Analysis of Factors Influencing Green Consumption Behaviour, A Comparison of Pakistani and Canadian Consumers

Iffat Batool
Quaid-I-Azam School of Management Sciences, Quaid-i-Azam University, Islamabad

Muhammad Sajid Saeed*
Glasgow Business School, Glasgow Caledonian University, UK

Abstract
Rapid economic growth and technological innovations have fostered exploitation of natural resources, over consumption and environmental deterioration. Differences in knowledge, cultural aspects, social values and awareness among customers of developed and developing countries may have differential impact on their green consumption patterns. This study was aimed at comparing factors that influence consumption of green energy products within Pakistani and Canadian consumers. Quantitative methods were used to get data from consumers about how social values, environmental concern, functional value and long term orientation impact green energy product consumption within consumers of Canada and Pakistan. From each country, sample of 250 consumers was selected by applying convenience sampling technique. It was concluded that environmental concerns, social values, long term orientation and functional values have significant impact on green energy consumption within both countries. Functional values had highest impact on green energy consumption within Pakistani consumers. However, results revealed that environmental concerns and long term orientation have high influence on green energy consumption within Canadian consumers as compared to those in Pakistan. However, green advertisements had high moderating role to influence green product consumption within Canadian consumers as compared with those in Pakistan. It is proposed that policy makers and practitioners within Pakistan need to emphasise on creating awareness about long term planning and environmental concerns for boosting green energy adoption by consumers.

Keywords: Sustainability, green energy products, green marketing, sustainable consumption

1. Introduction
The concepts of sustainability and environmental concerns have been of great importance for researchers and practitioners in recent times. The natural environment has been facing sustainability and environmental issues emphasising customers to change their consumption patterns for sustainable prospects. In order to meet increasing energy requirements of growing population from more sustainable sources, new renewable and sustainable energy sources have been initiated by relevant institutes. Further, increasing awareness of environmental concerns and suitability issues has brought considerable shift in consumer behaviour from conventional to sustainable energy products. The current study has aimed to study changing consumer behaviour towards sustainable product to explore drivers that influence consumers to adopt sustainable product alternatives and also to study impact of green marketing on consumers’ intentions to adopt sustainable products.

Over the years, rapid economic growth and technological innovations have fostered exploitation of natural resources, over consumption and environmental deterioration. This has led to long list of environmental hazards such as global warming, ozone layer depletion, severe weather, and health hazards of environment. On Global Climate Risk Index, Pakistan has been ranked at 8th position (German Watch, 2016); suggesting that it is vulnerable to negative environmental changes in future. Consumption behaviours and patterns significantly contribute towards environmental degradation and instability (Biswas and Roy, 2014). In the past few years, consumer awareness towards healthy, sustainable and environment friendly products has increased leading to changing consumption behaviours.

OECD (2009) defined green products as the one that are without non-toxic materials, reusable, recyclable, hold environment friendly packaging, and leave low impact on natural environment. Over the last two decades, considerable research has been conducted to investigate consumer buying behaviour towards environment friendly or green and sustainable products. Lack of consumer awareness towards green products may lead to attitude-behaviour gap between their actual buying pattern and environmental concerns (Ohtomo and Hirose, 2007). Although extensive literature is available on consumer behaviour towards green products and environmental concerns with context of USA and Europe (Arkesteijn and Oerlemans, 2005; Boztepe, 2012), there has been considerable vacuity in literature within context of developing economies such as Pakistan. Consumer preferences towards green products may differ within developed and developing economies. To date, a few studies on cross cultural comparison of green product consumption have been conducted (e.g. Liobikienė et al 2016); however, still they are vague to demonstrate how and to what extent consumers in different cultures differ in their green consumption behaviour. Hence, it would be worthwhile to conduct comparison of consumer
consumption behaviour towards green products within two contrasting economies.

This study aimed at comparing factors that influence consumption of green products within Pakistani and Canadian consumers. Further objectives of study include exploring drivers that influence consumers to buy green products in Pakistan and Canada, to analyse moderating role of environmental advertising in association between environmental concerns and green product consumption within Pakistani and Canadian consumers and to propose policy implications to marketers for promoting consumption of green products in Pakistan.

