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## Conference Paper

# Knowledge Management & Loyalty Programs: A Customer Perception Analysis, the Greek Retail Market

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## Abstract

The Food Retail sector in Greece is currently facing a number of challenges. From an economic point of view, the austerity programs imposed in Greece since 2010 resulted in losses of retail sales, alongside with bankruptcies and mergers of retail chains. At the same time, technological development creates an environment for innovation in terms of operations and marketing and offers new opportunities to retailers. Additionally, consumers become more involved and active in the purchasing processes. However, Greek consumers are also experiencing a dramatic decline in their disposable income. The study examines the perception of Greek consumers of several marketing efforts based on Information & Communication Technology Systems (ICT) introduced by a Greek food retailer in Northern Greece. More specifically, it investigates the relationship between ICT related marketing efforts, such as loyalty programs, and analytics regarding food control systems and purchases and consumer characteristics such as gender, age, income, status and family size. The study reveals a number of relationships between marketing efforts and consumer characteristics/segments. However, since the relationships are found to be weak, marketing managers are advised to use advanced analytics systems, such as big data technologies, in order to enhance the efficiency of their marketing strategies and approaches. The weak relationships between the parameters examined indicate that marketing efforts have to focus in several consumer sub segments in order to achieve significant results. The study's sample population is consumers of one of the top food retailers in Greece. The findings contribute to the literature on the use of ICT on marketing strategies and the use of big data. Furthermore, they have practical implications for marketers in the retail food sector, as they reveal the need for a more focused approach to different consumer groups, in order to increase the efficiency of marketing efforts and to achieve maximum results.

**Keywords:** knowledge management, loyalty programs, ICT, segmentation

**JEL Classification Codes:** D10, D12

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## 1. Introduction

The food retail sector, as most sectors of the economy in Greece, during the past nine years is experiencing the effects of a severe economic crisis. The austerity program, alongside with the high unemployment rates in Greece had an overall negative impact on retail sales. Furthermore, consumers' preferences are rapidly changing and two trends have emerged; namely the increase of market concentration and the use of private labels [1].

In regard to the market structure, the vast majority of food in Greece is sold through food retailers and "cash & carry" stores, which account for 90% of the market. The remaining 10% is sold through grocery shops, mini markets and various types of small self-service stores. The number of smaller shops has been steadily decreasing in the last years, and the share of food retail chains has rapidly increased. Due to the high market concentration competition is fierce [2].

Previous studies have highlighted a number of challenges which food retailers will be facing in the future. For example, "Conventional retailers, especially those that are mid-sized, will be squeezed from all sides: from larger players with better economies of scale; from smaller players with more focused selection or a greater emphasis on convenience; from electronic retailers that have few physical assets but are rich in information; and from entertainment – and education-orientated players that offer a more vibrant consumer experience." [3]. Furthermore, food retailers reap the benefits of actual contact with consumers either in-store or through social networks and digital platforms [4].

The aim of this study is to investigate the impact of Information and Communication Technology Systems (ICT) related marketing efforts on consumer behavior. More specifically, the relationship between ICT related marketing efforts, such as loyalty programs, and big data analytics regarding food control systems, frequency of purchases, and key demographic characteristics, such as gender, age, income, status and family size will be explored. Furthermore, this study reveals a number of relationships between marketing efforts related to ICT and consumer characteristics/segments. The fact that this study is conducted during a severe economic crisis in Greece further enhances its practical implications as firms in the food retail sector strive to remain competitive in a saturated market.

## 2. Big Data: A Game Changer in the Retail Sector

Big data is described as the collection of large and complex datasets which are difficult to capture, store, manage and analyze effectively using current database management software and concepts. Today, retailers appear to invest heavily on big data technologies. Businesses use big data to improve target marketing, obtain additional business insights and to detect fraud. It is a beneficial tactic for retailers as they can collect more information for consumers' behavior and improve decision making [5].

Big data and analytics will dramatically change the power of the retail landscape in the future. The way individuals are buying and selling goods is rapidly changing as many consumers use the Internet for their transactions. Retailers take advantage of this and use a data-first strategy in order to understand their consumers' habits, then match them to products and increase their sales. Retailers learn any information about consumers' behavior and preferences using analytics in shopping places, either offline or online [6].

