Instead of focusing on why consumers get into relationships, marketers should ask, "How do customers get into relationships with marketing entities?" This will bring into sharp relief the processes that come into play as relationships are formed. As Richard Bagozzi discusses in his personal correspondence with the second author, such a line of inquiry may also help us learn about how relationships should be forged. The "should" as Bagozzi amplifies in his letter, refers to the normative, ethical and moral criteria that people bring to bear when they decide to do something. It is our belief that answers to the revised research question will yield insights that could bring marketers closer to the elusive theory of RM in consumer markets.

To suggest a new theory is beyond the scope of this paper. However, since we are making a case for rephrasing the central research question, we feel it is incumbent upon us to offer some suggestions as to how might one develop an alternative line of inquiry in the area. One possible source that could inform RM theory development efforts is Oliver's (1997) theory on consumer loyalty. According to Oliver, consumers are satisfied when they sense that consumption has fulfilled a need or desire and when they acknowledge that the fulfillment was pleasurable. After a series of discrete pleasurable (and satisfying) transactions, a consumer crosses what maybe called the "loyalty threshold." Oliver defines satisfaction as pleasurable fulfillment. This reasoning is consistent with one of the viewpoints on satisfaction-loyalty literature, which considers satisfaction to be the beginning of the transitioning sequence that culminates in a separate loyalty state (also see Oliver, 1999).

Welcoming the recent trend of conceptualising loyalty primarily as a sociopsychological rather than a behavioural phenomenon, Saren and Tzokas (1998) advise marketers to cease artificially distinguishing between transactions and relationships, and instead start viewing every discrete transaction as a relationship opportunity. This is precisely the position we wish to take. Our suggestion is that only once a consumer reaches the loyalty state as envisaged in Oliver's (1997) theory, should a business claim to have forged a relationship with him or her. Such a conceptualisation of relationship shifts the onus on businesses to remain "loyal" to customers once relationships have been formed. Thus firms must continue to fulfill the promises that they make to customers (cf. Grönroos, 1990) during the initial "courtship" phase, failing which the loyalty process could reverse. The cumulative effect of discrete painful transactions and unfulfilled promises could potentially lead to termination of relationships.

It seems that loyalty literature has implications for RM in consumer markets that have not been adequately appreciated by marketers. Be the case as it may, one thing is abundantly clear, due to the unfortunate tendency on part of researchers to bring with them the heavy baggage of business-to-business markets, whatever little emphasis there is on consumer markets, is centered on constructs from social exchange theory, a theory that is of questionable relevance in consumer domain (O'Malley and Tynan, 2000). Even if scholars disagree with the central research question being suggested by us, they should analyse the implications of loyalty literature on relationships in consumer markets in greater detail than they have done hitherto.

To recapitulate, we have thus far argued that some of the ontological and epistemological assumptions about relationships in consumer markets found in the literature are questionable. We have also suggested that a constructivist stance might be compatible with a reality that is socially constructed. Given this perception of reality, we have stated that it might be more fruitful to discover how reality is constructed than it would be to focus on why reality is what it is. In the section that follows, we recommend adoption of a phenomenological approach to answer research questions about reality. As we discuss below, such an approach would be entirely consistent with the ontology of our position.

6. Advocating a Phenomenological Approach

The ontological assumption behind the epistemology of post-positivism and scientific realism is that reality is objective; the implication being that those who subscribe to these epistemological positions believe that reality can be "objectively" measured. This inevitably leads them to favour quantitative analyses. Constructivists, having reconciled to duality of meaning (the reference here is to indissolubility of objectivity and subjectivity in their world) are perhaps more comfortable with a reality that cannot be quantitatively measured. We hasten to add that this is not an attempt on our part to re-ignite the qualitative versus quantitative research debate. By no means does adoption of constructivist ontology make it incumbent upon a researcher to analyse data qualitatively. In this instance however, since the central research question asks marketers to discover processes through which relationships develop, there is sound reason to favour a qualitative approach.

Since relationships develop, they have a temporal dimension. The best that a quantitative approach can provide is a "pre" and "post" test measure to understand developments. But as Patton (1990) notes, pre and post-tests do not do justice to a dynamic development process. Such tests assume linearity in the process; in reality however any development, including that of relationships, occurs in fits and starts, some upward or forward movement may take place, and then there may be backsliding and consolidation. Under such circumstances, qualitative research can perhaps provide insights that quantitative research cannot. While there is obvious merit in exploring research questions from different perspectives, the efficacy of the adopted methodologies is often contingent upon the research puzzle. Clearly, the mandate of the central research question is to discover the relational phenomenon in depth. And a discovery-oriented project dictates the use of phenomenological interviewing (Thompson, Locander and Polio, 1989). A phenomenological approach falls under the overarching research tradition of interpretivism and is compatible with any school of thought that subscribes to socially constructed reality.

The basic philosophical assumption of phenomenology is that we can only know what we experience. While initially our experience may come from the sensory experience of a phenomenon, that experience must be later described, explicated, and interpreted (Husserl, 1962). According to Husserl, descriptions of experience and interpretations are so intertwined that they often become one: interpretation is essential to an understanding of an experience and the experience includes the interpretation. According to phenomenologists then, it is imperative that a researcher understand what people experience and how they interpret their world. They state that the only way a researcher can really know this is by experiencing the phenomenon in question herself or himself. Some scholars may object to the use of phenomenological inquiry in this instance by pointing out that it is impossible for a researcher to actually "experience" a relationship that a consumer might have experienced with a particular business. In response, we can do no better than quote Patton (1990, p. 70) who states (emphasis in original):

A phenomenological perspective can mean either or both (1) a focus on what people experience and how they interpret the world (in which case one can use interviews without actually experiencing the phenomenon oneself) or (2) a methodological mandate to actually experience the phenomenon being investigated (in which case participant observation would be necessary).

