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A Research Model To Predict the User/Non-User Status of Green Power Electricity

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Abstract

In this paper, a research model and a list of hypotheses are developed to study the various factors affecting the choice between user and non-user status of green power electricity (GPE) in Australia. Factors to be examined in this study include ecological concern and behaviour, consumer values, perceived consumer effectiveness in dealing with environmental issues, subjective norms, consumer knowledge of GPE, willingness to pay premiums, and consumer demographics.

Key Words

Green marketing, green power electricity

Introduction

The increasing level of environmental damage caused by products, production processes and other business activities in recent years has made environmental protection a top priority around the world. As environmentalism has become a significant social issue over recent years, many consumers have recognized that their purchase behaviour has a direct impact on their fragile environment. This has led to an upward trend towards consumers' environmental concerns (Roberts and Bacon, 1997; Carlson et al., 1993), Giving significant momentum to Green Marketing (GM). GM is described as an organisation's effort towards designing, promoting, pricing and distributing products that will not harm environment (Pride and Ferrell, 1993) and/or activities designed to satisfy human needs and wants with minimum detrimental impact on the natural environment (Polonsky, 1994). Increasingly, products are differentiated based on their environmentally friendly attributes, including using recycled paper and biodegradable packaging materials, organically grown foods and sustainable-harvested timber, etc.

Among the growing list of environmentally friendly products is Green Power Electricity (GPE). GPE is the electricity produced from renewable natural resources, including sun rays (solar power), wind, tidal waves, bio-mass and geo-thermal energy. These resources are not only renewable but are also non-polluting and hence environment friendly. GPE has the socially desirable characteristics because it is the electricity that is environmentally preferable by virtue of renewable energy resources used to produce it (Swezey and Bird, 2000). Growing evidence suggests that some consumers will make their purchase decisions for electrical power supply based on its environmental characteristics (Wiser R, 1998). Green Power marketers target such consumers under the assumption that they will pay premium for environmentally preferable, but expensive, Green Electricity product.

GPE differs from the conventional green products, however, in that it is a notional product. It is notional because electricity, which is flow of electrons, is identical whether produced from conventional environment damaging sources such as coal, oil and gas, etc. or from environment friendly renewable sources. All the electricity produced from renewable sources is fed into a large pool, which consists of electricity produced predominantly from conventional sources. Once a part of the pool, the

electricity is distributed as a bundled product along common wires. This flow of electrons can neither be labelled separately nor be sampled and analysed to ascertain its generating source. Thus, consumers purchasing GPE cannot be assured exclusive delivery of electricity produced only from renewable sources. At the point of consumption, the functional and utility value of GPE is identical to the conventional electricity; and any differentiation that exists is purely notional. Furthermore, the cost of producing GPE is higher than that of conventional electricity due to the infancy of the technology using renewable resources. This additional cost of GPE is recovered from consumers through price premiums. Thus, GPE consumers pay a premium for a product for which delivery cannot be exclusively guaranteed.

In spite of this anomaly, many consumers are signing up to the “Green Option” promoted by many electricity retail organisations (Farhar, 1999; Wiser, 1998;). Why do people purchase a notional product, such as GPE? What are the main characteristics of these customers? Bearing strategic importance for GPE providers, the answers to these questions may form the basis of the marketing strategies of GPE. The current study tries to find the answers to above questions by constructing a research model in order to predict the user or non-user status of GPE.

Literature Review

The nature of consumer behaviour is social and complex, often irrational and sometimes unpredictable. It is influenced by cultural, social, personal and psychological factors (Kotler, 1994). People buy products not only for what the products can do but also for what they mean to the purchaser. Thus, emotional rather than utilitarian criteria frequently dictate their purchase decisions (Assael, 1995). Social factors also play an important role in consumer decision-making process for products related to the environment. Such a decision-making process takes into cognisance not only benefits for the individual consumption but for the society in general. Thus, the phenomenon of purchasing environmentally friendly product appears to be intricate as it involves social, emotional as well as utilitarian values. Consumers purchase decision towards GPE would certainly be more complex.

