

Effect of Green Marketing on Consumer Purchase Intentions With Regard to the Company's Image as a Mediator in the Retail Setting

Case study: The Customers of Naghshe-e Jahan Sugar Company

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Abstract

The current study investigated the effect of green marketing on consumer's intention to purchase by considering the corporate image as an intermedator in retail-sale environment. Three variables of social responsibility, product image and corporate reputation were studied as factors of the corporate image. The statistical population included citizens who were beyond 20 year old in Isfahan province and the data collected from two-hundred eighty four respondents. Researcher self-made questionnaire was used to collect the required data. First, thirty questionnaires were distributed and reliability of the tool was estimated 93% by calculating the Cronbach's alpha. Simple random sampling method was utilized. Data analysis was conducted using Amos and SPSS 19 software. The study was conducted using descriptive-field method. For data analysis in descriptive statistics section, standards such as frequency, percentage, mean and standard deviation and diagrams to describe the variables and questions of the questionnaire were applied. In inferential statistics section analysis of structural equations models and t-test were used to test the hypotheses. The results indicated that green marketing has a significant effect on social responsibility and product image. The effect of green marketing on corporate reputation is not significant and three factors of corporate image have a direct effect on intention to purchase. Given to indirect effects among the variables, green marketing has a significant effect on intention to purchase.

Familiarity with the effect of green marketing on customers' intention to purchase in Nagshe Jahan Sugar Company will be a good incentive for consumers to consider environmental aspects in their intention to purchase and decrease the negative effects of artificial products through using environment friendly products by considering the role of corporate image factors.

Key words: green marketing, corporate image, social responsibility, product image, corporate reputation, intention to purchase

Introduction

Given to movement of societies towards industrialization, increasing of dynamism and competition among the companies to take possession of the market, increased concern towards the environment, governmental and international rules and obligations, increased awareness of consumers, pressures of environment-friendly groups and so on have been led to firms' attention towards issues regarding environmental management. Thus, concepts such as green marketing have gradually affected the marketing literature and as a result environmental considerations are one of the most important activities of corporations and supporting the external environment is not voluntary; rather it is an important part of business process.

Also one of the major reasons of dealing with the green issue is related to the economy. As resources are limited and human's needs are unlimited it is important for marketers to consume resources efficiently and without deficiency in achieving the corporate purposes. So green marketing is a marketing strategy that helps marketers achieve this purpose and this type of marketing supports the environment by creating identifiable environmental advantages based on what the customer expects (Cheah & Phau, 2005). This becomes more important when inattention to a significant issue like the environment will not only be led to lack of economic development but also it will be resulted in many problems by industrialization of the society. As a result, all benefits obtained from an industrial activity in long-term will sometimes be used to compensate for the damage (Soleimani, 2010). Due to change of direction of consumers' purchasing models towards increasing intentions to purchase environment friendly products new opportunities have been created for green marketing and selling of environmental products. Using such opportunities requires more researches in this regard. The present study investigated the effect of green marketing on customer's intention to purchase by considering the corporate image as an mediator in retail-sale environment.

Green marketing

Unfortunately most people believe that green marketing refers exclusively to fostering or promoting the products with environmental features. Most consumers relate words such as without phosphate, recyclable and compatible with the ozone layer to green marketing. This is while these words are just signs of green marketing. Green marketing is generally a more extensive concept that can be executed in consumer and industrial goods or even services (Polonsky, 2001, p. 24). Green marketing is applied to the development and improvement of pricing, promotion and distribution of products that do not damage the environment (Pride & Ferrell, 1995).