Phenomenological interviewing in the current context can help us understand how individual consumers perceive various offerings and overtures of sellers (see Pels, Coviello, and Brodie, 2000) and develop their own view about businesses. Researchers may for example, discover individual level differences in propensities to engage in relational behaviour. What strikes as "intimacy" to businesses may be construed as "intrusion" by some consumers (Smith and Higgins, 2000; p.84). As relationship formation processes come under the spotlight, a number of corollary questions may get generated: When do consumers become more amenable to forming relationships? What can be done to cajole those who are reticent about getting into relationships? What are the situational factors that undermine relationships? How do consumers react when they feel cheated? How is relationship terminated by either party? The last question is particularly important. One of the weaknesses in the literature appears to be the reluctance to acknowledge that relationships can be unpleasant and one-sided. Smith and Higgins (2000) attribute this reluctance to naïve humanism. They observe that the ideals of trust and mutuality are rarely achieved, yet relationships prevail – often in the face of individual selfishness, superficiality and self-indulgence. The point is that a researcher cannot hope to elicit high levels of self-disclosure needed to understand relationships without establishing personal rapport with respondents.

Though we have suggested that marketers look at loyalty literature as one possible source of explaining the relationship phenomenon in consumer domain, we note that the task of theory building would be better served if researchers were to undertake interviews with no a priori considerations. No mean task this, but for those researchers who do transcend – or temporarily suspend – their own worldview, the potential rewards can be attractive. Spielberg (1982, p.680) describes phenomenology as "a determined effort to undo the effect of habitual patterns of thought and to return to the pristine innocence of first seeing." It is surprising that scholars who have chosen to study relationships in the consumer domain have been less than enthusiastic in embracing a phenomenological approach. Valuable exceptions do exist (cf. Bagozzi and Dabholkar, 2001; Buttle, 1994; Fournier, 1998; Thompson, Locander and Pollio, 1989; also see Deighton and Kent, 1995) but these continue to be just those – exceptions.

7. Conclusion

We have argued that it should be taken as axiomatic that humans are predisposed to getting into relationships. Failure to do so may lead researchers to look for some non-existent all-encompassing objective truth that does not exist. To make our case, we scrutinised S&P's paper which is generally recognised as one of the seminal works in the area. We discussed that predilection with realism that adheres to a single reality – a reality that can be objectively measured – and instrumentalism that is based on a suspect axiom has the potential to hinder theory development in the current context. While we did not attempt to develop a new theory, we made a case for rephrasing the central research question so as to tap into a reality that is socially constructed. Thus, we suggested that it may be worthwhile to explore how consumers "construct" their own reality (i.e. how do consumers get into relationships). Given the rephrased question, adoption of a phenomenological approach was advocated.

As Czepiel (1990) observes, all exchanges involve a relationship. One might add that all relationships necessarily have at least two sides. We are perhaps guilty of having focused solely on the perspective of the consumers. As one of the reviewers of this article pointed out, "in relationship marketing consumer behaviour and organisational behaviour are enjoined dialectically as a base for sound enquiry." The central line of inquiry proposed by us can, and should, no doubt be pursued from both perspectives. Our failure to expound the organisational perspective should not be attributed to the ontology or epistemology of our position. A constructivist stance may preclude one from taking an organisational perspective, but the same cannot be said of a constructionist stance. We point out that the latter can accommodate collective generation of meaning as shaped by an organisation's social processes, culture, and norms (Crotty, 1998).

It would be remiss of us if we were to advocate social constructionism and constructivism at the expense of other positions. Indeed, reliance on a single paradigm has the potential to impose serious limitations for any marketing phenomenon (cf. Fournier and Yao, 1997; Mick and Buhl, 1992). We do not hold that findings from a constructivist approach would be incommensurable with other approaches. In fact, we agree with Doppelt (1978) who observes that rival scientific paradigms need not be insular, self-enclosed, and imprisoned within their own language. Since rival paradigms speak to the same empirical situation, they must share some common concepts, data, and problems. Once a theory has been built, it might help to test it within the framework of post-positivism or scientific realism, but to commence building theory we exhort the concerned scholarship to become more open to other ontological and epistemological positions.

References

Anderson, P. F., 1986. On method in consumer research: A critical relativist perspective. Journal of Consumer Research 139, 155-173.

Anderson, P. F., 1988a. Relativism revidivus: In defense of critical relativism. Journal of Consumer Research 15 (12), 403-406.

Anderson, P. F., 1988 b. Relative to what – that is the question. Journal of Consumer Research 15 (6), 133-137.

Bagozzi, R. P., 1995. Reflections on relationships marketing in consumer markets. Journal of the Academy of Marketing Science 23(4), 272-277.

Bagozzi, R. P., Dabholkar, P., 2001. Discursive psychology: An alternative conceptual foundation to means-end chain theory, psychology and marketing, 17, 535-586.

Boyd, R., 1991. On the current status in scientific realism. In: Boyd, R., Gasper, P., Trout, J.D. (Eds.), Philosophy of Science, MIT Press, Cambridge, MA, pp. 195-212

Brodie, R. J., Coviello, N. E., Brookes, R.W., Little, V., 1997. Towards a paradigm shift in marketing: An examination of current marketing practices. Journal of Marketing Management 13 (5), 383-406.