Since early seventies, researchers have tried to identify the characteristics of socially conscious consumers both on the basis of their demographic and psychographic characteristics, based on the Behaviour-Intention (B-I) model. Specifically, the constructs of attitudes towards environment played a significant role in those studies. Kassarijian (1971) concluded that the only way to segment the market for low polluting gasoline was on the basis of attitude toward air pollution. Anderson and Cunningham (1972) concluded that socio-psychological factors were more sensitive discriminators of social consciousness. Webster (1975) confirmed the findings of Anderson and Cunningham by developing the social involvement model, although the relationship between the social responsibility scale and the behavioural measures developed in the study was not found to be strong. Samdahl and Roertson (1989), in their attempt to study influence of political ideology on environmental concern, found the demographic characteristics to be inadequate in explaining environmentally conscious behaviour. The debate about the relative importance of demographic and psychographic variables in explaining environment friendly behaviour continues. However, as more recent studies (Straughan and Roberts, 1999; Laroche et al 2001) indicate, the results remain inconclusive.

Various studies undertaken so far, to understand consumer behaviour for green products, are product specific (Follows and Jobber, 2000; Vlosky et al., 1999; Wiser, 1998). While there are indications of common characteristics among green consumers, any generalisation of such results to other green products should be done carefully. For example, a consumer involved in recycling activities may exhibit characteristics quite different from those exhibited by purchasers of a green product (Pickett et al., 1993). Similarly, consumers who buy recycled paper may not buy other environmentally friendly products. Thus, while some product specific characteristics do exist among consumers, the characteristics for various environmentally friendly products may be common only to a limited extent. So far, no published studies have examined systematically the specific characteristics of GPE consumers using B-I models. Their lack is evidence of need for studies such as this one.

1. Ecological Concern

The results of several studies indicate that the level of an individual consumer's ecological concern is an important factor to determine his/her involvement as a user or non-user of green products. Banerjee and McKeage (1994) found that those who believe that the current environment conditions are deteriorating, and represent serious problems facing security of the world, are more likely to be green consumers. Laroche et al (2001) discovered that consumers with a higher level of acknowledgement of the severity of ecological problems are willing to pay higher price for green products such as plastic utensils and styrofoam cups as well as recycling programs. Acknowledgement of the severity of ecological problems appears to be the precursor for perceiving the importance of environmentally friendly behaviour. Chan (1999) showed that knowledge of ecological issues is a significant predictor of environmentally friendly behaviour. Chan and Lau (2000) explored the antecedents of green purchases, and concluded that ecological knowledge is an important antecedent in determining consumers' green purchase intention as well as their actual green purchases. These findings suggest that if consumers acknowledge the severity of ecological problems and perceive the importance of behaving in environmentally friendly manner, then they are more likely to purchase green products, such as GPE.

2. Ecological Conscious Consumer Behaviour

Research in the field of environmental studies have examined the correlation between an individual's environmental concern and their environmentally friendly behaviour, and have found a positive and significant correlation between the two (Roberts and Bacon, 1997; Roberts, 1996; Kinnear et al, 1974). A study by Schlegelmilch et al (1996) found a strong link between variables specific to environmental consciousness and pro-environmental purchasing behaviour for products such as environmentally friendly detergents, aerosols and paper products. This indicates that individuals, who are conscious and concerned about the environment, engage themselves in environmentally friendly behaviour. Suchard and Polonsky (1991) stipulate that ecologically conscious consumers will try to protect the environment in various ways by performing such activities as purchasing green products, engaging in recycling activities, favouring packaging made of recycled materials, etc. Straughan and Roberts (1999) in their study of environmentally friendly behaviour found that an environmentally friendly attitude is a precursor to environmentally friendly behaviour. Thus, if a consumer is already consciously engaged in environmentally friendly behaviour, s/he has positive attitude towards protecting the environment. The same

positive attitude towards the environment is also likely to result in his/her possible use of GPE, as GPE protects the environment. Hence, it is proposed that an environmentally conscious consumer, who is already involved in environmentally friendly activity, is more likely to be a user of GPE.