Green marketing and green customer

Customers became interested in environmental issues more and more since the mid 1990's. Key customers converted into a strong force in green consumerism and demanded the companies to hold themselves responsible against the society and its problems (Pwattie, 2001, p. 187). At that time the term green customer was appeared. This term is defined in this way: A person who avoids products of factories which create so much pollution, products that endanger his/her health and others' health, products that damage the environment and so on (Schlegelmilch 1996, p. 37). Companies faced with a new challenge in production after green customer was proposed and they moved gradually towards green marketing. This term, i.e., green marketing refers to planning, development and promotion of goods or services which satisfy consumers' needs without a negative effect on the environment and by means of natural raw materials and saving the energy (Grant, 2008, p. 7). Charter and Polonsky have stated that green marketing is a marketing based on environmental performance of products. Discussion about green marketing was proposed for the first time in the 1990's (Lee, 2008, p. 577). Generally it contains the following issues:

- Development of goods that their production, application or withdrawal has less pollution and damage for the environment.
- Development of goods that have positive effects on the environment and environmental resources.
- Making a relation between purchasing of goods with situations which attract people's attention towards environmental issues (Hawkins et al., 2007).

Green purchase behavior

Consumers of the environment purchase goods and services that think they have a positive (or less negative) effect on the environment. Green purchase behavior includes trying to save energy consumption and avoiding purchasing of goods with unsuitable packaging (Robert James, 1996, p. 217). Some researchers like Chan (1996) have considered behaviors such as buying standard sprays and drinks in disintegrable dishes (Joonas, 2004, p. 27). Other cases include the products made by plastic and recyclable paper, low-consumption lamps and detergents containing recursive material to the nature (Mainieri et al., 1997, p. 189).

According to Bet (1993) green products are disintegrable and recyclable which have the lowest amount of packaging and are produced organically (Chaiyawat, 1998, p. 26). Other green behaviors include purchasing of products that have been made or packaged by recyclable materials and that of products in packaging which can be filled again (Minton & Rose, 1997, p. 37).

Green consumer

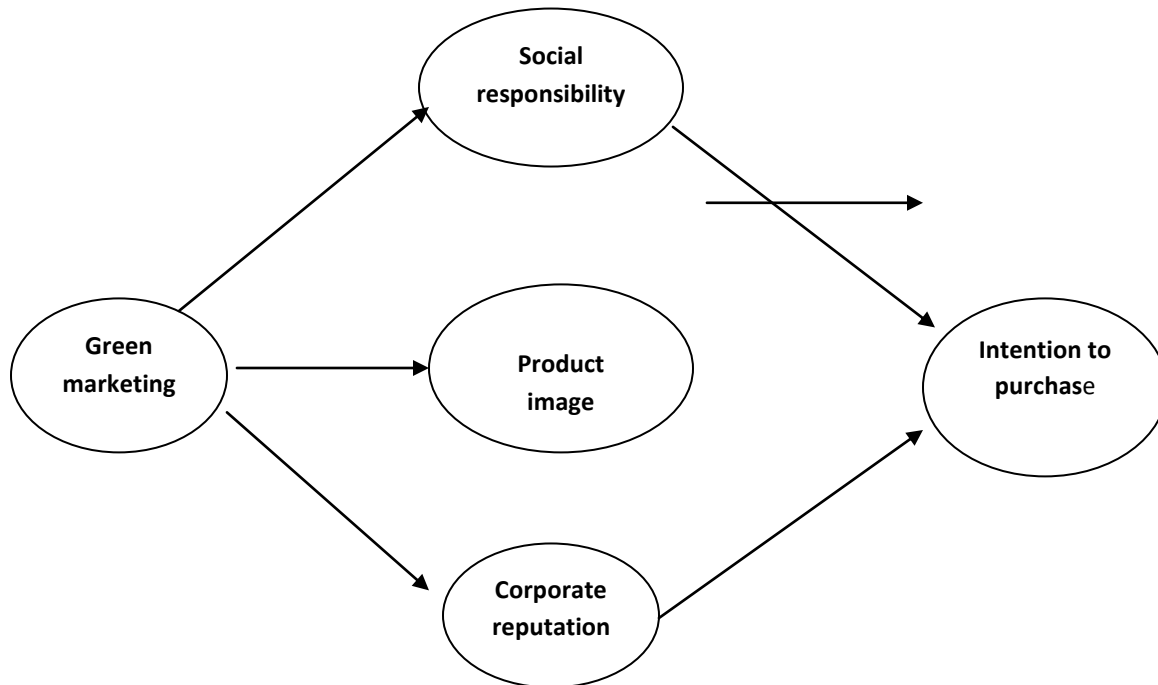
Although green consumers have been under study for about two decades but still there is no acceptable definition globally. Anyway, the studies related to green consumers have been conducted with various names like attentive consumers with regard to environmental issues; consumers who support the environment and consumers who are aware of the society (Chaiyawat, 1998, p. 29).

