TECHNICAL UNIVERSITY OF CRETE
SCHOOL OF PRODUCTION ENGINEERING &
MANAGEMENT

HOW TRUST AND ITS NEW DYNAMICS IN SOCIAL MEDIA AFFECT CUSTOMER CHURN

ELENI ANGELAKI

ΣΥΝΤΟΜΗ ΠΕΡΙΛΗΨΗ ΔΙΔΑΚΤΟΡΙΚΗΣ ΔΙΑΤΡΙΒΗΣ

How trust and its new dynamics in social media affect customer churn

Η παρούσα διδακτορική διατριβή εξετάζει το ρόλο της εμπιστοσύνης στο νέο περιβάλλον των κοινοτήτων εμπορικού σήματος στα μέσα κοινωνικής δικτύωσης.

Οι επιχειρήσεις χρησιμοποιούν τα νέα τεχνολογικά μέσα, όπως το διαδίκτυο, στην προσπάθεια τους να προσεγγίσουν υπάρχοντες και νέους πελάτες. Με την έλευση του παγκόσμιου ιστού 2.0 (Web 2.0) δημιουργήθηκαν οι κοινότητες εμπορικού σήματος στα μέσα κοινωνικής δικτύωσης. Οι κοινότητες αυτές παρουσιάζουν ορισμένα χαρακτηριστικά που τις διαφοροποιούν από τις κλασσικές κοινότητες εμπορικού σήματος (διαφορετική αλληλεπίδραση μεταξύ των μελών, δική τους γλώσσα επικοινωνίας, ιστορία και παραδόσεις της κοινότητας, μέλη βοηθούν τα άλλα μέλη στην ενσωμάτωση και παραμονή τους στην κοινότητα). Επίσης, εμφανίζουν κάποια μοναδικά χαρακτηριστικά (μοναδικό περιεχόμενο, έλλειψη ιεραρχίας μεταξύ των μελών, μια βάση μελών που αριθμεί εκατομμύρια, προσαρμοσμένο περιεχόμενο ανάλογα με τα μέλη και διαφορετική αφήγηση σύμφωνα με τις προτιμήσεις του κάθε μέλους, άμεση σύνδεση με χιλιάδες άλλες σχετιζόμενες κοινότητες εμπορικού σήματος). Τα μέλη των κοινοτήτων αυτών διαχωρίζονται σε ενεργά και σε παθητικά βάση των δραστηριοτήτων που αναπτύσσουν μέσα σε αυτές τις κοινότητες. Επίσης, στις συγκεκριμένες κοινότητες εμπορικού σήματος στα μέσα κοινωνικής δικτύωσης, τα μέλη αναπτύσσουν συναισθήματα τα οποία ενισχύουν την εμπιστοσύνη προς το προϊόν/υπηρεσία. Ακόμα τα συγκεκριμένα μέλη στις κοινότητες εμπορικού σήματος στα μέσα κοινωνικής δικτύωσης παρουσιάζουν κάποια ατομικά χαρακτηριστικά, τα οποία επηρεάζουν την αλληλεπίδραση τους μέσα στην κοινότητα και κατ' επέκταση και την σχέση τους με την εταιρεία που υποστηρίζει η κοινότητα. Τέτοια χαρακτηριστικά είναι όπως οι προσωπικοί στόχοι που έχουν κατά την είσοδο τους σε μια αλληλεπίδραση με άλλο μέλος/η (σχεσιακή ανταλλαγή), ο ατομικός προσανατολισμός που παρουσιάζουν κατά τη διάρκεια της επικοινωνίας τους, το επίπεδο ανταπόκρισης και αμοιβαιότητας που εκδηλώνουν κατά τη διάρκεια μια

σχεσιακής ανταλλαγής αλλά και το επίπεδο συμμετοχής τους στις συγκεκριμένες κοινότητες..

Η παρούσα διδακτορική διατριβή δείχνει ότι τα ατομικά χαρακτηριστικά ενός ατόμου μπορούν να επηρεάσουν το επίπεδο εμπιστοσύνης προς την εταιρεία με το αντίστοιχο εμπορικό σήμα. Πιο συγκεκριμένα, ο ατομικός προσανατολισμός και οι προσωπικοί στόχοι ενός ατόμου που επιδιώκει να επιτύχει στην αλληλεπίδρασή του με την εταιρεία επηρεάζουν το επίπεδο εμπιστοσύνης προς αυτή. Επιπλέον, η ίδια η συμμετοχή στην κοινότητα εμπορικού σήματος στα μέσα κοινωνική δικτύωσης αυξάνει περαιτέρω το επίπεδο εμπιστοσύνης προς την εταιρεία. Πρόσθετες δραστηριότητες στην κοινότητα, όπως η δημοσίευση στον τοίχο της κοινότητας εμπορικού σήματος στα μέσα κοινωνική δικτύωσης, έχει μια θετική επίδραση στο επίπεδο της εμπιστοσύνης του προς την εταιρεία με το εν λόγω εμπορικό σήμα.

Επιπροσθέτως, παρατηρούμε ότι σε κάθε αλληλεπίδραση που λαμβάνει χώρα στην κοινότητα εμπορικού σήματος στα μέσα κοινωνικής δικτύωσης, εάν ένα μέλος εμφανίζει μια συμπεριφορά εμπιστοσύνης σε ένα άλλο μέλος, το τελευταίο μέλος θα ανταποδώσει περισσότερο. Αντίθετα, παρατηρείται ότι μια καινούργια αλληλεπίδραση με νέα μέλη δεν επηρεάζεται από μια προηγούμενη επιτυχημένη αλληλεπίδραση με άλλα μέλη της κοινότητας αλλά εξαρτάται περισσότερο από το εκ φύσεως επίπεδο εμπιστοσύνης που έχει το άτομο που αλληλοεπιδρά.

Επιπλέον, στην παρούσα διδακτορική διατριβή, διαπιστώνεται ότι η υψηλότερη εμπιστοσύνη στην εταιρεία συνδέεται με ένα αυξημένο επίπεδο αγοραστικής πίστης. Αυτή η υψηλότερη εμπιστοσύνη προέρχεται από τη συμμετοχή στην κοινότητα εμπορικού σήματος στα μέσα κοινωνική δικτύωσης. Αυτή η αύξηση της εμπιστοσύνης στην εταιρεία, λόγω της συμμετοχής στην κοινότητα εμπορικού σήματος στα μέσα κοινωνικής δικτύωσης, φαίνεται να μειώνει την πιθανότητα ενός μέλους να σταματήσει να αγοράζει προϊόντα/υπηρεσίες από την εταιρεία με το εν λόγω εμπορικό σήμα.

The School of Production Engineering and Management nominated the following persons to serve as the Doctoral Committee:

Doctoral Committee			
1	Constantin	Zopounidis	(supervisor)
	Technical University of Crete	School of Production Engineering and Management	Full Professor
2	Michael	Doumpos	(advisor)
	Technical University of Crete	School of Production Engineering and Management	Full Professor
3	Chrysovalantis	Gaganis	(advisor)
	University of Crete	Department of Economics	Associate Professor
4	Emilios	Galariotis	(committee member)
	Audencia Business School	Finance Department	Full Professor
5	Evangelos	Grigoroudis	(committee member)
	Technical University of Crete	School of Production Engineering and Management	Full Professor
6	Georgios	Atsalakis	(committee member)
	Technical University of Crete	School of Production Engineering and Management	Assistant Professor
7	Dimitrios	Niklis	(committee member)
	University of Western Macedonia	Department of Accounting & Finance	Assistant Professor

Acknowledgments

Table of Contents

List of Figures

List of Tables

Chapter 1: Introduction

Nowadays the world wide web provides great opportunities for finding, researching and purchasing product and services. However, for a customer to place an order, he/she should trust the merchant first. Trust can be described as a belief or expectation that the offer of the seller can be relied upon and a seller will not take advantage of the customer vulnerability. Trust affects any kind of relationship in which one party cannot control the actions of the other party and these actions can lead to harm for the first party. Consistent with this line of thought, trust to the vendor is a prerequisite for a purchase.