3. Consumer Values

Triandis (1993) and McCarty and Shrum (1994) explored the values of individualism and collectivism, and suggested that collectivist people tend to be friendlier to the environment. The pro-social domain of the collective values consists of values that reflect the extent to which they motivate people to transcend selfish concerns and promote the welfare of others and of nature. This was re-named by Schwartz (1992) as “self-transcendence”, which includes values reflecting benevolence, concern for welfare of people with whom one is in frequent personal contact, and universalism, encompassing a broader concern for all people and nature. Thus, a person with high self-transcendent values is more likely to be concerned about protecting the environment. A study by Follows and Jobber (2000) of environmentally responsible purchasing behaviour found a positive relation between self-transcendence and the likelihood of purchasing environmentally responsible products such as disposable diapers. Since the use of GPE benefits society in general, self-transcendent values would play an important role in its consumption. It is therefore proposed that a relationship exists between consumers with pro-social values and their likelihood of opting for GPE.

Another part of collective values is the restrictive conformity domain, which reflects values related to conscious conformity to social expectations. Schwartz (1992) labeled this as “conservation” to reflect a need for status quo. These values belong to people who would maintain status quo and not like to complicate their lives by trying new innovations. Follows and Jobber (2000) found that consumers with high conservation values had a less positive attitude towards environment and were less likely to purchase environmentally responsible products. These findings can be extended for GPE as well. Consumers with high conservative values would be less likely to abandon the use of conventional electricity for something new such as GPE.

Schwartz (1992) also re-named individualist values from the collective-individual dichotomy as “self-enhancement” to reflect values that motivate people to enhance their own personal interests. He created domains of hedonism (reflecting pleasure or sensuous gratification of oneself), achievement and power to be included in self-enhancement. Using these domains in their study, Follows and Jobber (2000) found that those who hold stronger self-enhancement values are likely to purchase a product with the lowest individual consequences, even if it is an environmentally non-responsible product. Such consumers seek products that are beneficial to themselves irrespective of their social implications. Findings of studies by Triandis (1993) and by McCarty and Shrum (1994) have strengthened the argument that individualistic people tend to be less friendly to the environment. As the use of GPE involves increasing individual consequences in terms of paying higher prices without receiving any additional functional benefits from it, individuals holding higher self-enhancement values are less likely to be users of GPE.

4. Perceived Consumer Effectiveness

Another factor influencing a consumer's involvement in purchasing and using green products is his/her perceived effectiveness in helping to solve environmental problems. Samdahl and Robertson (1989) studied the determinants of environmental concerns using a construct of "Pro-regulatory liberalism"; and they found that the perception of environmental problems significantly predicted support for environmental regulations. This suggests that consumers expect intervention by regulatory bodies to deal with environmental problems. Roberts' (1996) study similarly concludes that perceived consumer effectiveness is one of the strongest predictors of ecologically conscious consumer behaviour. That is, if a consumer thinks that s/he can play a role in reducing environmental problems, environmentally conscious behaviour is very likely. Laroché et al (2001) studied consumers who believed that it was governments' and corporations' responsibility and not individuals', to solve ecological problems, finding that such consumers were not willing to pay more for green products. That study however, does not examine the influence of price premiums on behaviour towards environmentally friendly products with such consumer groups. As there is no additional advantage to a consumer in terms of functionality, between GPE and electricity produced from conventional sources, those consumers who strongly believe that they are less influential in protecting the environment, and that it is government/corporations' not individuals' responsibility to solve ecological problems, are less likely to be GPE users.

5. Subjective Norms

Subjective norms relate to an individual's perception of an important referent's (e.g. friend or family member) evaluation of his/her behaviour and the person's motivation to behave as per these evaluations. An individual is often influenced by expectations of his/her reference group. According to Fishbein and Ajzen (1975), as subjective norms become more favourable, a person's intention to perform a behaviour increases. In another study, Ajzen and Fishbein (1980) point out that for co-operative behaviours, normative considerations are more important than attitude considerations. Cordano and Frieze (2000) applied Ajzen's Theory of Planned Behaviour to understand the behavioural preferences of 295 environmental managers, and found a positive relationship between an environmental managers' assessment of subjective norms about environment regulation and their preference for implementing activities to reduce the source of pollution. Thus, if a person believes that his/her referent groups, such as family, friends, colleagues etc. expect him/her to contribute towards solving environmental problems by environmentally friendly behaviour (such as buying "green products"), s/he is more likely to be a user of such products. As adoption of GPE is for the benefit of the society in general, it is expected that normative influences should play an important role in the likelihood of a consumer being a user of GPE.