Green consumers view protection from themselves and their world through the perspective of their power of decision-makings for purchase. According to Shram, McCarty and Lowrey (1995) green consumers are those whose purchase behaviors are affected by their concerns

from the environment. Otman (1993) believes that green consumers look for products actively that are thought to have less destructive effect on the environment and the society (Chaiyawat, 1998, pp. 31-32).

Conceptual model of the survey

Figure 1-



Hypotheses

Primary hypothesis

Green marketing has a significant effect on consumer's intention to purchase in retail-sale environments given to the corporate image as an intermediary.

Secondary hypotheses

- 1- Green marketing has a significant effect on social responsibility of the corporation.
- 2- Green marketing has a significant effect on product image.
- 3- Green marketing has a significant effect on corporate reputation.
- 4- Social responsibility has a significant effect on intention to purchase.
- 5- Product image has a significant effect on intention to purchase.
- 6- Corporate reputation has a significant effect on intention to purchase.

Methodology

The present study was conducted using descriptive-field method. It was intended to investigate research purposes and problems given to the topic and studying the hypotheses by means of a questionnaire. The existing resources (books, articles, websites and organizational documents) were used to gather the research literature and theoretical issues. The statistical population included citizens who were beyond 20 year old in Isfahan province that were more than one million persons. Respondents were selected and sampled randomly. The sample size was estimated equal to 284 persons given to the estimated variance (0.1848) of the pilot

sample and then using Cochran formula (population size ∞), confidence level equal to 95% and standard error of estimation equal to $d= 0.05$. Therefore, 284 questionnaires were distributed through quota sampling method. To do this, Isfahan province was divided into five sections (center, north, south, east and west) and questionnaires were distributed randomly among the citizens who were beyond 20 year old.