Buttle, F., 1994. The co-ordinated management of meaning: A case exemplar of new technology for consumer researchers. European Journal of Marketing 28(8/9), 76-100.

Chalmers, A. F. 1998. What is this thing called Science? University of Queensland Press, St. Lucia.

Coote, L., 1994. Implementation of relationship marketing in an accounting practice. In: Sheth, J.N., Parvatiyar, A. (Eds.), Relationship Marketing: Theory, Methods and Applications, Research Conference Proceedings, Emory University, Atlanta.

Crotty, M., 1998. The Foundations of Social Research: Meaning and Perspective in the Research Process. Allen and Unwin, Singapore.

Czepiel, J. A., 1990. Managing relationships with customers: A differentiating philosophy of marketing. In: Bowen, D.E., Chase, R.B., Cummings, T.G. (Eds.). Service Management Effectiveness: Balancing Strategy, Organization, Human Resources, Operation and Marketing, Jossey-Bass Publishers, San Francisco, pp. 299-323.

Deighton, J., Grayson, K., 1995. Marketing and seduction: Building exchange relationships by managing social consensus. Journal of Consumer Research, 21, 93-109.

Doppelt, G., 1978. Kuhn's epistemological realism, originally published in Inquiry, reprinted in: Krausz. M., Meiland, J. (Eds.), Relativism: Cognitive and Moral, 1982, Notre Dame University Press, IN, pp. 113-48.

Fournier, S., 1998. Consumer and their brands: Developing relationship theory in consumer research, Journal of Consumer Research, 24, (March), 343-373.

Fournier, S., Yao, J., 1997. Reviving brand loyalty: A reconceptualization within the framework of consumer-brand relationships. International Journal of Research in Marketing14 (12), 42-51.

Godfrey, P. C., Hill, C.W.L., 1995. The problem of unobservables in strategic management research. Strategic Management Journal 16(7), 519-533.

Grönroos, C., 1994. From marketing mix to relationship marketing: Towards a paradigm-shift in marketing. Asia-Australia Marketing Journal 2(1), 9-29.

Grönroos, C., 1990. Service Management and Marketing: Managing the Moments of Truth in Service Competition. Free Press/Lexington Books, Lexington, MA.

Gruen, T. W. 1995. The outcome set of relationship marketing in consumer markets, International Business Review 4(4), 447-469.

Gummesson, E., 1999. Total relationship marketing: Experimenting with a synthesis of research frontiers. Australasian Marketing Journal 2(1), 55-66.

Harker, M. J., 1999. Relationship marketing defined: An examination of current relationship marketing definitions.

Marketing Intelligence and Planning, 1(1), 13-20.

Harper Collins Dictionary of Philosophy, 1992. Angeles, P.A. (Ed). Second edition, Harper Collins, New York.

Homans, G., 1958. Social behavior as exchange. American Journal of Sociology 63, 597-606.

Hooker, C. A., 1985. Surface dazzle, ghostly depths: An exposition and critical evaluation of van Fraussen's vindication of empiricism against realism. In: Churchland, P.M., Hooker, C.A. (Eds.), Images of Science. The University of Chicago Press, Chicago, pp. 153-96

Hunt, S. D., 1990. Truth in marketing theory and research. Journal of Marketing 54(7), 1-15.

Hunt, S. D., 1991. Modern Marketing Theory: Critical Issues in Philosophy of Marketing Science. South-Western Publishing, Cincinnati, OH.

Hunt, S. D., 1992. For reason and realism in marketing. Journal of Marketing 56(2) 89-102.

Husserl, E., 1962. Ideas. George Allen and Unwin, London.

Mick, D. G., Claus, B., 1992. A meaning based model of advertising experiences. Journal of Consumer Research 19 (December), 317-38.

Möller, K., Halinen, A., 2000. Relationship marketing theory: Its roots and direction. Journal of Marketing Management 16, 29-54.

Nagel, E., 1979. The Structure of Science. Hackett Publishing, IN.

O'Malley, L., Tynan, C., 2000. Relationship marketing in consumer markets: Rhetoric or reality? European Journal of Marketing 34(7) 797-815.

Oliver, R. L., 1997. Satisfaction: A Behavioral Perspective on the Consumer. Irwin/McGraw Hill, New York.

Oliver, R. L., 1999. Whence consumer loyalty? Journal of Marketing 63 (Special issue), 33-44.

Patton, M.Q., 1990. Qualitative Evaluation and Research Methods. Sage: CA.

Pels, J., Coviello, N. E., Brodie, R. J., 2000. Integrating transactional and relational marketing exchange: A pluralistic perspective. Journal of Marketing Theory and Practice 18(3), 11-20.

Penguin's Dictionary of Philosophy, 1997. Mautner, T. (ed.), Penguin, Ringwood, Victoria.

Peter, J. P., 1992. Realism or relativism for marketing theory and research: A comment on Hunt's scientific realism. Journal of Marketing 56(4), 72-79.

Popper, K.R., 1969. Conjectures and Refutations. Routledge and Kegan Paul, London.

Saren, M. J., Tzokas, N.X., 1998. Some dangerous axioms of relationship marketing. Journal of Strategic Marketing 6, 187-196.

Shani, D., Chalasani, S., 1992. Exploiting niches using relationship marketing. Journal of Services Marketing 6 (Fall), 43-52.