6. Consumer's Knowledge

Knowledge is recognized in consumer research as a characteristic that influences all phases in the decision process. Thus, product awareness is a critical factor in early adoption of a new product. Rogers (1995), in his study of the process of adoption of innovations found that adoption process begins with the awareness of a problem (need), and the knowledge of the existence of an innovation (product). Thus, if a consumer is aware of the existence of a product that possibly offers a solution to

his/her pressing problem, s/he is more likely to try the product after more knowledge about its functioning is acquired.

Consumers, who identify environmental degradation as a serious social problem and think that they need to do something about it, would be looking for various solutions. GPE is one such solution. On the basis of this argument, awareness of the existence of a product like GPE appears to be a precursor of its trial. However, it is suspected that general electricity consumers do not have the knowledge of GPE in terms of its availability from their retail electricity suppliers, or of its ability to solve environmental problem. This view is supported by conclusions from Farhar's (1999) study of a consumer's willingness to pay a premium for renewable energy. Thus, electricity consumers who exhibit a higher level of environmental concern, and are knowledgeable about GPE, are most likely to be its users

7. Willingness to Pay Premium

Various studies have been undertaken to find out consumers' willingness to pay a premium for green products (Vlosky et al, 1999; Farhar, 1999; Wiser,1998). In their study of consumer behaviour for ecologically certified wood products Vlosky et al (1999) found that there is a positive relationship between environmental consciousness and a willingness to pay a price premium for such products. Farhar (1999) found out that no matter how the question was phrased in her research, average majority of 70% residential consumers in five Western/Southwestern states in the U.S.A. were willing to pay at least a premium of US\$5 per month for GPE. Hence, it is posited that the consumers who would be willing to pay a premium for GPE are more likely to be its actual users in future.

Some studies, however, have identified a gap between the stated willingness to pay a premium and the actual behaviour. This is because such studies are fraught with the problem of a "social desirability" bias in the responses. For example, Wiser (1998) found, while analysing participation in green electricity pricing surveys that only under 3% of residential customers actually joined the GPE programs, as against 40-70% who stated a willingness-to-pay a premium in the survey. In spite of this anomaly, it is important to ask the question of consumers' willingness-to-pay a premium for green products in general, and also the premium they are willing to pay for a specific product like GPE. As mentioned in the Behaviour-Intention models, this willingness (intention) is posited to be the antecedent of behaviour (purchasing GPE at premium). True indication of the actual behaviour can possibly be obtained by conservatively discounting the collected data.

8. Consumer Demographics

Many researchers have studied the association between the demographic characteristics of consumers, their ecologically conscious attitudes and/or their behaviour towards the purchase of green products. Age has been explored by a number of researchers (e.g. Roberts and Bacon, 1997; Roberts, 1995; 1996; Kinnear et al, 1974; Anderson and Cunningham, 1972) and, as with some other demographic variables, the findings are equivocal. Although some have found the relationship between age and the attitude towards the environment to be significantly and negatively correlated (Zimmer et al., 1994; and Anderson et al., 1974), some others have found the relationship to be significant and positively correlated (Roberts, 1996;

Samdahl and Robertson, 1989) However, the general finding is that younger individuals are likely to be more sensitive to environmental issues (Roberts and Bacon, 1997; Roberts, 1995; 1996; Kinnear et al, 1974; Anderson and Cunningham, 1972; Webster, 1975). The most common argument for this observation is that those who have grown up in a time period in which environmental concerns have been a salient issue at a certain level, are more likely to be sensitive to these issues (Straughan and Roberts, 1999). The growing environmental concerns of the last few decades have influenced the attitudes of younger people to behave in a more ecologically conscious manner. It is therefore expected that they would be early adopters of a green product like GPE.