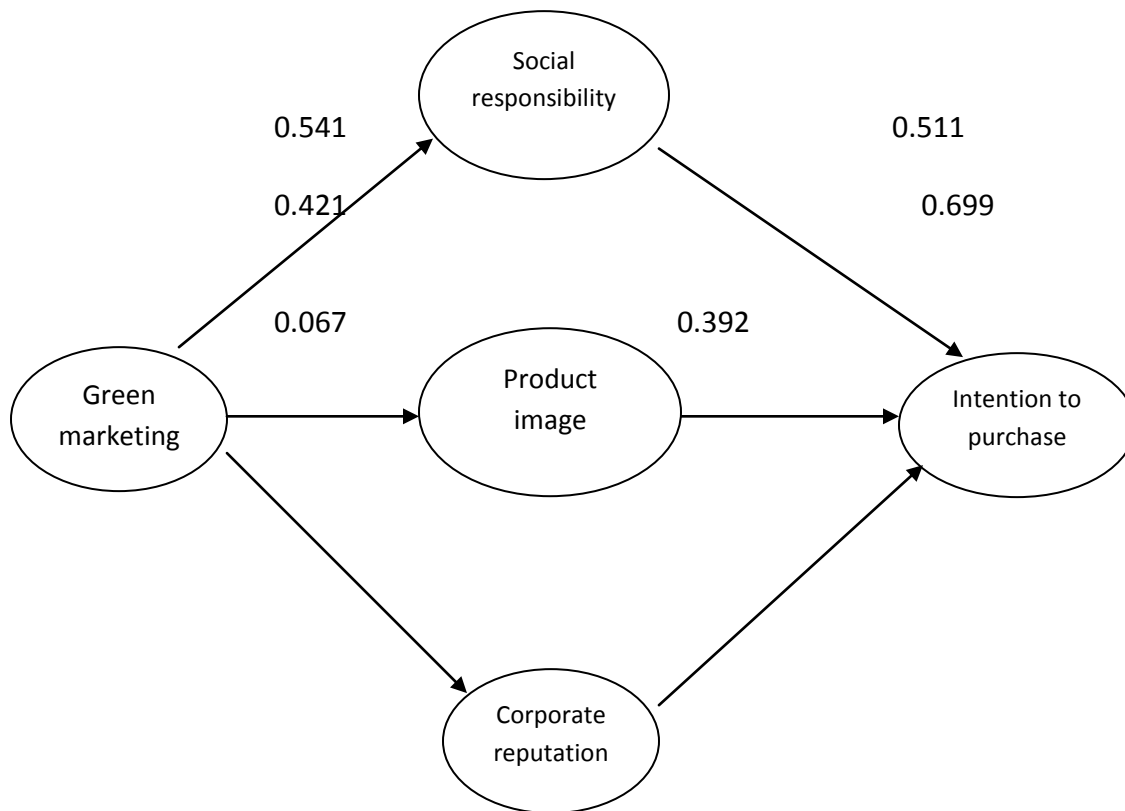
Data analysis

Testing of the hypotheses in this section was analyzed through inferential statistics and it was tried to find a suitable response for research questions given to confirmation or rejection of hypotheses. First, correlation among the variables was studied and analysis of structural equations models and t-test as well as significance level was used to study the hypotheses. Two-sample t-test and variance analysis were utilized to study the complementary hypotheses too.

Studying structural equations models

Structural equations model of the survey was studied through path analysis method by means of AMOS software. Here goodness of the model was studied and each intended relation was tested. Results of model's goodness as well as the figure and impact factors are presented and the results related to the hypotheses are illustrated.

Figure 2- Research model and path coefficients



Testing of hypotheses based on results of path analysis model

Path analysis model was used to test the hypotheses. Each path of structural equations model was proposed as a hypothesis and thus results of testing the hypotheses are presented as below.

H1: Green marketing has a significant effect on social responsibility of the corporation.

Results of Table 1 show that green marketing has a positive and significant effect on social responsibility of the corporation with standard coefficient equal to 0.542. Thus, hypothesis one is confirmed, that is green marketing has a significant effect on social responsibility of the corporation. Coefficient of determination (R2) was calculated equal to 0.417 that shows about 41.7% of changes of social responsibility of the corporation are explained by green marketing.

Table 1- Testing hypothesis 1

| Hypothesis One | Standard coefficient | Standard error | Value | P significance | The result |
|---|----------------------|----------------|-------|----------------|-----------------|
| Social responsibility-- -- green marketing | 0.542 | 0.215 | 6.934 | 0.000 | It is confirmed |

H2: Green marketing has a significant effect on the product image.

Results of Table 2 show that green marketing has a positive and significant effect on the product image with standard coefficient equal to 0.421. Thus, hypothesis two is confirmed, that is green marketing has a significant effect on the product image. Coefficient of determination (R2) was calculated equal to 0.254 that shows about 25.4% of changes of the product image are explained by green marketing.

Table 2- Testing hypothesis 2

| Hypothesis two | Standard coefficient | Standard error | Value | P significance | The result |
|-------------------------------------|----------------------|----------------|-------|----------------|-----------------|
| Product image--- green marketing | 0.421 | 0.189 | 7.105 | 0.000 | It is confirmed |

H3: Green marketing has a significant effect on corporate reputation.