Data collection provides the opportunity of knowing consumers' feelings, their patterns of behavior, their preferences and their interests [7]. The explosive growth of media, channels, digital devices and software applications has provided firms with unprecedented opportunities to leverage data to offer more value to consumers, enhance their experiences, create happy memories, increase consumer satisfaction and loyalty and extract value. They also suggest that companies need to invest in data capture and storage and not so much in analytics, as it is becoming clear that the availability of data is creating data-driven decision cultures in companies, providing them with competitive advantages and having a significant impact on their financial performance.

Big data analytics can be used at every step of the retail purchasing process; to identify high-demand products in specific periods of time, to define competitive pricing, to identify the potential customer target group, to analyze transactional data and to detect cross selling opportunities. Demographic, economic and transactional criteria and data are used for customer analysis. Product promotion can also be improved with online communication and data collection from loyalty programs and transactional records. Consumers can be informed about discounts of products they are interested in, even before they arrive in the store, through email or Short Message Service (SMS) [8].

It is important for consumers to get free coupons and special discounts according to their needs. Big data offers such possibilities and demonstrates the retailers' concern

to consumers' needs and enables companies to differentiate and gain a competitive advantage in a very antagonistic environment. "Big data analysis helps analyze information constantly being collected on what the customer is viewing and the items they've bought in the past, and all this information provides insight into what your customer wants. A smart solution would be to provide loyalty points and rewards through your company's very own app which will always have an edge that the traditional 'card' does not. Integrate live chat within your business app to better engage consumers and offer them more convenience and better deals." [9].

At tactical level, information available will enable marketing managers to re-evaluate their current segmentation, pricing and communication strategies and processes. This requires the analysis of information with databases and CRM (Customer Relationship Management) Systems, and then the personalized information (e.g. in forms of emails or SMS) should reach the customer, including information that is especially valuable to him/her (e.g. special offers or discounts in products he/she usually purchases). At strategic level, big data analysis will reveal future trends and opportunities – new product offerings can be developed, and decisions may include and affect relationships with suppliers, or redesigning parts of the value chain.

It appears that Greek food retail chains have recently realized the importance of big data, especially in order to have a better understanding of their consumers and – to a large degree – their individual needs. The quantity of information collected offers many opportunities from the marketing's perspective. More specifically, information needs to be collected, analyzed, and then actions are required from retail store planners. Despite the importance of big data, there is limited evidence that Greek retailers have designed a clear strategy. Baroudi [10] provides clear frameworks for linking business strategy to specific Key Performance Indicators (KPIs), while Rothaerlem [11] highlights the importance of developing a clear strategic positioning, differentiating from competition. At this point, regarding the use of big data, evidence of a clear link between big data and strategic management for Greek retailers has not been established.

### 3. Loyalty Programs

The use of loyalty programs as a tool of relationship marketing is becoming popular to encourage customers' loyalty. Numerous loyalty programs are used by businesses in order to build loyal consumers. Hoffmann et al. [12] summarize previous studies and conclude that customer loyalty is a deeply held commitment to a product, service, store, or any other aspect of an organization that causes the customer to re-purchase

or patronize the organization's product, service, or store consistently in the future, despite marketing efforts or other external influences having the potential to cause switching behavior.

Petruscu and Lauer [13] describe the process and benefits of the introduction of a loyalty program as follows: Retailers should encourage consumers to self-identify, by creating a member card and collecting some bonus points (to make it more attractive) and creating an account in which they have their own password. By this way, the retailer will be better informed about what the customer would be interested in, and be able to make a special offer for him/her. Additionally, consumers should give the email address to the company at the first purchase. In this case, managers may send information about offers or ask consumers about their opinion regarding their services or the quality of the product bought. Consumers can feel the company's sincere interest regarding the quality of the services it provides and probably will feel more familiar with the specific company and will choose it again. Some businesses prefer to offer different levels in loyalty programs like Platinum, Gold and Silver in which they categorize their consumers and offer different services depending on the category. Food retailers usually issue member cards for all consumers and collect information about the frequency of their shopping and other patterns of behavior [14].

Successful businesses create different kinds of loyalty programs to develop a greater and closer relationship with their consumers. It is important to explain how effective loyalty programs might be for companies [15]. Loyalty programs aim mainly to keep consumers from defecting, by developing switching costs for consumers. The second goal is to win market share by making consumers buy goods or services from one seller. Moreover, it is an important effect to prompt consumers to make additional purchases. Therefore, loyalty programs create demand and increase sales.