Sheth, J. N., Parvatiyar, A., 1995. Relationship marketing in consumer markets: Antecedents and consequences. Journal of the Academy of Marketing Science 23(4), 255-271.

Siegel, H. 1988. Relativism for consumer research? Comments on Anderson. Journal of Consumer Research 15(6), 129-132.

Smith, W., Higgins, M., 2000. Reconsidering the relationship analogy. Journal of Marketing Management 16, 81-94.

Spielberg, H. 1982. The Phenomenological Movement: A Historical Introduction, 3rd Edition, The Hague, Martinus Nijhoff.

Thibault, J.W., Harold H. K., 1959. The Social Psychology of Groups. John Wiley, New York.

Thompson, C. J., Locander, W.B., Polio, H.R., 1989. The lived meaning of free choice: An existential-phenomenological description of everyday consumer experiences of contemporary married women. Journal of Consumer Research 21(December), 432-452.

Zinkhan, G. M., Hirscheim, R., 1992. Truth in marketing theory and research: An alternative perspective. Journal of Marketing 56(4), 80-88.

Biographies

Samir Shrivastava, MBA is a postgraduate fellow at Bond University (Qld, Australia) currently pursuing his Ph.D. in management. Prior to doing his MBA, he served in the Indian army as an infantry officer for over 11 years. His research interests include philosophy of science, strategic HRM, HR technology, competitive intelligence, and competency modeling.

Sudhir Kale, Ph.D., is Associate Professor (Marketing) at Bond University, Australia. His research in

international marketing, macromarketing, and distribution channels has been published in Journal of Marketing, Journal of Marketing Research, Journal of International Business Studies, Journal of Macromarketing, and International Marketing Review. Professor Kale also serves as a consultant to companies in IT, gaming, e-commerce, and the services sector. His current research revolves around spirituality, CRM, and applications of the Enneagram in marketing and management.

Correspondence Address

Samir Shrivastava, Postgraduate Fellow, Bond University, Gold Coast, QLD 4229. Telephone: +61 (7) 559 52204, Email: sshrivas@staff.bond.edu.au

International Brand Management and Strategy – The Case of I Nuovi Cosmetics

Thomas Tan Tsu Wee

Abstract

The objective of this case study was to examine the success of I Nuovi Cosmetics Singapore Pte Ltd (INC). INC utilized a very international approach in its operations, from the portrayal of I Nuovi as an international brand to the outsourcing of production overseas. To better understand its international operations, the USA and Japan markets are discussed in greater detail. Marketing strategy adaptations have been made in each country due to economic, cultural and legislation differences.

Keywords: International brand management, International marketing

Introduction

According to Interbrand's 2001 ranking of the most valuable global brands, less than one percent of them were from the Asia-Pacific, despite Asia’s representation of 56 percent of the world's population (Rosenkranz, 2001). Temporal (2000) believed that Asian companies face difficulties in building strong global brands because of powerful western brands and global consumers perceptions of low quality of Asian brands. Hence, branding should be a priority for Asian firms operating in both foreign and domestic markets.

The following case study introduces a Singapore-grown cosmetics brand, I Nuovi Cosmetics (INC), which has successfully established itself in the international cosmetics industry despite tough competition from key rival such as Estée Lauder, Shiseido and Loreal. Effective brand management required taking a long-term view. This necessitated proactive strategies designed to maintain and enhance customer based brand equity over time in the face of external changes in the marketing environment and internal changes in the firm's marketing goals and programs (Keller, 1998).

Company Background

I Nuovi Cosmetics Singapore Pte Ltd (INC) started operations in October 1996 with a relatively limited product range. INC was conceived from the start as a vibrant colour cosmetics brand that combines quality with an easy-to-use application approach, to fulfill the needs of modern women. The reasons for starting with colour cosmetics instead of skincare were compelling. Firstly, they were easier to sell compared to skincare as the latter require a larger degree of brand loyalty to induce purchases. Secondly, the price points were lower, making it easier to induce impulse purchases. It was only after INC had established its brand position in colour cosmetics, that it launched its skincare line, Active Skin Therapy (AST) in June 2001.

Today, INC is one of the preferred makeup choices for many industry professionals and celebrities worldwide. Its annual sales turnover worldwide was estimated to be S$10 million at 2001 and the total employment created was approximately 150 to 200, of which 70 were based in its Singapore head office and Malaysia regional office.

General Market Trends for Cosmetics in Singapore

The market for cosmetics and toiletries in Singapore stood at S$589.9 million in 2000, with a compound annual growth rate of 6.9 percent. Colour cosmetics accounted for the largest proportion of sales from 1996 to 2000. Lip and facial make-up products registered dynamic growth as women experiment with a bolder range of make-up variants and colours (Euromonitor 2001).

The Singapore cosmetics market was highly fragmented with the leading player, Estée Lauder, accounting for only 13.6 percent market share at the end of 2000 despite having five international brands under its wing in 2000 (Euromonitor, 2001). Other major brands included Shiseido and Loreal. It is unlikely that the share of any cosmetics company could be sustained in the long run due to the increasing number of new entrants.

Adopted Marketing Strategy in Singapore

Target Market

Gender, age and income level were the three main considerations used in INC's selection of target market in Singapore. INC's primary target customers for its colour cosmetics line were young women aged 20–24 years. Its target markets would be further enlarged to include male consumers in future with plans to launch its hair and body care product line.