Contrary to the traditional offline communication, today's vendors use the new technological means such as the internet in an effort to reach existing or new customers. One novel construct which is employed in an incremental frequency by vendors is the creation of a brand community on social media platforms. The advent of world wide web 2.0 gave new possibilities for communication in such constructs and revolutionized their role in brand marketing. Social media-based brand communities present some characteristics that differentiate them from traditional brand communities, such as an online interaction of members, which builds a conspicuous and unique social identity and consciousness of kind, the existence of two kind of members, moderators and simple members which are not hierarchically organized, the existence of oppositional brand loyalty and of common rituals and traditions and a sense of moral responsibility to help with the integration and the retention of other members. Moreover, brand communities on social media exhibit five unique structural dimensions. They contain a unique social context, lack a clear hierarchical structure, have millions of members, present a customizable and member-specific content and storytelling and can be linked with myriad of affiliate brand communities instantly.

Furthermore, the members of the brand communities can be split in two categories, namely the passive and active members. The categorization of the members in these two classes is based on two distinct criteria, the frequency of the interaction and the kind of the activities they perform in the community. The higher the number of

interactions in the brand community, the more active a member is. Concerning the type of activities, a passive member utilizes available content, performs activities pertaining to content organization and interacts one on one with his/her friends, whereas an active member performs the same function with the addition of community activities, such as distributing user generated content to the whole site audience and public comment posting. The status of each member and the interrelations that develop in a social media-based brand community alter through trust creation and trust transfer the perception of the individual member for the brand.

In order to understand better this influence, we need to examine the emotion that developed during each of this interaction which can also be called "relational exchange". During each relational exchange, the participants develop two kind of emotions, global and specific ones. Global emotions are transitory, and they do not have an effect on the interaction of the individual in the long-term, whereas specific emotions are emotions leading to enduring affecting sentiments about social object, such as relationships groups and networks. Thus, in a relational exchange, actors interact and develop emotions based on its outcomes. After a positive outcome, they have an emotional uplift, whereas after a negative outcome they have an emotional down. This emotional reward or punishment is both internal, self-induced and is valuable for the participant, even if it cannot be monetary measured. Therefore, a customer will account for these emotions before making a choice to purchase a product from a vendor.

Lawler (2001) suggests that emotions can differ in magnitude and in persistence based on the mode of the exchange from which they come from. According to Lawler (2001), productive exchanges, in which the actors cooperate for achieving a common goal, produce the stronger and more persistent emotion, whereas generalized exchanges, in which one individual or a member of a network or group receives unilateral benefits from a third unlinked to the exchange party, produce equally strong but far less persistent emotions. Research has shown both active and passive members of a social media-based brand community can develop affectionate emotions toward the brand by transforming the generalized exchanges in which they interact

with other members to productive ones (Sashi, 2012). This, in turn, will increase trust toward the brand through trust transfer.

Trust transfer can occur through three different channels to a customer-member of a social media-based brand community: 1) from offline to online content, 2) from other members of social media-based brand community, and 3) from the community as a whole. All kinds of trust transfer increase brand trust and brand loyalty. Given the crucial role of trust in the completion of a purchase, a higher level of trust entails a higher number of purchases (or repeat purchases) and consequently, a higher revenue for the vendor. Given that brand loyalty is essentially linked to the ability of the vendor to retain the customer. A higher level of trust is expected to lead to a higher brand loyalty and higher customer retention. Note that when we speak for an online setting on a social media platform, trust transfer is a little more complicated and is affected by three additional factors, 1) institutional based trust, which refers to the security an individual feels about a situation because of safety nets, guarantees and other structures, 2) the social presence of the website, which refers in the type of signals transmitted in a communication medium (the more the social design features, the bigger the social presence and the easier for an individual to form a trustworthy relationship, as the perceived social distance is short) and 3) affect generalization that characterizes a phenomenon in which affect towards one attitude can spread to other related attitudes.

Members of a brand community are characterized not only by their level of participation, but also by other individual characteristics, such as the personal goals they have for entering to a relational exchange, the individual orientation they present during their communications, the level of feedback and reciprocity they exhibit during their relational exchanges and the level of involvement they have with the brand.

Involvement as a notion is close to the concept of participation, but the two terms do not represent the same element. The level of involvement of an individual is characterized by what we call customer engagement. Customer engagement can be defined as activities that foster interaction which strengthen the psychological and physical investment a customer has with the brand. The online environment of a

social media-based brand community makes this definition highly relevant as the customer participation is easier online and the mere existence of brand community facilitates a knowledge exchange process, while, at the same time, the increasing number of interactions between participants demands a higher personal investment from the members. Involvement creates a sense of ongoing psychological commitment to the brand by focusing the clients' thoughts, feelings and underlined behaviors on it.

Involvement is very important for bond formation with the brand as its existence leads to stronger and more emotional bonds. This happens as individuals who exhibit such a high level of attachment and commitment can pass from a generalized commitment to a productive exchange in their interaction with the brand and everyone associated with it. Thus, customer engagement lead to both transactional and emotional bonds. Customers who develop only transactional bonds can be transformed to loyal customers during a long-term relationship with the vendor, whereas customers who develops strong emotional bonds can be turned into fans during a long-term relationship with the vendor. This happens as the former category of individuals develop what we call calculative commitment to the brand, which is characterized by a more rational and economic-based reliance on the brand, whereas the latter class of individuals develops what we call affective commitment, which is characterized as the more emotional-based relationship and affection the individual has for the brand.

Trust, personal interaction and reciprocity are affecting directly the formation of affectionate bonds, while trust affects indirectly calculative commitment by the shaping of the perceived switching costs. This bond formation is very important as we assume that, in conjunction with trust, can affect and diminish the possibility of a customer to churn. By churn, we refer to the annual turnover of the market base of a vendor, which in a contractual setting represent the disengagement from the contract and in a non-contractual setting is characterized by the lack of repeat purchases from the vendor. The notion of churn is very important for businesses as research (Seo, Ranganathan, & Babad, 2008; Siber, 1997) has shown that the cost of acquiring a new customer can greatly exceed the cost of maintaining the customer base.

In the first part of our thesis, we will try to elaborate on a research proposal concerning trust and customer loyalty. This exposition concerns the examination of three elements about the relationship between the above-mentioned subjects, namely the social factors that contribute to the building of trust, their interrelation between brand trust and brand loyalty and the mediating role of brand communities in the whole process.

In order to examine these elements our methodological approach is twofold. First, we create an experimental game through we can assess the effect of the natural level of trust of an individual to the interactions developed in a social media-based brand community, the influence of each trusting interaction in any subsequent interaction with the same community member or a different one and the level of reciprocity exhibited in such interactions. This test allows us to have a complete picture of the micro dynamics that develop in the communications inside a social media-based brand community and how these interactions contribute to the level of trust to the brand and the possibility of the customer to churn. As a second tool we use an independent questionnaire which assess other elements (such as the individual characteristics of the respondent) and portrays their possible link to brand trust, brand loyalty and an individual's possibility to churn.

For contacting our analysis, we focused on a representative company of the supermarket business sector in Greece (SYN.KA Super Markets) and we use a large sample consisting of two distinct sub-groups. The first group includes the participants in the experimental game numbered at 174 which also is community members and answered the independent questionnaire as well (of those 137 gave a properly filled questionnaire). The second group included customers and potential customers of SYN.KA Super Markets who received and filled a paper version of the independent questionnaire numbered at 504 and did not participate in the social media-based brand community of SYN.KA Super Markets (except for 10 individuals who did participate). This distinct nature of the two sample groups allows us to examine the impact of the participation to the social media-based brand community for an individual in his/her brand trust formation and the possibility to churn.

As methods of analysis of our collected data, we employ Partial Least Squares Regression and most importantly, Ordinal Regression which fits best the nature of the data we have consisting mainly of ordinal and categorical variables and allows us to examine the existence of potential relationships among them. In addition, we create a universal churn predictor and we compare how the participants in the social media-based brand community fare in comparison with the respondents who are not community members.

Our results show that the individual characteristics of a person can affect the level of brand trust. More specifically, the personal orientation of an individual and the personal goals which tries to achieve in his/her interaction with the brand, influence the level of trust. Moreover, participation in the social media-based brand community further increases the level of brand trust. The performance of additional related community activities, such as public posting, has an incremental positive effect to the level of trust to the brand. Furthermore, we observe that on the micro level of each interaction that takes place in the social media-based brand community, if a member shows a trusting behavior to another member, the latter will reciprocate more. On the contrary, the effect that this successful interaction has to similar interaction with other members is not affected by the increased level of trust (due to the previous successful outcome) but is more a result of the natural level of trust of the individual. In addition, in our thesis, a higher trust to the brand is shown to be linked to an increased level of brand loyalty for the said individual member. This higher trust could be the result of participation in the social media-based brand community. This increase in brand trust, due to the community participation, can also lower the possibility of the member to churn.