Gender is another demographic variable examined in the relevant literature. Many researchers found that women are more likely than men to hold attitudes consistent with the green movement (Laroche, 2001; Straughan and Roberts, 1999; Banerjee and McKeage, 1994, Webster, 1975,). For example, Laroche et al (2001) found in their study that 57 percent of females would pay more for green products while this percentage is only 40 percent for males. A possible reason for this finding is that as a result of social development and sex role differences, women consider impact of their actions on others more carefully than males (Straughan and Roberts, 1999). These findings demonstrate that women are more likely than men to exhibit green product purchase behaviour. While gender's role in the purchase decision of buying GPE has not been fully investigated, it is expected that, as with other green products, females are also more likely to opt for GPE.

Income is another variable widely researched in green marketing for its effect on green issues. Numerous studies have addressed the role of income as a predictor of ecologically conscious consumer behaviour (ECCB) (Roberts and Bacon, 1997; Roberts, 1995; 1996; Zimmer et al, 1994; Kinnear et al, 1974; Anderson and Cunningham, 1972). Results of several studies examining this relationship are mixed. Anderson and Cunningham (1972) found annual family income was uniformly poor as a discriminator of social responsibility. Kinnear et al. (1974) and Zimmer et al. (1994) have shown a positive relationship between family income and environment attitudes and behaviours, while Kassarian (1971) found non-significant direct effect of income on environmental awareness. The most common justification for positive relationship between income and environmental sensitivity is that individuals can, at higher income levels, bear the marginal increase in costs associated with supporting green causes and favouring green product offerings (Straughan and Roberts, 1999). As GPE is more expensive than conventional electricity, it is expected that household income and its user status would be positively related.

Many studies have also shown a positive correlation between education and environmental concerns and environment friendly behaviour (Roberts, 1996; Zimmer et al. 1994; Aaker and Bagozzi, 1982; Murphy et al., 1978). Although findings of most of the above studies have shown a positive relationship between the two factors, Samdahl and Robertson (1989) discovered that education was negatively correlated with environment attitudes, while Kinnear et al. (1974) found no significant relationship. In a study of ecologically conscious consumer behaviour (ECCB), Straughan and Roberts (1999) found a significant positive relationship between academic classification (used as a proxy of education) and ECCB. A possible justification for education to be positively correlated to ECCB is that educated members tend to have more sensitivity to social problems. In view of the contradictory

results of these studies, it is proposed to explore the relationship between education level and user status of GPE.

Research Model and Research Hypotheses

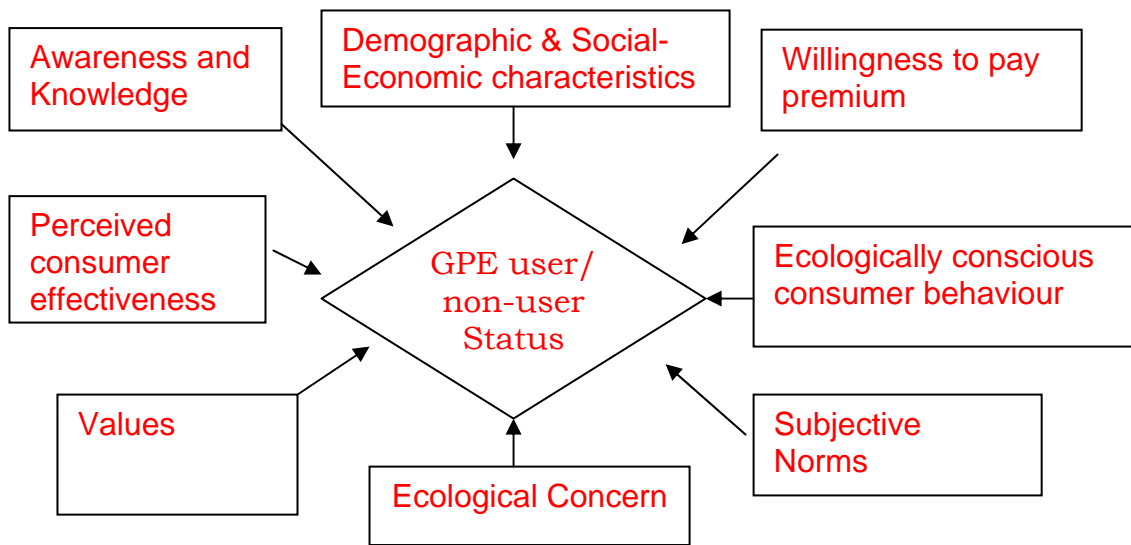
The above discussion highlights the point that consumer behaviour for green products is not yet fully understood. Contradictory results among numerous studies makes one wonder how to segment the market for green products. Further, consumer characteristics appear to be very product specific and difficult to generalize. These complexities, which are due to an individual's emotional involvement in the decision making process for a green product, can be understood through B-I models that use the hierarchy of values-attitudes-intention and purchasing behaviour. The literature reports that values can influence behaviours. However, they do so indirectly through attitudes; and hence constructs of values and attitudes have been used in gaining insights into the consumer mind (Cordano and Frieze, 2000; Follows and Jobber, 2000; Schwarz and Bilsky, 1987; Ajzen and Fishbein 1980).