Furthermore, Kahn [16] concludes that consumers avoid searching for information when it costs or requires time, but are responsive to information being made available to them. As members of a loyalty program, consumers secure access to information. Such information may be generic (e.g. information of special offers or discounts) or more relevant to their interests, depending on whether marketers take advantage of advanced ICT solutions to communicate personalized information to their consumers. Transactional data yield insights into consumers' behavior and preferences. The goal for the retailer is to make the suitable offer to those who are directly interested in a specific product.

The final goal of loyalty programs is profitability and an increase of cash flow. Loyalty programs may include offers from more than one company, creating synergies for the

consumers – and a strategic alliance between companies. Key issues can be identified both for the consumer's and the business point of view. From the consumer's point of view, offers from different companies can often lead to an integrated customer experience, e.g. ability to go shopping and earn extra overall discount (e.g. use of credit cards), free parking space or restaurant meals (coupons) – e.g. consumers of Kellogg's breakfast products get American Airlines miles [17]. From the business point of view, loyalty programs offer value to consumer and share valuable customer information with business partners. The level of information exchange can be either limited (e.g. coupons or special codes) or extended (information regarding customer data and transaction history), with the use of advanced ICT systems for data collection and analysis, in order to support loyalty programs.

Greek food retailers have been using loyalty programs by introducing loyalty cards. These retailers have also partnered with financial institutions to provide an additional type of loyalty system. Retailers appear to favor loyalty programs developed in cooperation with Greek banks and more particular with credit or debit cards; they offer credit cards which provide consumers with the option of purchases at different stores. Each loyalty program offers different privileges to consumers; however, they all aim to build a long lasting relationship with customers.

The literature examined in this section, reveals the important role and the potential impact of loyalty programs and the use of big data as key elements of retailers' marketing strategies. The use of big data and loyalty programs is a common practice that can have a significant impact on firms' financial performance since a closer relationship with consumers is established. Furthermore, consumers appear to be responsive and willing to receive freely available information.

## 4. Research Methodology

A questionnaire was designed in order to evaluate the effects of big data and loyalty programs to consumers in Thessaloniki. The study covers two areas in the city of Thessaloniki, N. Greece. Consumers were asked to provide their opinions regarding specific marketing approaches, either in-shop or via email and mobile, and to evaluate the degree of relevance to their interests, needs, and purchasing habits and decisions. The aim was to evaluate the relationship, in terms of correlation, between marketing approaches and key demographic criteria.

The questionnaires were distributed and collected during April 2017 and a total number of 154 questionnaires were issued and collected. There were no cases with

missing data– all questionnaires distributed were successfully completed and collected. To this respect, there is no bias regarding sample selection and reliability of data.

The study included a number of key demographic variables (age, gender, income, marital status, family size, education level) with key behavioral characteristics (e.g. use of Internet and smart phones, frequency of purchases, behavioral responses towards advertising, reception of information according to their personal interests, etc.).

Data were coded and analyzed with the use of statistical software (SPSS). The statistical analysis focused on exploring the correlations between variables. Regarding the correlation between the variables, the Pearson's correlation was used, which reveals in a linear way the relationship between the two variables, analogous or reverse analogous, depending on whether Pearson is positive or negative [18]. For the analysis of the data, descriptive analysis and bivariate correlation (Pearson) were used. Finally, the results of the statistical analysis were interpreted in order to draw meaningful conclusions for practitioners and to provide practical insights.

## 5. Findings

### 5.1. Results – Part 1 - Descriptive statistics

From the respondents, 43,5% were men and 56,5% women. A total of 37,7% were between 18 to 30 years of age; 24,7% from 31 to 40; 22,1% from 41-50, and 15,6% were over 50 years old. Half of the respondents (50%) were single; 35,7% were married; 11,7% divorced, and 2,6% were widowers. Almost half of them (48,7%) had an income between 5.000 – 10.000 Euros; 23,4% - 10.001-15.000; 10,4% of an income over 15.000, and 17,5% of respondents had no income. As observed, a large percentage of the sample (more than 66%) had relatively low income – less than 10.000 Euros per year. In regard to family size, 9,7% lived alone; 29,2% lived with one more person; 31,2% lived with two other individuals; 23,4% lived with three, and 6,5% of people lived with four or more people at home. The majority, 57,8% of the respondents had graduated from high school; 35,1% had post-secondary education, and 7,1% held graduate level degrees.

