

Customer Segmentation in a severe economic crisis

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Abstract

Given the changing shopping environment during a severe economic crisis period, the question is how this shift relocates customers and marketing executives to new realities, where new behaviors and trends emerge. However, segmentation based on the impact of economic crisis and customers purchasing behavior has not been studied, thus this is subject of the present paper. The objective of this study is to investigate different customers segments based on two aspects of crisis impact: the consumers perceived affection by economic crisis and the purchase behavior changes. The nature of the research is based on an exploratory research project and its population targeting Greek households. A fully structured questionnaire was used resulted to collect 1292 usable questionnaires. Research deduced 4 customer clusters: Adapters, Transitions, Wealthy and Stationary. Although over time and with the intensity of the crisis these clusters change rapidly, the change is limited to the percentage that each cluster represents, as its influence and perception are redistributed.

Keywords: *Recession, Consumer Segmentation, cluster analysis*

Track: *Consumer Behavior*

1. Introduction

In international literature review, Greek financial crisis has been characterized as a crisis of the financial system, while the recent discussion has been focused on the Greek public debt (Economou et al., 2013; Tsouma, 2014). Although several commonalities have been observed with the global financial crisis of 2007 (a year earlier) (Norris, 2013; Papadimitriou, Nikiforos & Zezza, 2013) and the Great Depression, its depth and duration characterizing it as unique due to it is difficult to make predictions and to quantify in terms of economic analysis.

The global financial crisis has shown the problems that have been brewing and accumulating over the past years due to the adopted economic model (Christodoulakis, 2016; Economou et al., 2013). The Greek financial crisis has highlighted the imbalances that exist and instability lurking in the Greek economy (Economou et al., 2013), and therefore the impact on Greek households was severe. Greek households, along with the rapid changes in Greek society and the Greek crisis, had to adapt to the new circumstances. The effects of the unprecedented economic recession on Greek consumers were severe, both in their attitudes and value system and in their consequent purchase behavior (Focus Bari, 2012). Understanding consumer influence in an unexpectedly unpleasant environment helps to investigate how consumers redefine their shopping and consumer behavior. Given the changing shopping environment, the question is how this shift relocates customers and marketing executives to new realities, where new behaviors and trends emerge.

When consumers' purchasing incentives are characterized by achieving the best economic choice that will add more value to their money and when the joy of the shopping turns into a forced process, then it is concluded that there has been a recession. The differences that exist between the consumer, such as financial status, occupational status, social status and lifestyle in general, lead to the development of a unique purchasing model (Aylott & Mitchell, 1998; Fischer & Arnold, 1994). This situation creates the need to investigate consumer categories and patterns, on the basis of purchasing behavior or on the incentives that drive individuals to buy from different stores. Although the relationship between retailers and consumers has been extensively studied in the past, so have detected a multitude categorizations (Bae, 2004; Ganesh, Reynolds & Lockett, 2007; Roy, 1994), during a period of widespread economic recession all the standard benchmarks points are no longer stable, so the patterns change.

2. Literature Review

The existing literature on the economic crisis highlights the need for understanding about how different consumer segments adjust their shopping behavior and how their financial capacity is reflected in their purchasing behavior (Ang, 2001). Although consumer segmentation has been studied extensively and there are numerous categorizations, few studies have examined consumer categorization during a crisis (Hampson & McGoldrick, 2013). The patterns of behavior in general trade, during a relatively economically stable period, are not representative of a period of crisis.

The consumers respond to a crisis by changing their buying habits and changing the proportion of their spending (Cano & Gallo, 2014). For this reason, aggregate consumption indices, such as per capita consumption, have been used in the literature, in order to assess exactly how consumers change their spending over time to make a smooth overall transition to their purchasing choices (Dutt & Padmanabhan, 2011). As a result, these indicators show household consumption patterns during the crisis, exclusively from the use of economic data. Moreover, based on the emotional reactions of consumers in retail stores and their economic situation, Quelch and Jocz (2009) distinguish the following segments of consumers: (1) Consumers who reduce all their expenditure, (2) Consumers who seek to save money, (3) Consumers who continue to buy but more selectively (4) Consumers who maintain the same purchasing habits by postponing only the luxury shopping.

In addition, Hampson & McGoldrick's (2013) study classified consumers based on attitudes and buying behavior using conceptual frameworks adapted to the economic recession.

This approach reflects consumer shopping making decisions, concluding that it is a versatile activity and presenting four types of consumers: (1) Maximum adaptors (2) Minimum changers (3) Caring Thrifties (4) Eco-crunchers. The first segment represents 20.1% of the sample, characterized by the highest level of customization of their shopping in all the examined variables. Maximum adaptors are mostly women with low degree of trust in the brands and the specific segment gathers the less wealth consumers. In contrast minimum changers characterized by the lowest level of change in all the examined variables. They are the wealthiest group of consumers and on the basis of behavior they present the least negative ratings for their trust in brands. The third segment is the largest group (38.6%), which indicates medium adaptation of behavior, but as implied by its name tends to support the unnecessary expenses on goods and disagrees with the ethical and charitable cuts. The last segment of eco-crunchers, unlike the previous one is marginally less wealth and expressed high levels of agreement on cuts in ethical and charitable expenses. This is also reflected in their express for their general negative trust levels in brands during the economic recession.