2. Literature Review

The concept of social marketing has started back in 1970s by Kotler and Zaltman (1971) cited in Remedios (2013). Remedios (2013) cited definition of social marketing proposed by Kotler and Zaltman (1971) as the societal process that focuses on enabling consumers to fulfill their needs and wants by creating, offering, and exchanging values of products and services with others. The concept of societal marketing was further extended to sustainability and environmental concerns by marketers and researchers. Further, Kao and Tu (2015) also extended the idea that global consumer growth is aligned with the concept that consumers in developing countries are imitating the consumption patterns and behaviours of those in developed countries. Multiple theories have explained the changes in consumer behaviour from traditional consumption to sustainable consumption. This particular study focused on the Theory of Consumption Values for exploring the association between consumption values and green product consumption with moderating role of environmental concerns and sustainable consumption.

Sheth et al. (1991) cited in Kao and Tu (2015) developed the theory of consumption values that explained the idea that why and on what basis consumers aim to buy sustainable products. This theory was specifically applied to multiple product categories including durable and non-durable (Park & Rabolt, 2009; Williams & Soutar, 2009).

The theory of consumption values focused on three propositions for explaining the idea of sustainable consumption. First, consumption values have different role in determining consumption behaviour; second, the consumption values drive consumer behaviour, and third, all consumption values are independent (Biswas and Roy, 2015). In this regard, consumption decisions are influenced by five consumption values that have different role in determining buying decisions of sustainable products. This study applied three consumption values along with long term orientation to assess difference in consumption behaviour of developed and developing countries. These values are explained below:

- The social value represents the perceived utility of products or services that arises from their consumption in association with some particular social groups such as cultural, demographic and socioeconomic (Sheth et al., 1991). The social value also relate with the approval and self-image improvement of individuals when they consume certain products and services (Sweeney & Soutar, 2001) that influences their green consumer's behaviour (Finch, 2005; Biswas and Roy, 2015). Hence, it is proposed:
  
  \[ H1: \text{Social value has positive association with green product consumption} \]

- The functional value is the thing that predominantly causes the purchaser's decision. This value refers to the apparent utility of an item or service to achieve utilitarian or physical performance that outcomes from qualities, for example, durability, unwavering quality, and price value (Sheth et al., 1991 cited in Biswas and Roy, 2015). Lin and Huang (2012) find that a few customers think enough about environmental dilapidation that they will pay more for green or sustainable items. Moreover, a study by Bei and Simpson (1995) cited in Biswas and Roy (2015) affirms that shoppers consider the cost and quality when they purchase reused items. Researchers also confirmed that the functional value impacts the buying decisions of green items (Finch, 2005; Biswas and Roy, 2015). Hence, this study proposed:

  \[ H2: \text{Functional value positively relates with green product consumption} \]

- Environmental value concerns the generally stable ideas about the issues, for example, the unsustainable state that the earth is achieving, relationship amongst environment and sustainability. With expansion in defensive feeling towards the natural environment, shoppers change their consumption modes and become environmentally viable (Kilbourne and Pickett, 2008). Prior studies have found that those with higher NEP scores (New Environmental Paradigm) are destined to take part in environmentally sustainable conduct (Wang et al., 2013). Individual's feelings showed towards ecological protection and improvement of individual obligation will trigger green buying choices (Rex and Baumann, 2007; Nagar, 2015). This study proposed:

  \[ H3: \text{Environmental concerns are positively related with green product consumption} \]

Long term orientations foster logical concerns arranged towards future compensates, for example, persistence, rewards, and adapting to changing circumstances specifically. Bearden et al. (2006) further clarified that Long term orientations will impact people's level of moral qualities known as the degree to which one considers acknowledged standards of right and wrong in their choices. Voldnes et al. (2012) expressed that individualism and collectivism moderated the impact of trust and execution in long term orientations by researching buyer–supplier connections in global markets. However by and large there is an absence of studies where cultural
angles are incorporated into investigating green consumption behaviour. This study proposed:

**H4: Long term association positively is positively related with green product consumption**

Advertising is viewed as a business system planning to draw in customers to new or existing products and services and create positive passionate connection (Goodrum and Helen 1990). Baldwin (1993) cited saying that environmental ads are intended to shape a customer's values and make an interpretation of these values into the buy of green items'. On the off chance that 'green advertising messages claim' match with buyers' contemplations and speculation process, this will upgrade their state of mind toward buying expectations, brands, and brand choice (Ruiz and Sicilia 2004; Kao et al. 2011 Nagar, 2015). Different researchers recommended that purchasers look for pieces of information with regards to the environmentalism of item ranges: whether the organization has a natural corporate picture, the data on names, bundling decisions and post-consumption alternatives, for example, reusing (Biel and Grankvist 2010; Biswas and Roy, 2015). Be that as it may, research on how green advertising correspondences messages influence customer reactions is constrained. Bostro¨m and Klintman (2008) state that next to no is thought about what is viewed as essential in green advertising, and sentiment differs concerning decisively what buyers will react to in such commercials. In one of only a handful few studies that has taken a look at the issue, Biswas and Roy (2015) found that their little example of college undergraduate students will probably react to a commercial for a hypothetical laundry detergent that stressed green versus its cost-sparing values. Their findings proposed that green advertising bids may convey some weight over non-green offers. Phau and Ong (2007) found that their respondents had a more uplifting disposition to those labels which specified environmental product attribute as opposed to those which said a natural organization characteristic. As it were, customers reacted more positively to item related instead of brand-related messages on the labels. However, most related research is more focused with figuring out who reacts to such advertisements as opposed to the way of the product itself (e.g. Pickett-Baker and Ozaki 2008; Haytko and Matulich 2008).

This study proposed:

**H5: Environmental advertising moderates role between environmental concerns and green product consumption**

The proposed model for this study is below:

![Proposed Model](image)

3. **Methodology**

3.1 **Research Approach**

The researcher adhered to deductive approach to test the hypothesised association between social values, environmental concern, functional value, long term orientation and consumer’s green product consumption. The rationale of choosing this approach is to test prior propositions and models regarding green product consumption within contexts of Pakistan and Canada.

3.2 **Research Methods**

This study involved quantitative methods to get factual evidence of how social values, environmental concern,
functional value and long term orientation impacts consumer’s green product consumption. With quantitative methods, the researcher gathered data in numerical form that was tested statistically. The rationale of using quantitative methods is to get empirical evidence of comparison between green product consumption behaviour between Pakistani and Canadian consumers.

3.3 Data Collection
Both forms of data i.e. primary and secondary were included in this study. Secondary data from recent journal papers, research papers, conference papers, books and reports were collected.

Primary data was collected from individuals within Pakistan and Canada. Survey strategy was applied to reach target population for collecting data. The survey is suitable strategy to reach a huge population with a single questionnaire.

Close ended questionnaire using Likert scale was used for conducting survey. Basically, questionnaire was adapted from prior studies conducted on social values, environmental concern, functional value, long term orientation, environmental advertisement and their impacts consumer’s green product consumption. The questionnaire included two main parts where the first part aimed at getting personal information of participants whereas the second part focused on getting information regarding research variables.

3.4 Sample and Population
The target population of this research was composed of energy product customers within Canada and Pakistan. From both countries, sample subjects were selected for collecting primary data. From this population, a sample of 250 customers each country was chosen by applying convenience sampling technique that focuses on targeting only those research subjects who are easily accessible.

3.5 Data Analysis
Data was analysed by using statistical software Amos and SPSS. Multiple group moderation was run between Pakistani and Canadian consumers for assessing differences in moderation between two samples through AMOS software. Further, SPSS software was also applied for conducting Independence Test to measure the degree of change in consumption behaviour of Canadian and Pakistani consumers.

4. Results and Analysis
4.1 Demographics
Questionnaire was distributed among 500 participants within both countries. From this sample, total of 409 completely filled questionnaires from 205 Pakistani and 204 Canadian participants were received that composed 82% response rate. The demographic profile of respondents shows that 64% respondents were males whereas only 36% were females. The qualification profile of respondents shows that almost 60% respondents were post graduates, almost 33% were graduates, 3.7% were diploma holders, and 1.5% respondents were holding high school certificates and the rest of respondents had some other qualifications. The age profile of respondents shows that 41.3% respondents fell in age category of 31-40 years, 23% respondents fell in age bracket of 41-50 years, 20% respondents were below 20 years, and the rest of respondents were between 21-30 years of age. The Table 1 shows results of demographic profile of respondents.