## 5.2. Results – Part 2 - Statistical analysis

In this study, the following demographic variables were used: gender, age, marital status, family size, education and income. Correlations between these demographic factors and factors related to loyalty programs and big data were investigated (Appendix 1). These variables include: a) Loyalty Program – whether consumers are registered in a loyalty program or not, b) Purchases – frequency of purchases from food retail stores, c) Food Control – whether consumers use in-store equipment for evaluating prices and key characteristics of the products, and d) Personal – whether consumers wish to receive more personalized information in the marketing messages, resulting in a better match between the loyalty program offers and their interests. An overview of the results is depicted in the following tables (Tables 1 & 2).

TABLE 1: Statistical Significance Correlations.

Variable1	Variable2	Relationship	Correlation	Statistical Significance
Gender	Loyalty Program	Reverse Analogous	Weak	Yes
Gender	Purchases	Reverse Analogous	Weak	Yes
Age	Purchases	Reverse Analogous	Weak	Yes
Age	Personal	Analogous	Weak	Yes
Age	Food Control	Analogous	Weak	Yes
Income	Food Control	Analogous	Weak	Yes
Status	Purchases	Reverse Analogous	Weak	Yes
Status	Personal	Analogous	Weak	Yes
Status	Food Control	Analogous	Weak	Yes
Family Size	Purchases	Reverse Analogous	Weak	Yes

TABLE 2: No Statistical Significance Findings.

Variable1	Variable2	Relationship	Correlation	Statistical Significance
Age	Loyalty Program	Reverse Analogous	Weak	No
Income	Loyalty Program	Reverse Analogous	Weak	No
Family Size	Loyalty Program	Reverse Analogous	Weak	No
Education	Loyalty Program	Analogous	Weak	No
Status	Loyalty Program	Reverse Analogous	Weak	No

## 6. Discussion

The above results show a weak reverse analogous relationship between gender and loyalty program. There is also a weak reverse analogous relationship between frequency of purchases and a) gender, b) age, and c) marital status. Furthermore, there is a weak analogous relationship between age and need for personalized information, as well as between age and food control. Personalized information has a weak analogous relationship with marital status. Additionally, marital status and income have a weak relationship with food control indications. Finally, family size was found to have a weak reverse analogous relationship with number of purchases. Furthermore, we investigated correlations for age, income, family size, education, status, and loyalty program. However, these correlations resulted in no statistical significance.

It appears that marketers focus mainly on providing generic offers and less on analyzing data, creating market segments and proposing personalized offers with special content; therefore consumers receive numerous irrelevant generic information and offers. As a result, consumers provide their opinions on the use of various marketing ICT based techniques, without however having actual experience of their true benefits.

Therefore, consumers may underestimate the benefits of specific innovations. It is probable that innovations introduced may have a greater impact on consumers, if marketers make full use of the ICT capabilities. In this case, the limited impact of marketing strategies examined, might be attributed to the underutilization of big data and loyalty programs.

The lack of fully explored marketing capabilities in terms of big data and loyalty programs can also be attributed to different priorities of food retailer chains. With so many drastic changes in the market, it appears that market coverage – as measured with number of stores operating – is the main factor for increasing sales and market share, and current top priority.

As a behavioral trend, Internet use appears to be a key area for innovation and marketing strategy. The use of Internet has medium correlations with age and status, and weak relationships with education and gender. Therefore, from a statistical point of view, the use of the Internet as a way to communicate or engage consumers – is a critical success factor since it has two medium correlations and two weak ones with the variables examined.

The Frequency of purchases has weak correlations with four variables (gender, age, status and family size). Furthermore, food control has weak correlations with age, income, and status.

Two main conclusions can be drawn from the analysis above: first, the market has various segments (over-segmented market), both demographical and behavioral. The main segments deriving from demographics (descriptive statistics) had relatively weak relationships with the behavioral variables examined. The results show weak relationships between demographic and behavioral variables. Therefore, it is not appropriate to consider large sizes of the population as segments based on demographic criteria whose purchasing behavior can be triggered using single dimensional marketing approaches and message.