However, segmentation based on the impact of economic crisis and customers purchasing behavior has not been studied, thus this is subject of the present paper. The diversity with, which the impact of the economic recession has influence consumer behavior, has created the need to look into the different households groups. These segments may operate differently perceive the recession impact and its consequences.

3. Methodology

3.1 Methods

The nature of the research is based on an exploratory research project and its population targeting Greek households. A fully structured questionnaire was used as a basic research tool and distributed to the major purchasers of household using the quota sampling method. The empirical research was designed based on the Sekaran and Bougie's (2010) conceptual framework and resulted to collect 1777 questionnaires, of which were used 1292.

3.2 Cluster Methodology

Cluster analysis is a technique that is used to segment objects or cases into relative groups called clusters based on the observed values of several variables for each individual (Everitt et al., 2011). Cluster analysis is one of the most popular unsupervised classification techniques and is achieved by various algorithms with completely different properties in terms of their mode of operation and performance (Hair et al., 2010). Therefore, cluster analysis aims to allocate observations into clearly identifiable groups.

1st Stage: Objectives of Cluster Analysis

Cluster analysis is considered as the most appropriate technique in order to group objectives, as divides several of customers profile into groups based on the similarity of the objects for a set of specified characteristics. Its main purpose is to classify participants' responses using the information contained in a variable (Aldenderfer & Blashfield, 1984, p.88; Everitt et al., 2011). In the present study, these variables are two aspects of crisis impact on consumer: to what extent consumers perceived that their households were affected by economic crisis and to what extent this impact on their purchase behavior.

2^oStage: Research design in cluster analysis

Squared Euclidean distance is conducted due to use the sum of the squared differences

without taking the square root and it speeds computations markedly.

3^o Stage: Assumptions in Cluster Analysis

One of the assumptions for reliable cluster analysis is the representative of the sample in the total population (Hair et al., 2017), so it has ensured. Moreover, the analysis of multicollinearity impact had negative effect.

4^o stage: Deriving Clusters and Assessing Overall Fit

Two steps analysis was conducted (Blashfield, 1976), which enables first to find the number of cluster (hierarchical clustering) and then to divide them (k-means analysis).

○ Hierarchical Cluster Analysis

A hierarchical cluster analysis was conducted through the Ward’s method, the selection of which two clusters to combine is based on which combination of clusters minimizes the within-cluster sum of squares across the complete set of disjoint or separate clusters, providing a range of possible cluster solutions. The analysis has not restriction to the desired number of clusters; they are resulted by using agglomeration coefficient. Four clusters are considered as the best solution.

○ K-Mean method

K-means algorithms work by portioning the data into four clusters, as it shows on tables.

Table 1: Final Cluster Centers

Cluster	1	2	3	4
Crisis Impact (Evaluation)	0,38	-2,09	-0,46	0,81
Crisis Impact (purchase Behavior)	1,11	0,16	-0,39	-0,75

Table 2: Distances between Cluster Centers

Cluster	1	2	3	4
1		2,65	1,73	1,91
2	2,65		1,72	3,04
3	1,73	1,71		1,33
4	1,91	3,04	1,33	

Table 3: Clusters’ ANOVA analysis

	Cluster		Error		F	Sig.
	Mean Square	Df	Mean Square	Df		
Crisis Impact (Evaluation)	310,547	3	,279	1288	1113,054	,000
Crisis Impact (Purchase Behavior)	250,029	3	,420	1288	595,360	,000

Table 4: Number of Cases in each Cluster

Cluster	1	2	3	4
No	382,000	124,000	414,000	372,000

5^o Step: Interpretation of the Clusters

The analysis of the degree of impact of crisis on behavioral response of households and their perceptions revealed four distinct clusters.

- The first cluster was called “Adapters”, as it consists of consumers with perceive high impact of the crisis and profound changes in their behavior.
- The second cluster was called “Transitions”, since it consists of consumers who perceived that they were not significantly affected by the crisis but changed their behavior.
- The third cluster was named “Wealthy”, as it consists of consumers who were not strongly perceived that they influenced by the crisis, so they did not change their behavior.
- The fourth cluster was called “Stationary”, as it consists of consumers who perceived a moderate influence of the crisis and this led to a moderate change of behavior.

4. Discussion

Customer segmentation helps marketers to discover distinct groups in their customer bases, and then use this knowledge to develop targeted marketing programs. The present study has as main objective to classify customers according to their influence from economic crisis on two aspects: the customer perception about their influence and the changes of their purchase patterns in order to understand the Greek householders’ behavior. The analysis resulted in 4 customers segments: “Adapters” represents the 29,61% of the sample, “Transitions” represents 9,61% of the sample, “Wealthy” represents 32,02% of the sample and 28,76% is represented by “Stationary”

4.1 Adapters

The first segment includes the most economically weak and those who are most affected by the crisis. Consumers in this category have suffered from the severe consequences of the economic crisis and have made the most abrupt purchasing changes in their household.