Brand Elements and Image

Keller (1998) defined brand element as visual or verbal information that serves to identify and differentiate a product. The most common brand elements were brand names, logo, symbols, characters, packaging and slogans. One key issue was therefore the selection of a suitable brand name as this was related to branding strategy (Rooney, 1995). "I Nuovi" an Italian phrase meaning "The New" was an adept name for the cosmetics line as it was a new player in the cosmetics industry.

Being part of the fashion industry, customers would usually judge a new cosmetics brand based on its portrayed image. Bearing this in mind, INC designed its stores using various innovative concepts to deftly portray its brand philosophy. These design concepts were replicated in its overseas outlets to provide a consistent image worldwide. INC has successfully used white as a good contrast to its colour ranges. To complement this, all sales personnel are also dressed in white uniforms.

Another unique aspect of the design was the adoption of an open concept in its shop display and merchandising. All products were conspicuously displayed with testers and product information. The concept proved successful, as consumers were getting more sophisticated and preferred to browse around before getting assistance, though at that time it was considered a rarity in the industry.

Product

INC products were fragrance and animal-test free, with botanical extracts, anti-oxidants, sunscreens and vitamins added for enhanced beneficial effects, and to create a point of difference. Each product had undergone intensive research and stringent manufacturing control, with constant reviews to reflect the latest technology and trends.

The colour cosmetics line encompassed an entire line of customizable make up products for professional and amateurs. Eye-shadows, foundations and lipsticks were its fastest selling products. Professional services like makeover, eyebrow shaping and makeup classes were also offered. On the other hand, INC's skincare line, active skin therapy (AST), utilized a treatment philosophy based on cellular bio-enzymatic action to address skin problems widely prevalent in modern lifestyles.

Due to the wide range of products that suit every skin type and climate, there were no other adaptations apart from the labeling when the products were launched overseas. The packaging was designed in-house, taking portability and simplicity as key considerations. In addition, all INC products have to comply with the legislations set by the respective local authority before they can be sold in the country.

Pricing

INC adopted a competitive cum market-based pricing strategy in its Singapore market. Its prices were 15 to 20 percent lower than leading premium brands. Some examples of pricing of the colour cosmetics range from S$19.42-S$44.66 for foundation, S$19.32-S$21.84 for lip make up and S$15.05-S$21.84 for eye make up. The prices for AST products like skin cleansing gel were slightly higher. (The exchange rate was about US$1 to $1.70 Singapore dollar).

Being a relatively young brand, such a strategy was considered effective. The lack of credibility of a new brand would deter consumers spending if it was priced close to the established brands. Nonetheless, INC did not want to be perceived as a cheap pharmacy brand by using a price penetration strategy. Prices across the international markets were however subjected to cost plus considerations in order to cover transportation, logistics and freight costs.

Advertising and Promotions

In an increasingly competitive marketplace, greater emphasis was placed on brand image as the basis for consumer discrimination. Advertising has been used by many companies to develop their brand images but INC chose to rely more on editorial write-ups to build its credibility.

INC has a good reputation for holding launch shows for big fashion brands like Gucci and Levis. This has helped to promote INC as a professional makeup brand. In 2001, INC was the official makeup brand for Singapore Fashion Week, organized by the Singapore Tourist Board and Trade Development Board.

Sales promotions were considered essential in the industry and promotions such as Gift-with-Purchase, Purchase with Purchase or Special Buys Promotions were conducted 2-4 times annually in all markets to coincide with the launch of new season colours or the mid and year-end sales. Ad hoc promotions with credit card companies were also conducted to tap on their databases.

Loyalty Programs

INC has several membership programs in place to reward its loyal customers. With the VIP card scheme, members could obtain discounts on their purchases. At present, it has about 20,000 registered members in Singapore alone. It also has an international membership program that entitles members to online purchase discounts. Its new card scheme allowed for free gift redemption with stamps accumulated on AST purchases.

Distribution Channels

INC products were available through cosmetics counters in departmental stores and stand-alone boutiques. All Singapore outlets carried the complete product line. New products would be launched in Singapore first before they were launched overseas.

Besides counters in departmental stores, stand-alone boutiques were established to provide more management control, brand visibility and a sense of product exclusivity. The over-riding criteria for the selection of store locations were based on the volume of human traffic and the profile of shoppers. Today, INC has eight stores in Singapore, comprising four cosmetics counters and four stand-alone boutiques.

An online store was also created to reach out to its global customers, although it was started initially for building brand awareness. This establishment of this channel was congruent with INC's young target customers who were likely to be Internet savvy. INC started its official website - www.inuovi.com, in 1997, way ahead of many other retailers. This site was subsequently revamped in 2000 and was featured in The Straits Times in 2001 as a successful e-commerce website that exhibits sophistication, ease of navigation and quality of services (The Straits Times Singapore, 2001).

Personality and service orientation were seen as more important than experience in the selection of INC's sales personnel. Selected sales persons underwent two-week training, after which they were posted to an outlet for a three-month probation period. This stringent hiring process ensured that only quality service was offered to customers in order to maintain high-quality service standards.

Intellectual Property

INC production was outsourced to contract manufacturers in Japan, Italy, France, Switzerland and USA. As a form of legal protection against trade secrets infringements, secrecy contracts were signed with these manufacturers. INC management has no intention to outsource the manufacturing process to Asian countries (except Japan) due to potential country-of-origin effects.