In the second part of our thesis, we examine the role of different kind of interpersonal bonds which develop in a social media brand community context. More particularly, we investigate whether the environment of a brand community in social media fosters the development of emotional and transactional bonds and serves as an incubator of interpersonal communication and personal emotions. We additionally observe, how this emotional and transactional bonding affects the perception of the brand in the customer-community members' minds.

We use the same methodological tools applied in the first part in order to identify potential links between different characteristics of a respondent and bond formation and the effect of the bonds formed to the level of brand trust, brand loyalty and the possibility of the respondents to churn.

In this part of our research, we identified that bond formation of a customer with the brand is affected by the individual characteristics of a person (personal goals, individual orientation and involvement). Participation in the brand community of the company on social media and the involvement of the person in community-related activities, such as public posting, leads to the formation of stronger and more emotional bonds with the brand. This finding is very important as we observe that stronger and more emotional bonds of a customer to the brand entail a higher level of brand trust and a lower possibility of the said customer to churn.

Our results have some important managerial and professional implications, showing that a vendor can retain an increased part of its customer base, by fostering its social media-based brand community and by cultivating the active participation of its customers in it. Through customer participation, the vendor can increase the brand trust of the customers and as a result, improve the word-of-mouth communication to new potential customers. Finally, based on the analysis of the micro level of customers' interactions in the community and its implications for the brand, we can support that a vendor can increase its revenues by providing small discounts or gifts to the customer. Further research could focus on the cultural aspects and their effect on the novel construct of the brand community, which we analyze in our research, and on new social constructs of specialized social media platforms, which restrict or modify the means and the channels of communication, in comparison with a traditional social media platform, such as Facebook that we examine.

In the following (second) chapter, we make an analytical literature review. More specifically, it discusses the particular characteristics of a social media-based brand community and the dynamics developing in it. The potential links between social media-based brand communities, trust and brand loyalty are also pointed and explained. Moreover, it is presented how people develop emotions and how trust is

created both in an online and in an offline setting. We additionally refer to alternative ways that trust can build up through transfer by other people or contexts. We analyze how customers are led to churn and we examine what is the role of trust the brand communities and social media-based brand communities in this process. In the third chapter, we present our research hypotheses and the areas in which we expect to contribute with our research. The fourth and fifth chapters discuss the existing literature on the measurement methods of elements presented in our theoretical framework and refer to the measurement methods that we use in our work with the former chapter focusing on trust and the latter chapter mentioning every other element. The sixth chapter describes the data and the methodology and. In the seventh chapter, a presentation of our empirical results and a discussion about them follows. A separate chapter which summarizes the conclusions of this thesis ensues. As part of the same chapter and as a last step, the managerial implications of this research and potential research questions covering open gaps in the literature for future research are presented.

Chapter 2: Literature Review

In the second chapter, the existing literature concerning trust, trust formation, the social media-based brand communities and their dynamics, churn and the particular features of the supermarket business sector are thoroughly discussed.

2.1 Trust and how it is built in social media[1]

There is little doubt that the online interface provides great opportunities for both consumers and vendors worldwide. Extended choice ranges, better prices and new products become available to consumers from physically isolated areas (Hamel & Sampler, 1998). For example, someone can save by buying books from Amazon.com more than 20% than by buying them from its local bookshop (this difference is still significant even if we account for the costs of express delivery in the online shop). Even if prices are favorable and better prices are a must to attract customers, to just have better prices is not always sufficient. Doney & Cannon (1997) qualify trust as a major contributor for purchase decisions. In other words, for a customer to place an order with a vendor, the customer must first trust the merchant.

Trust can be defined as a belief or expectation that the word or promise of the seller can be relied upon and the seller will not exploit the consumer's vulnerability (Geyskens, Steenkamp, Sheer, & Kumar, 1996). Trust affects any kind of relationship in which there is no direct control over the actions of the second party and the outcome could be potentially disadvantageous (Mayer, Davis, & Schoorman, 1995). From this definition, it can be inferred that e-commerce and the internet as a whole is affected by trust. Trust to the online vendor is a prerequisite for online transactions (Chien, Chen, & Wu, 2013). Proving this point, Quelch and Klein (1996) have shown that trust is a critical factor in stimulating purchases on the internet. For example, Jarvenpaa and Todd (1997) have found that in the US-based online market, people new to internet-based shopping found the online shopping fascinating due to the range of products available on the web, but they were hesitant to proceed to a purchase from

---

[1] As social media, we can describe "a group of internet-based applications that builds on the ideological and technological foundations of Web 2.0, and it allows the creation and exchange of user-generated content" (Kaplan & Haenlein, 2010, p.61). This definition implies that the content is not consumed by people passively. Instead, it is produced, shared and consumed by users actively generating content (UGC).

overseas sites. There are other surveys confirming this distrust among consumers about internet-based merchants[2]. Chien et al., (2013) have reaffirmed that trust to the other party (vendor) plays a significant role for a customer's online purchase intention[3].

This critical role of trust in attracting new customers in e-commerce has led many researchers to examine this link. Jarvenpaa, Tractinsky, and Saarinen (1999) created and practically examined a theoretical model about the prerequisites and the outcomes of building consumer's trust. They found that reputation and size influence the customer's trust in a web store. This research points to the fact that electronic shops with a better reputation[4] and a larger size are considered more trustworthy by surfers. They also find that the degree of consumer's trust influences their perceptions of the risk involved in purchasing from an e-shop.

According to the theory of reasoned action (Fishbein and Ajzen, 1975) and the theory of planned behavior (Ajzen, 1985), such a perception can shape a customer's attitude, influencing, in turn, the customer's behavior, namely the probability of an actual purchase and her/his evaluation of the vendor and its site. Garbarino and Johnson (1999) have shown that trust and the perceived satisfaction from it, influence the commitment in customer relationships. McKnight, Choudhury, and Kacmar (2002) have pointed out that when customers trust the online vendor, they tend to conduct transactions with the e-shop continuously. In other words, increased trust leads to increased customer loyalty[5] for the vendor. Moreover, Liu, Marchewka, Lu, and Yu (2005) have demonstrated the positive effect of trust on repeat purchasing, website visiting, and website recommendation to other online users. More recently, Sashi (2012) has shown that trust as part of a process for creating satisfaction to a customer could forge both emotional and relational bonds, effectively creating a calculative and

---

[2] For more on this topic, see Culnan & Armstrong, (1999)

[3] Hajli (2014) also notes that this link between trust to the vendor and intention to buy online is not only significant but also a direct one.

[4] By reputation we mean the long-term perception of the customer about the shop and not the short-term perception from fluctuations in product quality.

[5] See Chaudhuri A. & Holbrook M. B., 2001; Chiu, Huang, & Yen, 2010; Garbarino & Johnson, 1999; Harris & Goode, 2004; Hong & Cho, 2011; Kim, Chung, & Lee, 2011; Zhimin Zhou, Zhang, Su, & Zhou, 2012; Zhongyun Zhou, Jin, Vogel, Fang, & Chen, 2011

affective commitment to a customer[6]. Finally, Jarvenpaa, Tractinsky, and Vitale (2000) have also shown that cultural elements affect the level of trust among internet customers. More specifically, they have shown that the level of individualism increases the level of consumer trust to electronic vendors. Moreover, they have found an increased trust in electronic vendors belonging to the same societal background in collectivist societies[7]. Finally, it has also been shown that cultural elements play a role on the value[8] that a consumer anticipates to have received from a purchase (Richard & Habibi, 2016).

2.2 Brand communities, social networks and social media-based brand communities

The creation of consumer communities was a widespread phenomenon during the last century. Since the mid '90s, consumer communities have experienced a renaissance and have since risen in quantity and relevance. In this development, two factors have contributed significantly, the extensive and still growing accessibility of the internet and the continuous and incremental investment on web technologies on the part of the businesses (Schouten & McAlexander, 1995). In such communities, consumers gather, interact and participate reciprocally without the need from the company to provide them any additional incentives for the relational exchange (Ashley, Noble,

---

[6] In this paper, Sashi has shown that depending on the nature of the customer (a delighted or a transactional one) this increase in the perceived satisfaction can transform the customer to a loyal customer or fan through a six-stage process (This is called by Sashi as the customer engagement cycle which consists of 1) connection, 2) interaction, 3) satisfaction, 4) retention, 5) commitment and 6) advocacy).