The second conclusion derives from the fact demographically defined segments demonstrate limited responses to specific marketing stimulus. A single dimensional approach for the communication with consumers might not achieve the expected results. Thus, marketers are recommended to use new segmentation criteria, and to launch multiple marketing campaigns each one focusing on smaller, more homogeneous consumer groups.

## 7. Managerial Implications

The above findings show that the use of big data and related advanced software (Databases, Analysis of Transactions and Demographics) to provide analytics, can have a crucial role in enhancing relationships with the customers and to increase consumer loyalty.

Furthermore, the findings of Table 2 show the rather limited usefulness of traditional demographic segmentation for the implementation of loyalty programs. More specifically, loyalty programs do not appear to have a specific impact to traditional customer segmentation (age groups, family size, income and education).

Other marketing parameters address, to a lesser extent, specific customer segments. For example, the reverse analogous relationship between gender and loyalty program indicates that the effectiveness of existing loyalty programs is stronger to female consumers. Additionally in regards to age food control appears to be more significant in older ages, so marketers should consider including such mechanisms in their promotional campaigns targeting older consumers.

To this respect, the analysis reveals that marketers striving to increase market share should focus heavily on market segmentation using a combination of demographic, behavioral and transactional criteria, – in this case, the use of big data analytics is necessary to design and implement such a strategy.

Lastly, managers should consider that personalized communication based on Big data analytics is expected to have a greater impact in the future as internet usage increases rapidly. Additionally Internet marketing will most likely further evolve based on technological advantages. Thus, strategies that focus on traditional email campaigns, and are based on simple and targeted advertising (e.g. social media targeting selected audiences, linking both interests and exact location), can be more effective. Furthermore, more efficient web applications can include different aspects of marketing (such as loyalty programs or exclusive offers) based on transactional behavior (transaction data analysis). This will lead in greater consumer engagement.

## 8. Limitations and Implications for Future Research

There are two main limitations regarding this study that may affect its validity in the long run. First the use of big data and loyalty programs in Greece is still in the first stages, both from a technological as well as from a marketing point of view. As a result, consumers have not had the opportunity to explore the actual benefits of well managed campaigns since marketers make limited use of big data in their campaigns, and still focus on traditional “one offer for all” approaches. As the consumers get more experience and exposure on loyalty programs they should be able to provide more detailed and thorough answers.

A second limitation is the small geographical area examined, which does not allow for generalization of the results. We suggest that future research should focus on the greater Thessaloniki area. Additionally, the effectiveness of marketing managers to communicate the importance of loyalty programs and the use of big data to provide personalized information and services should be explored.

## 9. Conclusion

The aim of this study is to examine the impact of loyalty programs and the use of big data in the food retail sector in Greece and to reach some conclusions regarding consumers’ perceptions on these issues. The results show the weak relationships between the demographic segmentation criteria and loyalty programs and the use of big data.

The findings show that markets appear to be over-segmented in terms of demographic and behavioral characteristics. This fact reveals the need to identify smaller, less “traditional” market segments in order to increase the efficiency of the marketing efforts. Marketers are recommended to introduce new segmentation criteria, such as

behavioral and transactional criteria, using big data analytics, in order to design more effective marketing strategies.

The above results provide practical insights for marketing managers in the food retail industry, while at the same time demonstrate the need for further research on the issue of ICT marketing techniques and its impact on consumers.

## Appendix 1

### Statistical analysis

Correlations			
		GENDER	LOYALTY PROGRAM
GENDER	Pearson Correlation	1	-,189*
	Sig. (2-tailed)		,019
	N	154	154
LOYALTY PROGRAM	Pearson Correlation	-,189*	1
	Sig. (2-tailed)	,019	
	N	154	154

\*. Correlation is significant at the 0.05 level (2-tailed).

Regarding the correlation between gender and loyalty program, there are two findings: a) Weak correlation between the two variables (Pearson correlation is -0.189). Pearson correlation is negative indicating a reverse analogous relationship, and b) Sig. 2-tailed is 0.019 (less than 0.05) indicating statistically significant correlation for the total population.

Correlations			
		GENDER	PURCHASES
GENDER	Pearson Correlation	1	-,169*
	Sig. (2-tailed)		,037
	N	154	154
PURCHASES	Pearson Correlation	-,169*	1
	Sig. (2-tailed)	,037	
	N	154	154

\*. Correlation is significant at the 0.05 level (2-tailed).