Globalization and International Marketing

A global brand could be defined as one that is present in most world markets and has a universal appeal, same brand personality and values. With this in mind, the management decided that INC should expand globally. To date INC has operations in Malaysia (1998), Kuwait (1999), Japan (1999), Qatar (1999), U.S.A., (2000), Canada (2000), Hongkong (2000) and Taiwan (2001).

In 1998, the first opportunity to expand overseas arose in Malaysia. INC was approached by Isetan Kuala Lumpur, to set up a cosmetics counter there. The management of INC identified this as a good opportunity to bring INC out of Singapore, either through a distributor or a wholly owned office.

Distributorship was used as the main entry mode for INC's globalization efforts because distributors would have an established distribution network in their host country, thereby making market penetration faster and easier. They would also share responsibilities such as sourcing of locations and planning of marketing activities with INC. To ensure a smooth globalization process, INC set stringent criteria for the selection of distributors worldwide. Distributors for example must have a clear understanding of INC's image and products so as to enable them to conduct its marketing activities effectively and also have experience in the host country especially in the cosmetics industry. For most international markets, sales volume has grown steadily. To date, there has not been any exceptional change in sales volume in all international markets with the exception of Japan due to the recent economic crisis.

We now look in detail at two overseas markets - the

United States of America (USA) and Japan. The rationale for penetrating these markets was due to their comparable stages of economic development and large domestic markets that were crucial to INC's future growth.

The United States of America (USA)

Competitive Environment

INC management offered the USA distributorship to a company based in Los Angeles and allowed it to take on the name of INC Cosmetics Inc (INC Inc.). The primary reason for the choice of this company was due to its excellent relations with Hollywood, which would greatly boost publicity for INC. INC was officially launched there in February 2000 and currently has 31 outlets States-wide carrying its products.

Competition among cosmetics brands was fierce primarily due to the weakening brand loyalty among mass-market brands in America. The leading brands, including Revlon and Estée Lauder suffered from stagnant or declining share since 2000. Only relatively newer prestige brands such as MAC saw noticeable increases (Euromonitor, 2001). This provided opportunities for a niche brand like INC though its initial sales were disappointing.

The USA cosmetics industry was free to use ingredients that were known to be safe in the business and at concentrations deemed to be appropriate for cosmetic products as long as they follow certain guiding principles (Geffken, 2001). All cosmetics companies including INC must ensure that their products complied with the legislations set by the Food and Drug Administration (FDA) before they can be sold in the States.

The aggravated worldwide recession after September 2001 did not affect America as much as it affected Japan in terms of consumer confidence and spending. American women had low purchase frequency for cosmetics in the first place and many of them did not reduce or cut back on their purchases. As a psychological boost, many consumers found that after having scaling back on purchases of luxury items, they would spend on minor indulgences, like the purchase and use of cosmetics. Cosmetics, seen by many women as a high involvement product and relatively inexpensive, have become the items consumers splurge on. The retail sales turnover for INC in USA stood approximately at S$1.5 million from April 2000 to March 2001.

Marketing Strategy

A complete colour cosmetics line was carried in the USA while the AST line was only recently launched there. The price ranges for some of the products are as follows: US$15.50-US$35.00 for foundation, US$15.00-S$16.50 for lip make up and US$11.00-US$16.50 for eye make up.

The most significant distribution channels used in the USA were through departmental stores and specialty stores, which together accounted for 42 percent of all colour cosmetics sold in 2000 (Euromonitor, 2001). INC mainly distributed their products through departmental and specialty stores, with a minority of stand-alone boutiques. An example of departmental and specialty stores used was the Pure Beauty stores located in many cities in California. There were also channels using Internet online stores like ibeauty.com and wherehealthbegins.com and also mail orders but these were not as popular as the other mainstream channels for purchases. However, sales through Internet sites have been growing in the past 2 years.

Makeup artists and celebrities were crucial in helping INC to create brand awareness since it was a relatively unknown brand. INC's strategy in leveraging on makeup artistes and in tie-ups with celebrities allowed it to secure a foothold in the America market. Another means of promoting the brand was through sponsorship of artistes' makeup in movies and TV networks and in tie-ups with salons and fashion labels for cross selling purposes.

The profile of consumers using INC products in the States were that of young adults and middle aged women. As a rule, American women appeared to be less fashion conscious and not as well informed about makeup and fashion trends. They also tended to use cosmetics at an older age compared to Japanese women.

Japan

Competitive Environment

Nick & Shorn (N & S) was selected as INC's Japan distributor in June 1999 because they showed more interest in the distributorship and had previous experience in handling and selling of cosmetics products. Other cosmetics brands under N & S distributorship included Urban Decay. However, this brand has a smaller range and was thus deemed as complementary and not a threat to the INC brand. Today, INC distribution is concentrated in Tokyo-the trend-setting capital of Japan, with a total of 12 outlets.

Several adaptations of INC products were made before its entry into the market. A Japanese logo was specially created for use in official correspondences, posters and product packages. All new products' formulations were made available to N & S for its application for government licenses governing sales. As most Japanese did not understand English, training was conducted in Japanese for the office and sales personnel, who in turn trained their own workers.

New product launches in Japan were frequently delayed due to the stringent licensing legislations. However, effective from April 1, 2001, a sweeping three-year deregulation plan has amended the "Japanese Pharmaceutical Law" established in 1960. These amendments included the abolition of the pre-market licensing requirements and the establishment of new cosmetic standards intended to globalize trade by removing traditionally cumbersome barriers (Geffken, 2001). This quickened product diffusion for INC in Japan.