[7] Individualism can be characterized as an inclination for a loosely-knit social framework in which every person is expected to care only for themselves and their families. Its opposite, collectivism, depicts an inclination for a tightly-knit social framework in which every person can hope their relatives or members of a particular in-group to care for them in exchange for unquestioning loyalty (Hofstede, 2001). On the level of the individual, "the self is served in individualistic cultures by being distinct from and better than others, in order to accomplish the culturally mandated task of being independent and standing out. By contrast, the self is served in collectivistic cultures by being accepted by others and by focusing on negative characteristics, in order to accomplish the culturally mandated task of being interdependent and blending in" (Gelfand et al., 2002, p. 835). Here, it should be noted that collective behavior is not the major concept that differentiates individualism from collectivism. As with society members in collectivistic cultures, society members in individualistic cultures can exhibit collective behavior. Individualism and collectivism differ on the way individuals perceive themselves.

[8] We can discern two kinds of value from purchases (consumption): hedonic and utilitarian. Cultural elements are important factors affecting particularly hedonic consumption and the hedonic value of a purchase. However, for Okada, (2005), humans associate hedonism and hedonic consumption with feelings of guilt. Therefore, in high hedonic situations, consumers need to justify such consumption by emphasizing more the utilitarian aspects of every purchase. So, cultural elements are possible to affect the perceived value from every purchase.

Donthu, & Lemon, 2011; Chan & Li, 2010). Ganley & Lampe (2009) have stated that the success of such consumer communities, especially on the internet, show that a large impact is created in the business community by this form of online organization.

Brand communities are a special subgroup of consumer communities which bind brand and community together (Muniz & O'Guinn, 2001). These groups offer many advantages[9] to a vendor and serve as a means of building strong and lasting relationships with customers (Algesheimer, Dholakia, & Herrmann, 2005) . The rising importance of brand communities also goes hand to hand with the increase in the number and size of the online social networks. For instance, Facebook has 1.71billion monthly active users (Facebook, 2016), LinkedIn has 106 million active users (LinkedIn, 2016) and Twitter has 313 million active users (Twitter, 2016). These figures show the ever-increasing importance of the social media in the online environment. As Patterson (2012) has put it, "along with other forms of computer mediated communication, they (social networking sites) have transformed consumers from silent, isolated and invisible individuals, into a noisy, public, and even more unmanageable than usual, collective" (p. 527). As a result, current marketing strategies always entail some exploring and seizing of such online marketing opportunities.

A brand-related community in which users serve their interest for a brand, exchanging information and knowledge or they simply express their affection for a specific brand thrive in such virtual environments like the internet where users often gather together with a focus on a specific brand (Woisetschläger, Hartleb, & Blut, 2008). This possibility of a virtual presence for a brand community together with the vast expanse of the social media potentially offers a multitude of benefits to marketers (Thompson & Sinha, 2008; Zaglia, 2013). A lot of research has taken place on the existence of social processes within brand communities and it had concluded that social exchanges in brand communities exist throughout different product categories, branches, cultures and different types of communities. The latter includes offline and online brand communities (Muniz & O'Guinn, 2001; Muniz Jr & Schau, 2005), small-group brand

---

[9] For more on the advantages, see, for example, Brown, Kozinets & Sherry, 2003

communities (Bagozzi & Dholakia, 2006a), virtual large network brand communities (Adjei, Noble, & Noble, 2010), and brandfests[10] (Schouten, McAlexander, & Koenig, 2007).

Before proceeding our discussion for social media-based brand communities, it would be proper to refer briefly to the structure and characteristics of the social media. Social network theory postulates that human behavior is embedded in a network of interpersonal relations (e.g. Granovetter, 1985), and prior research demonstrates that social networks influence their members' behavior (de Valck, van Bruggen, & Wierenga, 2009). As the number of people participating in social media increases and the amount of time spend in these networks grows, the tenets of social network theory gain increased importance for describing them. As Raab and Kenis (2009) have stated our world is developing into a society of networks.

Due to the ever-increasing significance of social media in our contemporary society, it is good to present some characteristics that they exhibit. These characteristics of each social network derive from the result of the number of connected and interacting participants (either individually or in the forms of groups) along with the patterns of connections and relations developed among them (Doyle, 2007). For instance, there are social media which foster friendships between individuals, relation between groups and business relations between corporations (Mizruchi & Galaskiewicz, 1993; Raacke & Bonds-Raacke, 2008; Rapoport & Horvath, 1961). In other words, social media are virtual places that try to satisfy the needs of a specific population; on such platforms people with similar interests gather to communicate, exchange contact details, build relations and share and discuss ideas (Raacke & Bonds-Raacke, 2008). De Valck et al. (2009) describe social networks also as virtual communities of consumption, which feature characteristics like high consumer knowledge and companionship, and therefore, influence consumer behavior. Among other activities, users can interact, share stories in written form, or visually, in the form of pictures and videos (Cheung & Lee, 2010).

---

[10] Brandfests are events that bring consumer together in geo-temporarily concentrated events and entail coordinated activities and happenings. Their existence is defined by four discrete characteristics, 1) they are geographically concentrated, 2) they have temporality, 3) they have specific social context and 4) their participants form a unique consciousness of kind (Mittal, 2010).

In terms of information technology (IT), social networks are online services that allow individuals 1) to establish a public or semi-public profile within a given system, 2) to compile a list of other users with whom they form a connection and 3) to monitor and follow their list of connections and those created by others within the system (Boyd & Ellison, 2007). This definition of social media in terms of IT can make us derive the main distinct characteristics that differentiate them from other forms of expression on the web. Firstly, in social media, users create profiles with their real identities, whereas in other applications of the web, the use of pseudonyms is common spread. This characteristic enhances the authenticity of interaction. Additionally, in juxtaposition to other forms of communication in the internet, profiles in social media often incorporate visual information, audio and video content, along with any text information. Last but not least, blogging, instant messaging, chatting, update notification for the profile of one's connections which are usually called "friends" in social media, planning meetings, contacting in participating in polls, playing interacting games with others, "check-in" to places are some of the common activities a member can undertake in such social networks. All these features became possible to materialize with the introduction of web 2.0 technology and participants in social media use them to pursue their objectives of socializing, content sharing and enjoying (Messinger et al., 2009). As a result, the increased interactivity and the personalization of access as it is expressed by these distinct features provide fertile ground for the rapid development of brand communities in social media.

Brand communities are all about communication and consumption. All kinds of brand communities are specialized consumer ones. This specialization lies in their consumer character and their members' common interest and enthusiasm for a brand (Albert, Merunka, & Valette-Florence, 2008a). The object of their focus differs (namely, the underlying product or product classes that the brand produces). Still, all brand communities contain three common markers, a) consciousness of kind, b) shared rituals and traditions and c) moral responsibility (Muniz & O'Guinn, 2001).

The first and foremost marker of a brand community is the consciousness of kind which describes the perception of common membership of participants and intersects with social identity theory (Bagozzi & Dholakia, 2006a). Members feel connected

15

with other members and distance themselves from outsiders (Bagozzi & Dholakia, 2006b). Thus, participants often derive a unique feeling of belonging from their membership to the brand community (Algesheimer et al., 2005).

A contributory factor which is inextricably linked to the consciousness of kind that the brand community members develops (Bagozzi & Dholakia, 2006b) is their consumers' perceptions and especially, their social identity. By social identity, it is described "the part of the individuals' self-concept which derives from their knowledge of their membership of a social group (or groups) together with the value and emotional significance attached to that membership"(Tajfel, 1981, p.255). Social identity is a construct that overlaps with consciousness of kind. Social identity can be construed in three parts, cognitive, evaluative and affective (Ellemers, Kortekaas, & Ouwerkerk, 1999). The cognitive part refers to the self-categorization of community members through individuals, namely people tend to identify similarities among members of their group and acknowledge differences to outsiders (Bagozzi & Dholakia, 2006b). The evaluative component entails the assessment of the community and one's membership in it (Ellemers et al., 1999). Finally, the affective component includes the positive feeling experienced by members based on the sense of belonging to a particular group. It also includes positive emotions toward other group members (Bergami & Bagozzi, 2000). A member of a brand community should exhibit all the three components.