Regarding the correlation between gender and purchases there are two findings: a) Weak correlation between the two variables (Pearson correlation is -0.169). Pearson correlation is negative indicating a reverse analogous relationship, and b) Sig. 2-tailed is 0.037 (less than 0.05) indicating statistically significant correlation for the total population.

Correlations			
		AGE	PURCHASES
AGE	Pearson Correlation	1	-,205*
	Sig. (2-tailed)		,011
	N	154	154
PURCHASES	Pearson Correlation	-,205*	1
	Sig. (2-tailed)	,011	
	N	154	154

\*. Correlation is significant at the 0.05 level (2-tailed).

Regarding the correlation between age and purchases there are two findings: a) Weak correlation between the two variables (Pearson correlation is -0.205). Pearson correlation is negative indicating a reverse analogous relationship, and b) Sig. 2-tailed is 0.011 (less than 0.05) indicating statistically significant correlation for the total population.

Correlations			
		AGE	PERSONAL
AGE	Pearson Correlation	1	,182*
	Sig. (2-tailed)		,024
	N	154	154
PERSONAL	Pearson Correlation	,182*	1
	Sig. (2-tailed)	,024	
	N	154	154

\*. Correlation is significant at the 0.05 level (2-tailed).

Regarding the correlation between age and personal there are two findings: a) Weak correlation between the two variables (Pearson correlation is 0.182). Pearson correlation is positive indicating an analogous relationship, and b) Sig. 2-tailed is 0.024 (less than 0.05) indicating statistically significant correlation for the total population.

Correlations			
		AGE	FOOD CONTROL
AGE	Pearson Correlation	1	,227**
	Sig. (2-tailed)		,005
	N	154	154
FOOD CONTROL	Pearson Correlation	,227**	1
	Sig. (2-tailed)	,005	
	N	154	154

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Regarding the correlation between age and food control there are two findings: a) Weak correlation between the two variables (Pearson correlation is 0.227). Pearson

correlation is positive indicating an analogous relationship, and b) Sig. 2-tailed is 0.005 (less than 0.05) indicating statistically significant correlation for the total population.

Correlations			
		INCOME	FOOD CONTROL
INCOME	Pearson Correlation	1	,176*
	Sig. (2-tailed)		,029
	N	154	154
FOOD CONTROL	Pearson Correlation	,176*	1
	Sig. (2-tailed)	,029	
	N	154	154

\*. Correlation is significant at the 0.05 level (2-tailed).

Regarding the correlation between income and food control there are two findings: a) Weak correlation between the two variables (Pearson correlation is 0.176). Pearson correlation is positive indicating an analogous relationship, and b) Sig. 2-tailed is 0.029 (less than 0.05) indicating statistically significant correlation for the total population.

Correlations			
		STATUS	PURCHASES
STATUS	Pearson Correlation	1	-,309**
	Sig. (2-tailed)		,000
	N	154	154
PURCHASES	Pearson Correlation	-,309**	1
	Sig. (2-tailed)	,000	
	N	154	154

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Regarding the correlation between status and purchases there are two findings: a) Weak correlation between the two variables (Pearson correlation is -0.309). Pearson correlation is negative indicating a reverse analogous relationship, and b) Sig. 2-tailed is 0.000 (less than 0.05) indicating statistically significant correlation for the total population.

Regarding the correlation between status and personal there are two findings: a) Weak correlation between the two variables (Pearson correlation is 0.163). Pearson correlation is positive indicating an analogous relationship, and b) Sig. 2-tailed is 0.044 (less than 0.05) indicating statistically significant correlation for the total population.

Regarding the correlation between status and food control there are two findings: a) Weak correlation between the two variables (Pearson correlation is 0.189). Pearson correlation is positive indicating an analogous relationship, and b) Sig. 2-tailed is 0.019 (less than 0.05) indicating statistically significant correlation for the total population.

Correlations			
		STATUS	PERSONAL
STATUS	Pearson Correlation	1	,163*
	Sig. (2-tailed)		,044
	N	154	154
PERSONAL	Pearson Correlation	,163*	1
	Sig. (2-tailed)	,044	
	N	154	154

\*. Correlation is significant at the 0.05 level (2-tailed).