Results of Table 3 show that significance level of t-test is not less than 5% error and thus hypothesis three is not confirmed. It means that green marketing does not have a significant effect on corporate reputation. The standard coefficient is very low which confirms the test result. It is notable that the correlation coefficient between the two variables was not significant. Coefficient of determination (R2) was calculated equal to 0.0104 that shows about 1% of changes of corporate reputation are explained by green marketing.

Table 3- Testing hypothesis 3

| Hypothesis three | Standard coefficient | Standard error | Value | P significance | The result |
|--|----------------------|----------------|-------|----------------|----------------|
| Corporate reputation--- green marketing | 0.067 | 0.243 | 1.105 | 0.268 | It is rejected |

H4: Social responsibility has a significant effect on intention to purchase.

Results of Table 4 show that social responsibility has a positive and significant effect on intention to purchase with standard coefficient equal to 0.511. Thus, hypothesis four is confirmed, that is social responsibility has a significant effect on intention to purchase. Coefficient of determination (R²) was calculated equal to 0.328 that shows about 32.8% of changes of intention to purchase are explained by social responsibility.

Table 4- Testing hypothesis 4

| Hypothesis one | Standard coefficient | Standard error | Value | P significance | The result |
|---|----------------------|----------------|-------|----------------|-----------------|
| Social responsibility--- intention to purchase | 0.511 | 0.206 | 8.023 | 0.000 | It is confirmed |

H5: Product image has a significant effect on intention to purchase.

Results of Table 5 show that product image has a positive and significant effect on intention to purchase with standard coefficient equal to 0.699. Thus, hypothesis five is confirmed, that is product image has a significant effect on intention to purchase. Coefficient of determination (R²) was calculated equal to 0.2611 that shows about 26.1% of changes of intention to purchase are explained by product image.

Table 5- Testing hypothesis 5

| Hypothesis five | Standard coefficient | Standard error | Value | P significance | The result |
|---|----------------------|----------------|-------|----------------|-----------------|
| Product image--- intention to purchase | 0.699 | 0.1786 | 5.877 | 0.000 | It is confirmed |

H6: Corporate reputation has a significant effect on intention to purchase.

Results of Table 6 show that corporate reputation has a positive and significant effect on intention to purchase with standard coefficient equal to 0.392. Thus, hypothesis six is confirmed, that is corporate reputation has a significant effect on intention to purchase. Coefficient of determination (R²) was calculated equal to 0.1774 that shows about 17.7% of changes of intention to purchase are explained by corporate reputation.

Table 6- Testing hypothesis 6

| Hypothesis six | Standard coefficient | Standard error | Value | P significance | The result |
|--|----------------------|----------------|-------|----------------|-----------------|
| Corporate reputation--- intention to purchase | 0.392 | 0.209 | 6.807 | 0.000 | It is confirmed |

Testing the primary hypothesis

All direct and indirect effects of green marketing on consumer's intention to purchase were used to determine the effect of green marketing performance on consumer's intention to purchase. Variables of social responsibility, product image and corporate reputation are regarded as intermediate variables. On the other hand, effects of the above variables on each other are considered in indirect effects of green marketing on consumer's intention to purchase.

Note: direct effect in Table 7 refers to lack of interference of other variables (just the effect of one variable) and indirect effect refers to interference of other variables (effect of other variables together with any other variable in the model). In order to calculate the indirect effect of green marketing on intention to purchase, coefficients of each path are multiplied by each other and then are added. Finally all indirect effects are added to obtain the total effect.