Another marker of the brand community can be found in the shared rituals and traditions of the members. For example, such rituals and traditions could be celebrations around brand history and exchanges of brand-related stories (Muniz & O'Guinn, 2001). Moreover, members usually serve under a common banner of common values and behaviors like a common form of language or specific signs in their effort to distinct themselves from outsiders (Casaló, Flavián, & Guinalíu, 2008). In this way, they build a unique meaning of their community experience, a meaning which they transcend in and out of the borders of the community (Casaló et al., 2008).

Finally, moral responsibility exists among the community's members and it is expressed in many ways, like in the form of supporting existing members or

integrating new members into the community (Muniz & O'Guinn, 2001). This feeling of moral responsibility makes the members of a brand community feel morally committed to other members and the community as a whole (Casaló et al., 2008).

Now, it would be good to show how these characteristics of a brand community transcend to the online environment of a social media-based brand community. First let's explain how such a transition takes place. For example, in a brand community on social media, the interaction of members is not in person as members communicate through a computer and rarely meet each other face to face but still, they develop a conspicuous and unique social identity and consciousness of kind (Sicilia & Palazón, 2008). In such a community, brand fans perceive these unique social identities with small friendship groups based on the virtual networks, with the brand and with the company, all in a system of interrelated bonds. Such multiple group affiliations represent common identities and it's easier to be network-based or similar to a friendship group, where both are linked in a chain of relationships (Bagozzi, Bergami, Marzocchi, & Morandin, 2012). Therefore, brand fans perceive a social identity with the brand community and with its social network environment separately, but simultaneously. This lead us to believe that social networks and brand communities are social constructs that overlap in many respects as both share the basic property of their members interacting one another. More particularly, brand communities and social networks are inextricably linked together as the brand communities' interactions are essential for the survival and success of social networks, whereas social relationships are critical for the success of a brand community as such communities are built around a brand but they ultimately grow and persist due to the relationships developed among their members (Jang, Olfman, Ko, Koh, & Kim, 2008).

In a brand community in social media, we can say that we have the realization of a groundbreaking social construct. Typically, in this construct (the social media-based brand community), there are two types of participants: the members which essentially represent potential clients and consumers and the brand which is effectively represented by the administrators or moderators of the community. In contrast to other brand communities, a social media-based brand community is characterized by lack of

hierarchy as in most times, the moderating and administrative role of some individuals is either lacking, hindered by the sheer number of members or is not controlled by the brand itself (senior members are attributed as administrators by other members of the community). Even in such a case, the brand could be considered as an active relational partner. Echoing Fournier (1998) arguments and based on the theories of animism, we can consider the brand as an active partner in an online context as consumers usually assign personality characteristics to brands (Aaker, 1997) and think about them as human characters (Blackston, 1993; Levy, 1985). Thus, every action of the brand in everyday life impacts its status in the community and the perception of its members.

To see how brand communities develop and flourish in social media one should note how they are built up and work. For example, in the social network LinkedIn, users join groups which focus on business events or shared interest. In Facebook, people choose to become fans of certain pages or members of subgroups. Therefore, we see that brand communities embedded in social media can have diversity of scope. One common feature of social media-based brand communities is that with the use of social networks, brand community members have turned to life-presenters who are happy to share the previously private and deeply personal moments (Patterson, 2012). On the other hand, brand communities embedded in social media can exhibit different characteristics based on the intensity and form of interaction and brand affection of the members. There are communities that emphasize the network of members' relationship (Adjei et al., 2010) like fan pages or, in contrast, give particular attention to the relations between individuals (Dholakia, Bagozzi, & Pearo, 2004). Along similar lines, research on attachment differentiate communities in common identity and common bond ones (Prentice, Miller, & Lightdale, 1994). In other words, a member's attachment could be attributed on the particular social identity which a member develops with the community as a whole or the bond which a member develops with individual members of the community respectively (Ren, Kraut, & Kiesler, 2007). Research has confirmed that all three community markers are present in both common identity and common bond brand communities. Consciousness of kind is expressed through the use of "we" or "us" to describe the community (Zaglia,

2013). These remarks, except for expressing the feeling of belonging, also include the existence of the cognitive component of social identity (Ellemers et al., 1999). Moreover, members of social media-based brand communities express their consciousness of kind through oppositional brand loyalty[11] (Zaglia, 2013). Oppositional brand loyalty does not only enhance consciousness of kind but also help members to develop a unique common language and in turn, create shared rituals and traditions[12]. Another element that indicates the existence of common rituals and traditions is the use of jargon (Zaglia, 2013). Moreover, as part of safekeeping these shared rituals and traditions in online communities, members always enforce rules of proper communication and appropriate behavior in the relational exchanges among members of the community (Zaglia, 2013). Finally, participants develop a sense of moral responsibility, the third community marker, in the social media-based brand community through their help with the integration and retention of other members, their support in the use of products and their general assistance to other members (Zaglia, 2013). All in all, we see that the three markers identifying a community as a brand community still persist in the social media context.

A community can be affected both from its intrinsic characteristics and the particular attributes of its members. The members of the brand community have some individual characteristics that affect their impact on the brand community itself. The first one is participation. In order for someone to be a member in a brand community, he/she needs to participate in it. Participation for our purposes in this text can be considered equal to membership. The membership in social media-based brand community can be assigned to an individual by simply clicking a "Like" on its homepage. Here, one could question how someone who just pressed the "like" button on a brand's community Facebook page can be considered a member of this brand community. Research (Relling, Schnittka, Ringle, Sattler, & Johnen, 2016) has shown that people who click like on a brand's Facebook page gain similar experiences as those in fan

---

[11] Faithful clients of a given brand may determine a significant segment of the importance of the brand and their feeling of self from their view of competing brands and may express their image devotion by energetically contradicting those competing brands. This practice is called oppositional brand loyalty (Muniz & Hamer, 2001)

[12] This happens as members create a differentiation between in-group and out-group individuals (Carlson, Suter, & Brown, 2008).

pages which are comparable with brand communities. Thus, it's safe to assume that by just clicking "like" on a brand's Facebook page, an individual actively seeks to become a member in the group, although the intensity of this participation can vary. As a result, the intent to participate in a social media based brand community could be measured by simple decisions like clicking the "like" button in the social platform, the sending of a request to join the community or the suggestion of a friend to participate (Relling et al., 2016).

As we mentioned above, the level of participation in a brand community can vary. There are users who actively participate and interact with other members of the community, whereas others stay passive and they do not contribute to the community. The former can be considered as highly involved and the latter as lowly involved.

The level of involvement as described by the frequency of interaction is very important for the formation of bonds in a social media-based brand community. First of all, it increases the information available to an individual member about other members, which, in turn, increases individual attachment to the community. More particularly, information about individual members and their unique attributes available through the interaction in such a community helps the members to personalize other members of the group, a process which cultivates emotional attachment to other members of the community. Research has shown that interpersonal bonds arise especially from exchanges of personal information and self-disclosure (Collins & Miller, 1994; Postmes, Tanis, & De Wit, 2001), activities that take place in the environment of such a community. Moreover, through the frequent interaction in a brand community in social media, members of a brand community in social media are easier to identify interpersonal similarities with other members in a community, an important process in the creation of attachment to other members. In more detail, we always perform interpersonal comparisons in our social life. These comparisons which describe the perception we have for others in our social environment, are the grist for conversation and are the basis for self-evaluation and friendship formation (Suls, Martin, & Wheeler, 2002; Wood, 1989). In fact, our similarity to other people is a major determinant of our interpersonal attraction to them. Similarity in personal attributes and in preferences has been shown to lead to a

positive evaluation of others and liking of them (Byrne, 1997; Newcomb, 1961). All these elements increase the attachment to each other to a group context (Hogg & Turner, 1985; Postmes et al., 2001). Finally, frequent interaction of one member with other members of the community increases the familiarity among members, an attribute which causes an increase in attachment between group members. This is what we call the "mere exposure effect" (Milgram, 1977; Zajonc, 1968) which applies equally to both groups and individuals and can be explained with the phrase "the more familiar one is with a person, the more likely one will like the person". In other words, the more individual members encounter one another and are exposed to each other activities, the more likely they are to communicate with each other and the more they will like and help each other (Festinger, Schacter, & Back, 1950). We expect that this effect applies in the context of a brand community in social media.