Correlations			
		STATUS	FOOD CONTROL
STATUS	Pearson Correlation	1	,189*
	Sig. (2-tailed)		,019
	N	154	154
FOOD CONTROL	Pearson Correlation	,189*	1
	Sig. (2-tailed)	,019	
	N	154	154

\*. Correlation is significant at the 0.05 level (2-tailed).

Correlations			
		FAMILY SIZE	PURCHASES
FAMILY SIZE	Pearson Correlation	1	-,237**
	Sig. (2-tailed)		,003
	N	154	154
PURCHASES	Pearson Correlation	-,237**	1
	Sig. (2-tailed)	,003	
	N	154	154

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Regarding the correlation between family size and purchases there are two findings: a) Weak correlation between the two variables (Pearson correlation is -0.237). Pearson correlation is negative indicating a reverse analogous relationship, and b) Sig. 2-tailed is 0.003 (less than 0.05) statistically significant important correlation for the total population.

### No Correlation

Regarding the correlation between age and loyalty program there are two findings: a) Weak correlation between the two variables (Pearson correlation is -0.064). Pearson

Correlations			
		AGE	LOYALTY PROGRAM
AGE	Pearson Correlation	1	-,064
	Sig. (2-tailed)		,427
	N	154	154
LOYALTY PROGRAM	Pearson Correlation	-,064	1
	Sig. (2-tailed)	,427	
	N	154	154

correlation is negative indicating a reverse analogous relationship, and b) Sig. 2-tailed is 0.427 (more than 0.05) not statistically significant correlation for the total population.

Correlations			
		INCOME	LOYALTY PROGRAM
INCOME	Pearson Correlation	1	-,001
	Sig. (2-tailed)		,987
	N	154	154
LOYALTY PROGRAM	Pearson Correlation	-,001	1
	Sig. (2-tailed)	,987	
	N	154	154

Regarding the correlation between income and loyalty program there are two findings: a) Weak correlation between the two variables (Pearson correlation is -0.001). Pearson correlation is negative indicating a reverse analogous relationship, and b) Sig. 2-tailed is 0.987 (more than 0.05) not statistically significant correlation for the total population.

Correlations			
		FAMILY SIZE	LOYALTY PROGRAM
FAMILY SIZE	Pearson Correlation	1	-,053
	Sig. (2-tailed)		,513
	N	154	154
LOYALTY PROGRAM	Pearson Correlation	-,053	1
	Sig. (2-tailed)	,513	
	N	154	154

Regarding the correlation between family size and loyalty program there are two findings: a) Weak correlation between the two variables (Pearson correlation is -0.053). Pearson correlation is negative indicating a reverse analogous relationship, and b) Sig.

2-tailed is 0.513 (more than 0.05) not statistically significant correlation for the total population.

Correlations			
		EDUCATION	LOYALTY PROGRAM
EDUCATION	Pearson Correlation	1	,046
	Sig. (2-tailed)		,577
	N	152	152
LOYALTY PROGRAM	Pearson Correlation	,046	1
	Sig. (2-tailed)	,577	
	N	152	154

Regarding the correlation between education and loyalty program there are two findings: a) Weak correlation between the two variables (Pearson correlation is 0.046). Pearson correlation is positive indicating an analogous relationship, and b) Sig. 2-tailed is 0.577 (more than 0.05) not statistically significant correlation for the total population.

Correlations			
		STATUS	LOYALTY PROGRAM
STATUS	Pearson Correlation	1	-,098
	Sig. (2-tailed)		,228
	N	154	154
LOYALTY PROGRAM	Pearson Correlation	-,098	1
	Sig. (2-tailed)	,228	
	N	154	154

Regarding the correlation between status and loyalty program there are two findings: a) Weak correlation between the two variables (Pearson correlation is -0.098). Pearson correlation is negative indicating a reverse analogous relationship, and b) Sig. 2-tailed is 0.228 (more than 0.05) not statistically significant important correlation for the total population.