The market share held by the various cosmetics brands changed very little in 2000, due to market maturity and the tendency for Japanese women to stay loyal to the same brand. Shiseido had retained its number one position, with relatively new brands like Pieds Nus and Proudia making some inroads especially among the younger Japanese women. Thus, the challenge for N&S was to induce its target customers to switch to INC instead of continuing to use their own brands of cosmetics.

The target customers for INC brand were 3 to 4 years younger compared to those in America and Singapore as Japanese women tended to use cosmetics at a younger age. INC brand was also perceived as a low priced product due to comparably higher standard of living in Japan. It was also likely that due to INC affordability, the brand tended to attract a younger clientele.

Before the recent economic crisis, the Japanese market had been performing well in terms of sales of cosmetics and toiletry products. However, Japan today is facing its worst economic downturn to date as reflected by declining consumer confidence and sales. Japanese consumers were holding back their purchases in many areas of consumer goods including cosmetics. Fortunately for INC, its young consumers appeared to be less affected by the recession and have continued to spend on their favourite cosmetics brands. INC retail sales volume for April 2000 to March 2001 stood at about S$1.5 million.

Marketing Strategy

Presently, the full range of INC cosmetics is available in Japan. The prices for some of the products are as follows: ¥1,800-¥3,600 for foundation, ¥1,800-¥2,000 for lip make up and ¥1450-¥1950 for eyes make up. (The exchange rate was about US$1 to 118 Japanese yen).

N & S has five stand alone boutique stores even though they are a rarity in Japan due to their expensive rentals. The company had also set up INC cosmetics counters at departmental and specialty stores such as Nakachuu, Sephora and Blue Lagoon. There was even lesser use of Internet online stores in Japan compared to America as Japanese women appeared to resist buying cosmetics through virtual sites without physically viewing and trying them on.

The main advertising and promotional efforts in Japan revolved around editorial features and advertisements placed in magazines like Vogue, Classy and MISS. N & S also started a makeup school to conduct lessons using INC products. This had proved to be a successful promotional effort since students in this makeup school had to use the products, creating brand acceptance and sales.

The INC brand was viewed predominantly by both American and Japanese women as an innovative and niche market brand. In America, its prices were considered to be mid priced compared to Japan where it was viewed as a budget and entry level brand. The different perceptions were primarily due to the cost plus pricing strategy adopted by INC in both markets. Due to the higher standard of living in Japan and the extant prices of cosmetics brands, INC products were invariably seen as a low end brand. See Table I.

Future Plans and Outlook

Having established INC presence in some of the developed nations of the Asia Pacific and America, INC planned to enter the European market, which was seen as one of the most attractive market in the world. To prepare for this entry, INC will participate in the upcoming COSMOPROF tradeshow in Italy in 2003 with hopes to secure contacts of potential distributors in Europe.

China’s huge market base and current developments also present an opportunity for INC. However, INC is maintaining a reserved attitude towards this investment due to China’s burgeoning civil government, its bureaucratic and ever changing legislation and its ill defined and differentiated markets. INC management hopes that the bureaucracy, market and regulatory conditions would change with China’s recent entry into the World Trade Organization (WTO).

INC management viewed its future favorably due to its

Table 1:
Comparisons of Different Aspects of Marketing for United States of America and Japan

Different Aspects of Marketing	United States of America	Japan
Launch Period	Launched in February 2000. Exclusive distributorship with company with ties to Hollywood, Los Angeles.	Launched in June 1999 with non exclusive distributor carrying complementary niche brands.
No on Outlets/Stores	31 Statewide	12 mainly in Tokyo area.
Economic Situation	Effects of recession not so serious. Spending not so affected by recession. Plan to expand further into other cities.	Effects of recession more serious. Spending more affected by recession but less so for teenage and young markets which appear more free to spend. Expansion plans in Japan put on hold.
Legislative Environment	Liberal legislative environment for new product launches.	Stringent legislative environment for new product launches; however recent move to liberalize on legislations.
Product Life Cycle	Mature stage. Weak brand loyalty; customers more prone to experimentation; easier to break into market	Mature stage. Strong brand loyalty; customers less prone to experimentation; harder to break into market
Product Range	Line of colour cosmetics; just launched AST skin care brand.	Full line of of colour cosmetics and skin care products.
Brand Position	Aim to instill brand recognition; recognize low probability of immediate profit on short term. Niche player. Seen as mid price brands due to lower standard of living.	Aim to instill brand recognition; recognize low probability of immediate profit on short term. Niche player. Seen as lower price brand due to higher standard of living.
Brand Elements	No change to logo and no change to product information. Training done in English	Change to logo and change to product information. Training done in Japanese
Target markets	Mainly young to mid age adults. Groups not as well informed on fashion and cosmetics. Less disposed to spend on cosmetics. Use make up at a later age.	Mainly teenagers to young adults. Groups well informed on fashion and cosmetics. More disposed to spend on cosmetics. Tends to make up at a younger age.
Advertisement and Promotions	Mainly paid print advertisements. Publicity through editorials, magazines and make up artistes. Perform make up on stars and actresses/models as publicity.	Mainly paid print advertisements. Publicity through editorials, magazines and the running of make up school.

competitive advantages, which were its innovativeness, quality and trendy products and its flexible and nimble management style. With the increasing educational and income levels of countries worldwide, the demand for cosmetics was likely to increase, posing an opportunity for INC to step up its ventures overseas.