The type of activity that a member performs in the community plays also a crucial role. More specifically, we can discern between three kinds of activities for members of a social media-based brand communities. One kind of activities is the functional use of the community's web page which incorporates content utilization as well as all activities pertaining to content organization. There are also local social network activities which entail on-side interaction with one's friends. Finally, the last distinct kind of activities is the community activities which enclose distributing user-generated content that can be devoured by the site audience, membership to particular sub-groups for discussion or comment posting (Oestreicher-Singer & Zalmanson, 2009).

Users who are contacting only the first two kind of activities can be considered passive members and they are lowly involved to the activities of the community. On the contrary, users who are involved in all three types of activities can be considered active and highly involved (Oestreicher-Singer & Zalmanson, 2009). The latter group of members tend to form strong and lasting bonds with the brand and to acquire increased brand loyalty both in an offline (Mael & Ashforth, 1992) and online context (Jang et al., 2008; McAlexander, Schouten, & Koenig, 2002). Moreover, these active members are willing to repurchase the brand's product or service and exhibit lower price elasticity than do passive members and they are willing to pay a premium to

continue doing business with the referred retailers (Reichheld & Sasser, 1990). Active members are also crucial to the social media-based brand communities' online success. These are the individuals who will most probably provide the content which is of value to others, like answers to other members' questions (Blanchard & Markus, 2004; Rodgers & Chen, 2005) and open code and edits in community posts (Kittur, Chi, Pendleton, Suh, & Mytkowicz, 2007; Mockus, Fielding, & Herbsleb, 2002). Moreover, it is possible for these members to play a role of an ad hoc community administrator by helping enforce norms of appropriate behavior to other members (Smith, McLaughlin, & Osborne, 1977), by policing the community and sanctioning deviant behaviors (Chua, Wareham, & Robey, 2007) and by performing behind the scenes work to help maintain the functioning of the community (Butler, Sproull, Kiesler, & Kraut, 2007).Therefore, the actual level of involvement of a member to the community is described by the number and the kind of personal interactions with other members of the community as a whole. These interactions can take the form of personals posts, comments, feedback on other members' posts and comments and announcements on the brand community's homepage.

Additionally, members of the social media-based brand community develop both emotional and relational bonds with other members, the community as a whole and the brand itself which as we have mentioned above could be considered a separate entity. As suggested by Sashi (2012), there are people who connect to brand community in order to have a material benefit from this interaction. These people could exhibit some loyalty to the community as a whole or the brand but they do not form emotional bonds with the other members of the community, and they do not long for the wishes and the goals of the community. These people we could say that they could be called transactional members (Sashi, 2012) and they usually stay passive in their activity on the community. These people usually do not develop personal trust to the other members of the community or the community itself, but they exhibit what we call calculative trust, namely form a rational subjective assessment of the costs and benefits from any interaction for themselves (Williamson, 1985; Williamson, 1993) and of the possibility of cheating from the other party (Ratnasingam, 2005). On the contrary, there are members who actively participate in

the community and form emotional bonds with other members of the community, the community itself and the brand.

Based on the emotional part of the relationship between the member and the community, there have been theories explaining how attachment and engagement to the brand is created. One such theory is referring to what we call brand love. In this strand of the literature, the main concept is that consumers get attached to the community by doing activities in it that they love.

Ahuvia (2005) investigates the positions and the activities that consumers love and their role in the construction of a coherent identity narrative in the brand community. In his work, Ahuvia (2005) shows the role and significance of beloved objects and activities in structuring social relationships with brands. Moreover, Carroll & Ahuvia (2006) created a model that explained consumers' passionate emotional attachment to certain brands by including brand love in it. Brand love is greater for brands representing products, perceived as more hedonic versus products which have utilitarian value. Brand love is also greater for brands offering symbolic benefits.

In line with Ahuvia's (2005) research, there are lot of studies who confirm his results (e.g., Ahuvia, Batra, & Bagozzi, 2008; Albert, Merunka, & Valette-Florence, 2008b; Batra, Ahuvia, & Bagozzi, 2012; Heinrich, Albrecht, & Bauer, 2012). Moreover, similar notions like brand passion were created by subsequent research (Bauer, Heinrich, & Martin, 2007; Swimberghe, Astakhova, & Wooldridge, 2014).

In addition, consumers can develop negative emotions for a brand. These negative emotions can lead to extreme situations like anti-branding (namely, the creation of online places that target with negative attention a specific brand) (Krishnamurthy & Kucuk, 2009) or brand divorce (namely, a total disconnection from a brand which was loved in the past) (Sussan, Hall, & Meamber, 2012). Extreme negative emotions and generally, the negative side of consumer brand relationships is one of the least researched and further research should be conducted on it.

Another line of thought in literature tries to explain customer's transformation to a fan through the existence of trust that develops between members and between members

and the brand. This strand in the literature is the one in which we focus on the rest of our work.

2.3 Social media communities and their role in brand trust and loyalty

After explaining the main characteristics of social networks, brand communities and social media-based brand communities, it is time to summarize and elaborate the main points that we will need in order to exhibit how trust is built up and transferred in a brand community in social media and how this increase in trust translates to increased brand loyalty.

To summarize the main points about social media-based brand communities, such a community can be decomposed in two elements: social media and brand community.

A brand community is essentially a "specialized, non-geographically bound community, based on a structured set of social relations among admirers of a brand." (Muniz & O'Guinn, 2001, p. 412). Same to every other community, a brand community is made up of its entities including its members, their relationships and the sharing of essential resources either emotional or material. The main drive for the establishment of a social media-based brand community is the psychological need of consumers to feel socially connected (Sarason, 1974), emphasizing, especially through the social media participation, their will to belong in a group (Gangadharbatla, 2008; Tardini & Cantoni, 2005). The basic purpose of the creation of brand communities is the facilitation of information sharing (Muniz & O'Guinn, 2001; Szmigin & Reppel, 2004). From a vendor's perspective, the main advantage in supporting brand communities is increasing customer brand loyalty (McAlexander et al., 2002).

A specialized version of a brand community is a social media-based brand community. Simply defined, a social media-based brand community is a brand community established on the platforms of social media (Habibi, Laroche, & Richard, 2014; Zaglia, 2013). These particular communities have some significant deviations from other online communities. The main such difference is the lack of any structure or hierarchy separating the old members from the new ones (Habibi et al., 2014). Thus, a more elaborate and precise definition of a social media based brand

community can be that "it is a specialized, non-geographically bound community, which is based on a set of social relationships among admirers of a brand in a social media platform" (Habibi, Laroche, & Richard, 2016, p. 294).

From this definition, we can derive five unique dimensions that make the brand communities on social media distinct from other online or offline brand communities. These five dimensions are 1) social context, 2) structure of brand communities, 3) scale, 4) content and storytelling and 5) myriads of affiliating brand communities (Habibi et al., 2014). In order to understand better these five unique dimensions, we refer briefly to each one of them. Firstly, the social context[13] existing in social media-based brand communities is unique. Secondly, as we mentioned above, the brand communities on social media lack a clear structure in contrast to other online brand communities. Moreover, unlike traditional brand communities which are usually very small in scale (Dholakia et al., 2004), the brand communities on social media can have millions of members (Boyd & Ellison, 2007). Furthermore, the content and storytelling in social media greatly differs from other online communities as it is much more generalized and customable (Patterson, 2012). Finally, the nature of social media allows a far greater number of affiliating brand communities to be established easily and quickly, opposite to other traditional brand community structures (Zaglia, 2013).

Despite these differences, as we have referred in the previous section, the members of social media-based brand communities have 1) a shared consciousness, 2) shared rituals and traditions and 3) the sense of obligation towards the community among its members (moral responsibility) (Habibi et al., 2016), three characteristics that have in common with any other online community (Muniz & O'Guinn, 2001).

Laroche, Habibi, & Richard (2013) have shown that brand trust has positively influenced brand loyalty and the customer-company relationship in an online setting. Therefore, we see that the importance of customer trust surpasses the strict limits of

---

[13] By social context, we refer to the immediate physical and social setting in which people interact with one another or in which something happens or unfolds. This setting when we consider it in a social media platform is quite unique due to the oddity of the interacting environment in a social media platform.

the relationship between a company and an individual and it equally applies to collective settings and settings with repetitive interaction like the social media.