Table 7- Value of total, direct and indirect effects of green marketing on consumer's intention to purchase

| Effect | Total effect |
|--|--------------|
| Indirect effect of green marketing on intention to purchase through social responsibility | 0.276 |
| Indirect effect of green marketing on intention to purchase through product image | 0.294 |
| Indirect effect of green marketing on intention to purchase through corporate reputation | 0.026 |
| Indirect effect of green marketing on intention to purchase through social responsibility and corporate reputation | 0.024 |
| Indirect effect of green marketing on intention to purchase through social responsibility and product image | 0.057 |
| Indirect effect of green marketing on intention to purchase through product image and corporate reputation | 0.016 |
| Direct effect of green marketing on intention to purchase | 0.189 |
| Total effect of green marketing on intention to purchase | 0.882 |

Results of Table 7 reveal that the impact factor of green marketing on intention to purchase is equal to 0.882 and it means that intention to purchase (equal to 0.882) can be changed in lieu of change in one unit of green marketing in general state and by presence of all existing variables. Indirect effects are calculated as below.

Example: Indirect effect of green marketing on intention to purchase through social responsibility

The effect of green marketing on social responsibility that is equal to 0.542 was multiplied by the effect of social responsibility on intention to purchase (equal to 0.511) that is calculated equal to 0.276.

Ranking of the indexes through Friedman test

Table 8- Ranking the indexes of Kirkpatrick model (n= 284)

| Indexes | Mean of Friedman rank | Friedman statistic | Significance level |
|-----------------------|-----------------------|--------------------|--------------------|
| Product image | 3.40 | 50.344 | 0.000 |
| Green marketing | 3.24 | | |
| Intention to purchase | 2.98 | | |
| Corporate reputation | 2.73 | | |
| Social responsibility | 2.64 | | |

Given to Table 8, it is observed that significance level of Friedman test is less than error level 5% and thus it is concluded that there is a significant difference among the research indexes. Mean of Friedman rank shows that product image which has the highest mean rank has been the most important index from the viewpoint of respondents, then the second important index was green marketing. At the bottom of table social responsibility with the lowest mean rank has the least importance among the indexes.

Conclusion

Results of Pierson correlation analysis among the variables such as green marketing, social responsibility, product image, corporate reputation and intention to purchase show that all dual relations among variables are significant directly and averagely at error level 0.001 except the relation between green marketing and corporate reputation. In studying the effect of green marketing on intention to purchase, results of all direct and indirect effects of green marketing on intention to purchase were calculated equal to 0.882. It means that generally by considering all variables in the model, intention to purchase equal to 0.882 can be changed in lieu of changing each unit of green marketing.

Given to results of previous researches and theories of scholars about green marketing it can be stated that the world has nowadays been challenged about how to use natural and environmental resources to increase the speed motor of green industries. Thus, consumers have social responsibility towards the environment more. So, companies in the market try to facilitate green consumption to start strategic operations in social responsibility method and emphasizing products compatible with the environment more than before. There is a general belief among consumers that green consumption is necessary in daily life. Also the global societies show this process. Therefore, the consumer's perception from green marketing to maintain desirable image of the company is vital. Indeed one of the main reasons of dealing

with the green issue refers to the economy. As resources are limited and human's needs are unlimited it is important for marketers to consume resources efficiently and without deficiency in achieving the corporate purposes. Hence, these marketers need to understand the role of effective perception of consumers in depicting the strategic marketing map in retail-sale. Moreover, green marketing is a marketing strategy that helps marketers achieve this purpose and this type of marketing supports the environment by creating identifiable environmental advantages based on what the customer expects (Cheah & Phau, 2005). This becomes more important when inattention to a significant issue like the environment will not only be led to lack of economic development but also it will be resulted in many problems by industrialization of the society. As a result, all benefits obtained from an industrial activity in long-term will sometimes be used to compensate for the damage (Soleimani, 2010). Due to change of direction of consumers' purchasing models towards increasing intentions to purchase environment friendly products new opportunities have been created for green marketing and selling of environmental products. Using such opportunities requires more researches in this regard. The present study investigated the effect of green marketing on customer's intention to purchase by considering the product image as an intermediary in retail-sale environment.

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