Management felt that while having stores everywhere was a symbol of international access, more important was the establishment of a strong and identifiable brand. With the exception of Japan, most Asian companies have not done enough to promote their brands outside their home country. In turbulent markets, brands equity remained the key to customer loyalty and long-term survival.

Lessons from this International Brand Management Case INC has achieved remarkable progress in its internationalization plan with effective market entry into two large and strategic markets. Revenues in both countries have increased, by some 10 percent in the USA and 15 percent in Japan in the 2001 /02 financial year and INC has for the first time registered a small net profit. With better brand recognition and association of quality and good value for money attributes, INC was poised to increase its penetration in these markets both in terms of market share and revenues. This case provides some key managerial implications and the lessons learnt as outlined below could well serve as a model for other companies wishing to take their brands overseas.

Environmental Factors

Environmental issues were of key concerns to marketers when looking at export designation potential of different countries. In Japan, the effects of the recession were more serious than in USA as reflected in spending on cosmetics but less so for the teenage and young markets which appeared to spend more freely. Nevertheless the effects of the recession has lead INC to delay its expansion plans in Japan. The legislative environment has also contributed its effects in Japan where the introductions of new product launches were often delayed due to the more stringent legislative requirements. However with the recent liberalization of import requirements, this would speed up INC’s product introductions in Japan.

Product Lifecycle and Loyalty

In terms of product lifecycle, both countries have reached the mature stage of the lifecycle for cosmetics. In USA, weak brand loyalty predominated with customers more use to experimentation with new brands whereas Japanese women tended to be more brand loyal. In Japan, the customers were mainly teenagers and young adults compared to USA where the average age of the customer was older. As a rule Japanese women were well informed on fashion and cosmetics, more so than American women and tended to make up at a younger age. They were also more disposed to spend on cosmetics but this was somewhat tampered by the effects of the recession.

Brand Awareness and Recognition

The aim of INC in both countries was to instill brand recognition as a niche player. The company wished first and foremost to increase brand awareness and recognition and realized there was a low probability of immediate profit. This was reflected in the cost plus pricing strategy that was adopted in both USA and Japan. In America the brand was seen as mid-priced brand whereas in Japan it was viewed as a budget and market entry brand due to the higher standard of living there.

Product Adaptation and Change

Several adaptations were made before entry into the Japanese market. A Japanese logo was specially created for use in all correspondences, posters and product packages. As most Japanese did not understand English, training was conducted mainly in Japanese. There was no change to the logo and product information in the United States and the training was conducted in English.

In both markets, colour cosmetics were introduced first as these products saw greater usage and were initially priced below the leading brands. Also, skin care products were considered more highly involved and carried a higher level of financial, physical and social risks. Hence they were introduced to the markets later after brand equity has already been achieved in the respective markets.

References

“Are you registered?”, Global Cosmetic Industry, New York, Vol. 169, Issue. 5 Oct. 2001.

“Back on track” in Soap, Perfumery & Cosmetics Asia, No. 20, March 2000.

“Colour Cosmetics-Major Market Profiles”, published by Euromonitor, September 2001.

“Colour Cosmetics in the USA”, published by Euromonitor, July 2001.

“Colour for the masses” in Soap, Perfumery, Cosmetics Asia, April 1997.Geffken, C., "Color Cosmetics- Market Background", published by Euromonitor, September 2001.

"Cosmetics and Toiletries in Singapore", published by Euromonitor, May 2001.

Geffken, C., "Are you registered?", Global Cosmetic Industry, New York, Vol. 169, Issue. 5 Oct. 2001.

Geffken, C., "Deregulation sweeps Japan", Global Cosmetic Industry, New York, Vol. 168, Issue. 3 March 2001.

Keller, K.L., (1998), Strategic Brand Management, building, measuring and managing brand equity, Prentice Hall, N.J.

"Intelligence on the Cosmetics Market in Japan" in Market Report, Vol. 3, August 2001.

"International Marketing - Selling the brand called Singapore", TDB Annual Report – Meeting Challenges of the Future Opportunities and Potential in the New Economy, 1999/2000.

Kanouse K. and Walker, S. (2000) "The Inadvertent Franchisor, Guiding You through the Legal Mazes", Boca Raton, Florida http://www.kanouse.com/tinaf.htm.

"Reasons To Be Cheerful" in Soap, Perfumery & Cosmetics, Vol. 72, No.11, November 1999.

Rosenkranz, E. (2001), "To Sum up", Asia-Inc, November, pp. 20-28.

Temporal, P. (2000), Branding in Asia – The Creation, Development and Management of Asian Brands for the Global Market, 1st edition, John Wiley & Sons (Asia) Pte Ltd,

The Straits Times, Singapore, "www.inuovi.com receives excellent commendation", 19th July 2001.

Biography

Thomas Tan Tsu Wee received his Ph.D. in sociology from the University of Virginia, USA. He was an Associate Professor at Nanyang Business School, Nanyang Technological University, Singapore and a deputy director of the MBA in Marketing Programme. Currently he is a Senior Teaching Fellow at the School of Marketing, Curtin University of Technology. He has published in Journal of Business Research (JBR), Journal of Brand Management JBM), Journal of Consumer Marketing (JCM) and Marketing Intelligence and Planning (MIP).

Correspondence Address

Thomas Tan Tsu Wee, Ph.D., Senior Teaching Fellow, School of Marketing, Curtin University of Technology, GPO Box U1987, Perth, Western Australia 6845. Telephone: +61 (8) 9266-1219, Facsimile: +61 (8) 92663937, Email: tant@cbs.curtin.edu.au