However, the very nature of social media is possible to differentiate how customer trust is formed and translates to customer loyalty. For example, Hajli (2014) has suggested that social media amplify the level of trust in online consumers. According to the commitment-trust theory (Morgan & Hunt, 1994), in all brand communities and even on an individual level, we should expect commitment and trust to play a joined role in relationship development between a customer and an online vendor (Shi, Sia, & Chen, 2013) and trust to exert a positive impact on relationship commitment itself. Nevertheless, as we have mentioned above, due to the distinct characteristics of online communities, and especially social media-based brand communities, we should discern between two kinds of trust, 1) the trust of members of the community to others members of the community and consequently, to the community itself and 2) the trust of the members of the community to the brand (brand trust) and consequently, their brand loyalty. To make the difference between the two above mentioned kinds of trust in a research level even more clear, we should mention that the former is mainly created by the elements of interaction between the members of the community when the latter is mainly affected by the elements of interaction with the brand and therefore, interaction satisfaction with other community members is more important for the former when trust to the brand is more important for the latter (Chen, Wu, & Chung, 2008).

According to the trust transfer theory, trust transfer occurs when the trust in a known person or an entity can be shifted to another unknown person or an entity (Lim, Sia, Lee, & Benbasat, 2006). We can easily understand that this possibility of trust transfer can lead to significant implications in the building of both kinds of trust presented in a brand community, whereas it has marginal impact in the examination of the formation of trust in an individual level.

For our work, we focus on the latter kind of trust presented in a brand community, namely the trust of the members of the community to the brand which can lead to increased brand loyalty. As far as the former kind of trust is concerned, some research

has been conducted identifying factors (privacy, interaction satisfaction, perceived ease of access, perceived ease of use and perceived usefulness of information) increasing the trust in the other members of the community and in the community as a whole (Chen & Shen, 2015; Elliot, Li, & Choi, 2013; Wu, Huang, & Hsu, 2014; Wu, Chen, & Chung, 2010)[14]. We also try to analyze it further in subsequent sections of our work when it overlaps directly or indirectly with the latter kind. Concerning the latter kind of trust, there is no substantial research. Davis, Wang, and Lindridge (2008) have shown that website atmospherics[15] can impact the customers' intention to purchase. This was further confirmed by Mazaheri, Richard, and Laroche (2011) and it was further shown that different cultural backgrounds prefer different store atmospherics. Although this does not relate with trust, it is possible to influence the building of it. Moreover, Habibi et al. (2016) have tried to connect social media-based brand communities with brand loyalty through factors affecting relationship quality. However, they omit entirely brand trust from their model. Therefore, we see that there is almost no research identifying what are the contributing factors for the building of trust of brand community members towards the vendor which (as we have referred above) leads to increased brand loyalty.

After this short exposition of the importance of trust building for increasing brand loyalty, it's good to go in more details about the way in which the main actors interreact. How people interact and relate in an online and offline environment? How the people trust one another and why and how this contributes to creating brand trust? How a social media-based brand community mediates in this interpersonal (relational) exchange? How we can measure this trust building and its effect on brand loyalty? These are important questions for our research which we try to answer in the next pages of our report. In the next section, we try to explain how people relate and interreact among themselves both in an online and in an offline context.

---

[14] Although, even here, we should note that no one has searched the effect of cultural deviations in the building of this kind of trust.

[15] Website atmospherics can be defined as the conscious design of web environments aiming at creating positive effects in users and in turn, at increasing favorable consumer responses (Dailey, 2004).

2.4 Relations, Emotions and Decisions

Our goal, in this section, is to show how emotions are created by relational exchanges and how these emotions help to build trust to other social objects, such as a brand community based on social media or a brand. In order to analyze this topic, we work with social exchange theory and its evolution through the intermingling with the more recent affect theory.

Every exchange of activity, tangible or intangible, between at least two persons or entities can be defined as a social exchange. In other words, every human interaction with another human being or a group of people can be considered as a social exchange. In every social exchange, central properties are self-interest and interdependence. These two characteristics form the basic mode of interaction when two or more actors have something of worth to one another and they have to choose whether to exchange and in what extent. Therefore, according to the principles of individualism, which humans use to explain exchange processes, their individual self-interest is twofold, namely a combination of their rational and psychological needs. This self-interest and its realization are complicated by the interdependence of actors in situations with more than two parties involved in the social exchange.

In order to analyze the economic part, essentially the utilitarianism, which people derive from a relational exchange, Cook & Whitmeyer (1992), Emerson (1972) and Homans (1961) have suggested that people follow five simple rules, which maximize their rewards from the relational exchange. The first proposition also called the success proposition suggests that individual behavior that creates positives outcomes is likely to be repeated. The second proposition also called the stimulus proposition argues that if an individual is rewarded in the past for his behavior, then the individual will continue the previous behavior. The third proposition which is also called the value proposition states that if the result of a behavioral action is considered satisfying to the individual, it is more probable for that behavior to occur often. The fourth proposition also called the deprivation-satiation proposition suggests that if an individual has received the same rewards several times, the perceived value of this reward for the individual will diminish each time. The fifth proposition states that those who will receive a higher reward than the one they expect (and vice versa for

punishment) will be happy and will behave approvingly. From these five simple rules, we can sum up that in a relational exchange with two participants, an individual will repeat behaviors which create positive outcomes and were rewarded in the past and aim to satisfy the individual's self-interest and can provide to him different and ever-increasing rewards. We can see that these five tenets help an individual, who is assumed, according to this traditional approach, to be rational, to maximize his/her utility from a relational exchange. So, based on this approach, the individual makes a rational choice (success proposition, value proposition and deprivation-satiation proposition) which maximizes his/her positive material outcomes and through positive or negative reinforcement respectively (stimulus proposition and ever-increasing reward proposition), amplifies the possibility for a behavior to occur or to be avoided in the future. Emerson (1972, 1981) has generalized this approach by extending this dyadic relational exchange to include more actors. This classical approach is quite sufficient to theoretically explain the economic aspect of the reward from the relational exchange, but it is not practically accurate and fails to anticipate the emotional parts of the reward which if not taken into account will erroneously lead to suboptimal outcomes.

These shortcomings of the traditional approach have led to a deeper focus on the emotional aspect of a transaction. Research (Molm & Cook, 1995) has shown that participants in exchanges are not necessarily fully rational profit maximizers. The aim of the participants is actually to obtain more valued goods, profit and utility than they have on their current state, which makes it possible for them to consummate transactions that furnish each participant with bigger gains than otherwise but that are suboptimal (Macy, 1993). Moreover, actors in a social exchange have feelings and emotions[16]. Given the uncertainty faced in a social exchange, actors have critical and irresolvable information deficits. This context enhances the emotional impact on the decision-making process during a relational exchange. Lawler (2001) has shown that people choose to participate in relational exchanges not only from a rational choice

---

[16] Emotions are defined as positive or negative evaluative states with physiological and cognitive components (Clore, 1994; Izard, 1977; Kemper, 1978; Lazarus, 1984). Emotions may be enduring or transitory, object focused or objectless, and can vary in intensity.

point of view or from a reinforcement perspective but also based on the emotional outcomes of their exchanges.

According to Milliman & Fugate (1988), people participating in a relational exchange develop emotions and sentiments[17]. Emotions can be split in two kinds, global ones and specific ones. Global emotions are everyday emotions and they are transitory and ambiguous in nature. On the other hand, specific emotions which can be defined as the emotions that are associated by the actors with particular entities are emotions leading to enduring affective sentiments about social objects such as relationships, groups and networks. From this distinction, it is clear that in our work when we mention emotions, we refer to the specific ones.