In particular, an individual's belief systems and attitude towards society in general are found to be a pre-cursor to environmentally friendly behavioural studies (Follows and Jobber, 2000; Laroche et al, 2001). Both these studies, however, did not include the construct of "Subjective Norms" as proposed by Ajzen (1988). In view of findings by Ajzen and Fishbein (1980) that, for co-operative behaviours, normative considerations play an important role, it can be argued that expectations of the referent groups can influence a decision process towards environment-friendly behaviour. Hence, it is essential to explore this missing construct in the study of consumer behaviour for green products.

While constructs from B-I model enable us to gain some insight into consumers' mind, constructs from the socio-demographic model possibly enable us to possibly identify the customer characteristics for market segmentation purposes. Laroche et al (2001) made an attempt to develop a conceptual model using constructs from B-I model as well as socio-demographic variables in their analysis of consumers' willingness to pay more for environmentally friendly product. However, they did not include the construct of subjective norms in their study. Their study also assumed that the customer was already aware about the existence of an environmentally friendly product, and explored the willingness to pay extra for it.

To date, there has been little published research effort applying constructs from the B-I model to understand consumer behaviour towards a notional product such as GPE. As such, the following research model for GPE is constructed (refer to **Figure 1** on the next page), which consists of constructs from B-I model, including subjective norms as well as constructs for socio-demographic variables. The model explores various constructs to predict user/non-user status of consumers of GPE. They cover consumers' psychographics, such as values and attitudes towards the environment in terms of ecological concern and subjective norms, their demographic and social-economic characteristics (i.e, age, gender, income and education, etc.), as well as the influence of prior engagement of environmentally friendly activity on the likelihood of being a user of GPE.

Figure 1: A Research Model on GPE User/Non-user Status



Research Hypotheses

Based on our review of the past literature on studies of green products, and on the proposed research model, a number of research hypotheses are proposed for this study. These hypotheses, together with the proposed measures, are included in **Table I** (please refer to the next page).

Methodology

Green Power programs started in Australia in 1997/98 with the intention of supplying the greater proportion of electricity produced from renewable resources. In spite of the Australian government's mandatory requirements to increase the proportion of green power in total electricity sales by retailers up to the year 2002, only 0.2% of the total sales were from renewable resources (Passey and Watt, 2002). In the past five years only 70,000 customers have taken up the option of green power, even though 14 accredited retailers serve 96% of the population of Australia. Passey and Watt (2000) report that the extra charge for green power is reported as the main impediment to its acceptance, whereas Bradbrook (2002) criticizes the green power schemes as flawed because they are not compulsory and they do not extend to remote areas.

This low rate of acceptance of GPE may be improved by identifying the various psychographic and demographic characteristics of its consumers and actively promoting GPE to those consumers with similar characteristics.

The proposed study will be conducted in two stages. The first stage will be a pilot study, during which in-depth interviews will be conducted with a sample of current users and non-users of GPE. This is to validate the measures to be used in the various constructs as outlined in the proposed research model. In the second stage, a large-scaled survey will be utilized, using a structured questionnaire constructed based on the results of the in-depth interviews in stage one. The survey will be mailed