<table>
<thead>
<tr>
<th>Demographical analysis</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<tr>
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<td></td>
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<tr>
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<td>Graduation</td>
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<tr>
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<td>Professional Diploma</td>
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<td>3.7</td>
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<tr>
<td>Others</td>
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<td>1.5</td>
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<tr>
<td>Age</td>
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<tr>
<td>Below 20 years</td>
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<td>21-30 Y</td>
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<td>50.1</td>
<td>50.1</td>
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<tr>
<td>Canadian</td>
<td>204</td>
<td>49.9</td>
<td>49.9</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 1: Demographical Descriptives
4.2 Results of Model
The table 2 represents the results of the model of the independent variables and dependent variable. The results revealed that overall model fitness is good. The results show that common measures of the model fitness are within the range. The value of χ²/df is 1.137 that is less than 3 with corresponding p-value of less than 0.05 whereas the values of GFI and AGFI are greater than 0.09 that indicate goodness of the model.

<table>
<thead>
<tr>
<th>Model</th>
<th>NPAR</th>
<th>CMIN</th>
<th>DF</th>
<th>P</th>
<th>CMIN/DF</th>
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<td>Saturated model</td>
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<tr>
<td>Independence model</td>
<td>4</td>
<td>54.263</td>
<td>6</td>
<td>.000</td>
<td>9.044</td>
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</table>

Table 2: Model Fit Summary

The figure 2 represents the results of path coefficients for independent and dependent variables. All the paths of the model are significant that validate the hypotheses of the study (as shown in figure 3) for Pakistani and Canadian consumers. Further, the residuals of the covariance are centred to zero identifying the significance of the model. This study indicated that the relationship between consumers’ environmental concerns and green product consumption is high (shown by path co-efficient value of 0.55). Additionally, there also exists strong relationship between functional value of products and green product consumption within consumers of both countries (regression co-efficient =0.52). However, a very strong relationship was found between long term orientation and green product consumption within consumers of both countries 9as indicated by higher regression co-efficient value of 0.63). This study also found positive but comparatively small relationship between social value and green product consumption behaviour (regression coefficient value=0.23). The figure 2 presents the path coefficients of independent variable with the dependent variable.

In order to assess the degree of moderation done by environmental advertisement on relationship between environmental concerns and green product consumption within Pakistani and Canadian consumers, multiple group analysis was conducted on AMOS. The figure 3 represents the moderating role of environmental advertisements on relationship between consumers’ environmental concerns and green product consumption within Pakistani consumers. The regression coefficient of relationship between environmental concern and green product consumption was higher (0.55) within Pakistani consumers whereas the regression coefficient of environmental advertisement with green consumption was bit low, still significant (0.27). However, the relationship between interaction (environmental advertisement and environmental concern) and green product consumption was significant with regression coefficient value of 0.35. This revealed that Pakistani consumers have positive green consumption behaviour when their environmental concerns are moderated by green advertisements.

The table 3 represents the regression weights between different paths of the moderated model within Pakistani consumers. It is clear that direct path between green consumption and environmental concern is significant (p-value is 0.00 that is <0.05), and so is true for direct path between green consumption and environmental advertisements (p-value is 0.20 that is below 0.05). Additionally, the indirect path between green consumption and environmental concern is also significant (p-value 0.033 that is less than 0.05). Hence, it is proved that Pakistani consumers are more likely to consume sustainable products when their environmental concerns are modified and enhanced by green advertisements. All significant paths demonstrate full mediation of green advertisements between environmental concerns and green product consumption within Pakistani consumers.
Table 3: Path analysis: Canadian consumers, Significant at p<0.05

The figure 4 represents the path analysis results between environmental concerns, environmental advertisements and green product consumption within Canadian consumers. The regression weights between environmental concerns and green consumption is highly significant (0.63) whereas the association between environmental advertisements and green consumption is also significant (regression coefficient (0.45). Furthermore, the regression coefficient between interaction (environmental concerns and environmental advertisements) and green consumption was also higher in Canadian consumers (0.53) as compared with Pakistani consumers (0.35). This reflects that green product consumption intentions of Canadian consumers are high as their environmental concerns are highly moderated by green advertisements.

Table 4: Path analysis: Pakistani consumers, Significant at p<0.05

For assessing the differences in green product consumption within Pakistani and Canadian consumers, Independent Sample test through Levene's Test for Equality of Variances was performed on SPSS. The table 5 represents results of the Independent Sample test. It is clear that green product consumption behaviour is significantly different between Pakistani and Canadian consumers as p-value is 0.003 that is below 0.05. Although social value, functional value, environmental concern, long term orientation and green advertisements impact on green product consumption behaviour of consumers in both countries, this study shows significant difference in green product consumption intentions within Canadian and Pakistani consumers. This could be because of different social values, long term orientations, environmental concerns and approach of green advertisements in both countries. Canada is a developed country where people have high long term orientation as compared to Pakistani people; as reflected by Hofstede’s (1935) cultural dimensions’ scores, so they are more likely to have positive attitude towards sustainable consumption. These results are also endorsed
by previous researchers who suggested that higher long term orientation is more likely to result in higher sustainable consumption (Nagar, 2015). Previous studies also support that sustainable consumption behaviour of consumers in developed and developing countries significantly differs considering different social, functional, and cultural factors (Biswas and Roy, 2015).