## References

- [1] Sarantopoulos, P., Kioses, L. and Doukidis, G., (2013) 'IELKA's White Paper Series: Productivity and Efficiency in Grocery Retail'. Available at: <http://www.ielka.gr/wp-content/uploads/2013/07/Retail-Productivity-and-Efficiency-White-paper.pdf> (Accessed: 5 June 2017)
- [2] Bettini, O. and Dever, J., (2012) 'Greek Retail Foods', Available at: [https://gain.fas.usda.gov/RecentGAINPublications/RetailFoods\\_Rome\\_Greece\\_6-13-2012.pdf](https://gain.fas.usda.gov/RecentGAINPublications/RetailFoods_Rome_Greece_6-13-2012.pdf) (Accessed: 21 May 2017)
- [3] Sheth J.N., Sisodia R.S., (1999), *The Changing Face of Retailing, Mastering Marketing*, Pearson Education, p. 205
- [4] Polymeridou K., (2018), *When Food Retail Stores and Consumers Communicate*, Marketing Week, Issue 1535 (Greek)
- [5] Ridge, M., Johnston, K. A. and O'Donovan, B., (2015) 'African Journal of Business Management -The use of big data analytics in the retail industries in South Africa', 9(19), pp. 688-703. doi: 10.5897/AJBM2015.7827
- [6] Marr, B., (2015) 'Big Data: A Game Changer in the Retail Sector', Forbes.com. Available at: <http://www.forbes.com/sites/bernardmarr/2015/11/10/big-data-a-game-changer-in-the-retail-sector>
- [7] Wedel M. and Kannan P.K., 2016, *Marketing analytics for data-rich environments*, pg.(1), viewed at 14th of June at: <https://www.rhsmith.umd.edu/files/Documents/Departments/Marketing/wedel-kannan-jm-2016-final.pdf>
- [8] Marr B., Op. Cit.
- [9] Holmström F., (2017), *Big Data and smart solutions for customer loyalty*, viewed at 25th of March 2018 at: <https://www.liveadmins.com/blog/big-data-and-smart-solutions-for-customer-loyalty/>, p.1.
- [10] Baroudi R., (2014), *Key performance indicators Winning tips and common challenges*, Performance, Volume 6, Issue 2, May 2014
- [11] Rothaermel F.T., (2008), *Competitive Advantage in Technology Intensive Industries, Technological Innovation: Generating Economic Results Advances in the Study of Entrepreneurship, Innovation and Economic Growth*, Volume 18, 201-225, Elsevier Ltd.
- [12] Hoffmann, N., Platen, A. and Wirtschaftsuniversitat Wien, (2013) *Loyalty programs in retailing: a comparison of stand-alone and multi-partner programs* Available at: <http://eds.a.ebscohost.com/eds/ebookviewer/ebook/bmxlYmtfXzcwNDc2OV9fQU41?sid=75197e73-cfb7-4430-aef4->

7a44d62a592b@sessionmgr4008&vid=8&format=EB&rid=1 (Accessed: 5 June 2017)

- [13] Petruscu M. and Lauer B., 2017, Qualitative marketing research: The state of journal publications, viewed at 14th of June at: <https://nsuworks.nova.edu/cgi/viewcontent.cgi?article=2481&context=tqr>
- [14] Ghaleb Magatef Elham Fakhri Tomalieh, S., (2015) 'The Impact of Customer Loyalty Programs on Customer Retention', *International Journal of Business and Social Science*, 6(81). Available at: [http://ijbssnet.com/journals/Vol\\_6\\_No\\_8\\_1\\_August\\_2015/8.pdf](http://ijbssnet.com/journals/Vol_6_No_8_1_August_2015/8.pdf) (Accessed: 5 June 2017)
- [15] Nunes, J. C. and Drèze, X., (2006) 'Is Betraying You', *Business*, 84(4), pp. 124-131. Available at: [http://i.bnet.com/pdf/174977-Your\\_Loyalty\\_Program\\_Is\\_Betraying\\_You.pdf](http://i.bnet.com/pdf/174977-Your_Loyalty_Program_Is_Betraying_You.pdf)
- [16] Kahn, B.E., (1999), Brand Strategies and Consumer Behavior. In: Financial Times, ed. Mastering Marketing. Prentice Hall, pp.108-114. Kapferer, J.N., (1999). Making Brands Work Around the World. In: Financial Times, ed. Mastering Marketing. Pittman Publishing, pp. 23-28.
- [17] Nunes, J. C. and Drèze, X., Op. Cit.
- [18] Gaur A.S. and Gaur. S.A. (2009), *Statistical Methods for Practice and Research, A Guide to Data Analysis using SPSS, Response / SAGE Publications*, 2nd edition