Table 1. Research Hypotheses and Measures

Research Hypotheses	Measures
H1: <i>A consumer is more likely to be a GPE user, the more s/he is concerned about the environment</i>	Environmental Concern (12 items, 5-point scale: 5=strongly agree, 1=strongly disagree); Adapted, based on Straughan and Roberts (1999)
H2: <i>A consumer is more likely to be a GPE user, the more s/he is engaged in ecologically conscious behaviour</i>	Ecologically Conscious Behaviour 22 items, 5-point scale: 5=Always True, 1= Never True) Adapted, based on Straughan and Roberts (1999)
H3: <i>A consumer is more likely to be a GPE user, the higher s/he is placed on the self-transcendence scale.</i>	Self-transcendence Scale (4 items, 7-point scale: 7= Extremely Important, 1=Extremely Unimportant); Adopted from Follows and Jobber (2000)
H4: <i>A consumer is less likely to be a GPE user, the higher s/he is placed on the conservation scale.</i>	Conservation Scale (3 items, 7-point scale: 7= Extremely Important, 1=Extremely Unimportant); Adopted from Follows and Jobber (2000)
H5: <i>A consumer is less likely to be a GPE user, the stronger self-enhancement values s/he holds.</i>	Self-enhancement Scale (3 items, 7-point scale: 7= Extremely Important, 1=Extremely Unimportant); Adopted from Follows and Jobber (2000)
H6: <i>A consumer is less likely to be a GPE user, the less s/he thinks s/he can be effective in solving environmental problems.</i>	Perceived Consumer Effectiveness (4 items, 5-point scale: 5= Strongly Agree, 1 = Strongly Disagree) Straughan and Roberts (1999)
H7: <i>A consumer is more likely to be a GPE user, the more s/he thinks his/her referent groups expect him/her to do so.</i>	Subjective Norms (4 item, 5 point scale (5= Strongly Agree, 1 = Strongly Disagree) Adapted, based on Ajzen and Fishbein (1980)
H8: <i>A consumer who exhibits higher level of environmental concerns is more likely to be a GPE user, if s/he is aware of GPE's availability.</i>	Consumer Knowledge (Yes/ No)
H9: <i>A consumer is more likely to be a GPE user, the more s/he is willing to pay premium for it.</i>	Willingness-to-pay Premium (5 point scale, 5= Definitely Willing, 1 = Definitely Not Willing) Adapted, based on Farhar (1999)
H10a: GPE users are more likely to be younger than non-users.	Age (5 categories) based on Straughan and Roberts (1999)
H10b: GPE users are more likely to be female than non-users.	Gender (Male/Female) based on Straughan and Roberts (1999)
H10c: GPE users are more likely to be higher income-earners than non-users.	Family Income (ranging from \$30,000 to above \$100,000) Adapted, based on Straughan and Roberts (1999)
H10d: GPE users are more likely to have higher education level than non-users.	Educational Level (5 Categories) Adapted, based on Straughan and Roberts (1999)

to randomly selected users and non-users of GPE in the metropolitan and surrounding areas of Sydney, Australia. The targeted sample size will be at least 150 in either user or non-user group. Logistic regression model will be utilized to analyse the survey data and to test our research hypotheses.

Limitations

Firstly, the research model and the hypotheses developed within this paper requires empirical testing before any conclusions can be drawn. Secondly, as mentioned earlier, previous studies of purchase behaviours for green products are product specific. This study is no exception. Therefore, the application of our proposed research model to other green products must be handled with care. And thirdly, for practical reasons, the proposed survey sample will be drawn from a specific geographical region in Australia. Here again, due care needs to be taken when applying the results of this study to situations in other parts of Australia and in other countries.

Conclusion

Consumer behaviour for green products is still not clearly understood; and purchase behaviour for a notional product like GPE is even more complex. Some light can be shed on this complex behaviour by analysing the psychographic and demographic variables that play an important role in consumer purchase behaviour. Based on the findings of previous research of consumer behaviour for other green products, a modified conceptual model with psychographic and demographic variables for GPE is proposed with corresponding hypotheses. Through a comprehensive survey, profiles of users and non-users of GPE can be defined. In view of relatively slow growth of GPE in Australia, these profiles will be of great importance to electricity retail companies in promoting GPE by fine-tuning their marketing strategies. Thus this study will provide insight into the consumer's mind, not only for the academicians, to explore further the complexity of consumer behaviour, but also for managers operating in commercial world.

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