Levene's Test for Equality of Variances

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>Sig.</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>95% Confidence Interval of the Difference</th>
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<tr>
<td>GrenConsu</td>
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<td></td>
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<tr>
<td>Equal variances not assumed</td>
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<td>399.228</td>
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<td>399.228</td>
<td>.297</td>
<td>.0977</td>
<td>.105 .489</td>
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</table>

Table 5: Independent Samples Test

4.3 Discussions and Implications

In order to gain market competitiveness on long term basis, companies need to develop consumer knowledge and knowhow regarding sustainability issues and sustainable products. This could be done through development of eco-friendly products that are financially as well as environmentally sustainable. By doing this, marketers expect that consumers will respond to sustainable products and green advertisements in positive way. Although separate literature streams are available regarding analysis of green product consumption within developed and developed countries, there is still considerable literature gap regarding the comparison of green product consumption within developed and developing countries. Therefore, the current study attempted to evaluate differences between green product consumption behaviour within Pakistani and Canadian consumers in relation to consumption values and moderating role of green advertisements.

By applying consumption value theory, this study has proved positive association between consumption values, green advertisements and green consumption behaviour within Pakistani and Canadian consumers. Results of this particular study clearly demonstrate that green product consumption intentions of Pakistani and Canadian consumers differ significantly considering differences in social, functional, environmental concerns, long term orientation and green advertisement approaches in both countries. Specifically, full moderation of green advertisements with environmental concerns and green product consumption suggests that consumers respond positively to sustainable advertisements. When environmental concerns of consumers are boosted through green advertisements, they are more likely to respond positively to sustainable consumption. All hypothesis of the study are accepted as social value, functional value, environmental concerns, green advertisements and long term orientation have significant association with green product consumption within both countries. However, the results of Independence Test revealed significant differences in green consumption behaviour within Pakistani and Canadian consumers suggesting differences in values of consumers in both countries. These results are also endorsed by previous researchers who suggested that consumers in developed countries are more conscious about environment and sustainability (Biswas and Roy, 2015); hence they respond positively to sustainable consumption.

The results of this particular study have significant implications for policy makers, researchers and marketers who can boost consumer knowledge about sustainability issues for enhancing sustainable consumption. This study found that environmental advertisements moderate the relationship between environmental concerns and green product consumption. Marketers can start communication campaigns and education programs for enhancing consumer knowledge regarding sustainability issues and green consumption. Effective and attractive green advertisements by companies can largely enhance consumer knowledge and motivate their environmental concerns that largely influence them to adopt sustainable products. On the other hand, policy makers can launch different awareness campaigns in general public in Pakistan for enhancing knowledge of consumers regarding sustainable consumption.
5. Conclusion

This study attempted to elaborate evaluate factors contributing green consumption behaviour within Pakistani and Canadian consumers with moderating role of environmental advertisements and environmental concerns. For this purpose, questionnaire survey was conducted with general public within Pakistan and Canada. Results were analysed through AMOS and SPSS.

Results of this study concluded that Pakistani and Canadian consumers have different consumption patterns and behaviours, though both have positive intentions to buy sustainable products. Social value, functional value, and long term orientation of consumers have higher value towards sustainable consumption. Further, results also conclude that environmental advertisements fully moderate the relationship between environmental concerns and green product consumption within Pakistani and Canadian consumers. However, the extent of moderation was higher among Canadian consumers as compared to those of Pakistan. This study also concludes that green product consumption intentions of Canadian consumers are high as their environmental concerns are highly moderated by green advertisements. Considering the results of the study it is proposed that marketers and policy makers in Pakistan need to launch awareness campaigns regarding sustainable consumption and marketers should develop attractive green advertisements to boost sustainable consumption. The results of this study are limited on generalisability as small sample was chosen. Future researchers can extend the scope of this study by conducting the study on large scale and also by incorporating the theory of planned behaviour with theory of consumption values.

References