Adapters are consumers who, in addition to the financial reductions in monthly household income, some members of their family are fired. As a consequence of this situation was their inability to cope with the new environment and led to strained changes such as change of residence and the application even on pawnshops to be able to sell some of their assets.

Their behavior as retailing shoppers characterizes them as bargain and lower prices hunters. The main criterion for choice a product is the price, sacrificing both the quality of products and their brand attachment and bonding. According to product quality, this segment has the

perception that all the products (branded, luxury or private labels) are exactly the same due to they have adapted the perception that all the companies in the midst of crisis have lowered their quality levels and standards. While the excess of the value associated with the promotion strategies of branded products, so they are reluctant to buy non-branded products. As price bidders and hunters, they do not purchase from one retail store, thus their loyalty level to retail stores are extremely low.

Adapters have same characteristics with existing buyers typologies such as “Max adapters” (Hampson & McGoldrick, 2013), “Anxiety” (FocusBari, 2010), “Newcomers” (FocusBari, 2011), “Panicked” and “budget conscious” (MRBHellas S.A., 2015).

4.2 Transitions

The segment of “Transitions” is the cluster with the lower representative percentage in the sample but its importance is high. According to Quelch and Jozs's (2009) research on consumer segmentation during a recession, it is reported that Transitions has emerged as a new category of consumers. Transitions are households with a high financial standing and the consequences of the crisis has not affected, just only by a minor reduction of their family income. For this reason, they have reduced the purchase of non-essential products, especially luxury ones and they have turned to savings. In this way, they achieve a sense of security for retaining the same life quality for the present and for the future, while at the same time they do not disrupt their surroundings by demonstrating their financial comfort.

Regarding the choice of retail stores, they have not made any extreme change due to they visit the same retail stores taking under consideration the proximity to their home. However, they have turned to buying local products and trying to get more value for money choices.

“Transitions” consider themselves responsible for giving value to their money, so they are looking for the best value for money option. Thus, they prefer to buy large quantities for durable branded goods when they are on offer or at a lower price. This segment is described as loyal shoppers, but they will not make a word of mouth promotion of their favourite brands and retail stores. This group of consumers is struggling to curb their purchasing power, and they are expecting the first sign of economic growth to return to their pre-crisis buying habits.

They have been described as “Transitions” because of their mimetic disposition, they have made significant changes in their purchasing behavior because of the way others do, not because they themselves have been affected by the onset of the crisis. Focus Bari (2010) research resulted in a customer category similar to Transitions behavior, the “Instants” with the slogan “Life has challenges”. The main features of this segment are savings through the

reduction of buying luxury goods and the search for value.

5.1.3 Wealthy

The third segment of consumers is the "Wealthy", which includes consumers on the highest economic scale with obvious effects of the crisis on their lifestyle. They have similar consequences from the economic crisis with Transitions, but more intense. This segment has perceived that their family income has reduced and a member of their family has fired.

"Wealthy" segment has not reduced their shopping list and spending on retailing goods. They bought from the same retail stores focused on smart ways to save money without stop buying their favorite brands. These are shoppers who do not want or cannot afford to reduce their 'needs' and resort to other ways of saving money that do not affect the overall coverage of their buyings. As a result, this category of consumers has turned the shopping trend of shopping therapy that they used to do into smart shopping.

"Wealthy" consumers are seeking more satisfaction in saving money and less in the process of acquiring goods. This segment show a similar behavioral profile to the "Swingers" and "Minor Adapters" groups, which were highlighted in FocusBari's (2013) research and Hampson & McGoldrick's (2013) international research, respectively.

5.1.4 Stationary

The segment of "Stationary" consists of the majority of middle economic households with a medium impact of economic crisis. They have reacted to their income reduction with the same purchase reduction. It's the group that has simply reduced the value of its purchases by buying less overall, without affecting its consumer behavior in any other way. "Stationary" has only changed in terms of choice of more offers and more economic packages.

Although they continue to choose the same retail stores for their purchases they are not attached with it, however they consider that they have opted for the most value for money brands and have no scope for change.

Stationary characterized from loyalty to retail store brands and prevail social trends in their purchase behavior such as "Caring Thrifties" (Hampson & McGoldrick, 2013), "Conservatives" and "Repeaters" (MRBHellas S.A. 2015).

5.2 Contribution

The contribution of the present study is at the level of consumer analysis, by examining the extent of the impact of the economic crisis and the consumer changing behavior. Existing

literature has not sufficiently studied the sequence and causes of consumer behavior change in the context of an economic crisis, while at the same time contributing to the emergence of new categories of consumer audiences.

One of the main aspect of the analysis concerned the categorization of Greek consumers into groups according to their influence on the crisis and their reaction to this influence, is to help understanding the purchasing behavior of the Greek consumer. Although over time and with the intensity of the crisis these clusters change rapidly, the change is limited to the percentage that each cluster represents, as its influence and perception are redistributed. Therefore, the criteria for separating groups consolidate the profile of the segments and interpret their purchasing behavior.

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