So, in a relational exchange between three or more people, the participants through their interaction and based on its outcome (if it consummated successfully or not) develop emotions. In the case of success, they feel good (they have an emotional uplift) and in the case of failure, they feel bad (they have an emotional down) (J. A. Russell, Weiss, & Mendelsohn, 1989). This "feeling good" or "feeling bad" respectively constitutes a special class of reward or punishment which is both internal and self-induced (Bandura, 1996). So, these emotions have value for the participants even if they cannot be monetary valued. Furthermore, they are motivating in themselves because "feeling good" is positive value in itself and "feeling bad" is negative value in itself (Izard, 1991). Therefore, we can see that emotions are reinforcing factors in repeating or avoiding an exchange. In other words, emotions are responses to stimuli but also stimuli that generate other responses. Thus, we can conclude that people who participate in a relational exchange with three or more people or entities care not only for the monetary outcomes but also for maximizing their utility after taking into account these emotional rewards or punishments. Lastly, it is obvious that a relational exchange with three or more individuals emulates the setting of relational exchanges developed in every communication in any community, including a social media-based brand community.

---

[17] Sentiments are enduring affective states or feelings about one or more persons or entities (Homans, 1961).

Furthermore, Lawler (2001) argues that emotions can defer in magnitude and in persistence based on the mode of the exchange from which they arise. He discerns between four modes of exchanges: productive, negotiated, reciprocal and generalized (see also, Ekeh, 1974; Emerson, 1981; Molm, 1994; Molm & Cook, 1995). Productive exchanges are exchanges in which people coordinate their efforts or combine the resources to generate joint goods. Negotiated exchanges are exchanges with an object of negotiating an explicit agreement or the terms of a transaction. Reciprocal exchanges refer to sequential, often tacit, exchanges of benefits across time. Finally, generalized exchanges are exchanges in which one individual or member of a network or group receives unilateral benefits from a third party (which could be one or more other members) to the dyad exchange (Emerson, 1981; Molm & Cook, 1995).

Productive exchanges foster the strongest and most persistent emotions, whereas generalized exchanges create the less persistent emotions despite being equally strong (Lawler, 2001). From this definition of each mode of exchange, we can understand that in each individual setting (like a brand community in social media) more than one mode can be applied based on the perception, the level of involvement and the orientation of every participant.

Moreover, Lawler (2001) has shown that strong persistent emotions[18] towards a group or a network can increase solidarity. Solidarity in this context is defined as the strength and durability of person to group and person to person relations (Hechter, 1987). Solidarity, in this case, is also present even in generalized exchanges in such a degree that members will discharge their obligations to the enrichment of the community rather than for their individual narrow self-interest (Ekeh, 1974). This relationship presupposes obligations of an individual to a large network of people, namely it is relationally rather than transactionally based. This expression of solidarity according to Lawler (2001) is even stronger in productive exchanges in which the emotions of the participants are more persistent and more focused.

---

[18] See Lawler (1992); Lawler & Thye (1999); Lawler & Yoon (1993).

Indicators of solidarity consist of 1) an expansion of areas of collaborations among actors with increased interdependence and trust, 2) an exchange of unilateral benefits which when offered have no explicit request for or expectation of reciprocity, 3) undertaking more obligations with increased ambiguity and risk, 4) forgiving isolated instances of opportunism and harmful behaviors and 5) remaining in an existing community or relationship although equal or better alternatives can be found elsewhere.

Inferring from this theory, in our work, we try to explain how this model can help us understand the relationships built in a brand community based on social media and the implications to customers' brand loyalty. In other words, we present why members become emotionally connected with the brand community and the impact of this connection. According to Sashi (2012), we can discern between two kinds of customers, a transactional customer and a delighted customer. Analogous to this, we can make a distinction between two kinds of members in a social media-based brand community, passive members who emulate a transactional behavior and active members who adopt an affectionate stance. Concerning the former, we can say that they participate in a generalized exchange, whereas the latter feel united under the banner of the community's goals imitating, in this way, a productive exchange (Lawler, 2001).

Based on the above-mentioned discussion, it is obvious that active members develop a strong and persistence relationship with other members of the community leading to the building of a positive sentiment towards the community as a whole. As the previous analysis has shown, this, in turn, leads 1) to increased trust to the other members of the community and the community as a whole, 2) to increased commitment in accomplishing the community's goals, 3) to increased repetition of interaction with the other members of the community and 4) to decreased perception of risk in these interactions among members of the community (Lawler, 2001). This emotional attachment which increases the affectionate bonds between the active members of the community leads to their transformation to fans as suggested by Sashi (2012).

However, as we saw theoretically above, even passive users who, according to the model, emulate a generalized social exchange in their interactions develop a kind of emotional attachments which despite being strong lack the focus presented in the behavior of active users and therefore, they create a willingness to increase the repetition of the exchange and to decrease the perceived risk from such exchanges but fail to provide any additional benefits and to create affectionate bonds. Thus, in this second case, the member is more transactional-oriented and does not develop affectionate bonds. Essentially, this second process shows how the passive members transform to loyal members as suggested by Sashi (2012).

All in all, we can see that the participation, repeated interaction and positive feedback among members in a social media-based brand community increase the emotional connection with the community as a whole but these affectionate bonds differ between different kinds of members. More involved members tend to exhibit a stronger emotional connection leading to increase trust, increase commitment both to other members and their goals and to the community and its goals compared to less involved members. Finally, note that some studies (Sonnenbichler, 2009; Wirtz et al., 2013) suggest that active members present a diminished commitment to the community after some time but consistent with what we presented above, even in these studies this lack of commitment is attributed to the ever-decreasing involvement and participation of these members to the community relational exchanges.

2.5 Trust: how to pass from its building to its transfer

After showing how emotional responses are created by community participation, in this part, we briefly try to analyze how trust is transferred between people participating in an online social media-based brand community and how this mechanism creates trust to the community and the brand.

In order to do this, we have to differentiate between three types of trust transfer that take place in social commerce: 1) the trust transfer from the offline to the online shop, namely the perception which is created to the person from the interaction from the physical shop of the brand and how this translates to trust in the online shop, 2) the trust transfer from the other members of the social media-based brand community

which reinforces both the trust of the subject to the community and the trust of the subject to the brand, and 3) the trust transfer from the community as a whole which translates to increased brand loyalty from the community as a whole to the individual. In our work, we start from a short analysis of the offline trust transfer. We continue with the trust transfer between the offline and the online facilities of the vendor. As a next step, we show the trust transfer that occurs online between brand community's members in social media. Finally, we show how the community as a whole can transfer credibility to the brand, which will be transformed to increased brand loyalty.

Alessandra, Cathcart, and Wexler (1988) have written that "a client may take your word for something and buy blindly because he believes you are looking out for their best interests. Without trust, however, the best products and services cannot be sold." (p.196). This phrase highlights the fundamental value of building trust in commercial relationships. The creation of trust becomes a persuasive tactic which can alter the level of uncertainty of the clients and thus, influence the probability of a sale (Milliman & Fugate, 1988). Every sale can be described as "a decision following a decision" process. So, a client, for instance, would make one decision to purchase a specific product and then, conclude the decision-making process with another decision to accept or reject the proposed cost of action to complete the purchase. This latter decision which is separate from any previous step will be based more on situational variables than on the attributes of the object for purchases under consideration (Funkhouser, 1984).

After we have considered trust as an essential element in completing the commercial transaction, it is good to refer to what exactly is a trust transfer. The trust transfer could be of a dual nature. On the one hand, transfer may occur based on a communication process in which either the trusted entity or a trusted third party exerts direct influence on the trustor. On the other hand, we can consider trust transfer as a process of human cognition in which transfer occurs when an individual places initial trust in an entity on trust on a context other than the one in which the initial entity is encountered (e.g. a different place) or in some other related entity. In other words, trust transfer can be based on a cognitive process in which the mere knowledge of the

relationship between the trusted entity and another source of trust induces transfer. Our work focuses more on the latter kind of trust transfer.

Before proceeding, it is good to make a distinction between trusting beliefs and trusting intentions. Trusting beliefs are the beliefs of a person about the degree to which an entity is possible to behave in a way that is "benevolent, competent, honest and predictable in a situation" (McKnight, Cummings, & Chervany, 1998, p. 474). In contrast, trusting intentions can be defined as the extent to which an individual is willing to make himself vulnerable to a trusted party's actions (McKnight et al., 1998). From these definitions, we can see that trusting beliefs and trusting intentions differ, although research (McKnight et al., 1998) has shown that a positive relation between the two exists. Such a relationship is logical as the more an individual believes another entity to be trustworthy, the more an individual is likely to be willing to depend on that other, even in situations where the outcome is ambiguous and potentially adverse. However, it is crucial to distinguish between trusting beliefs and trusting intentions because it is possible an individual to hold trusting beliefs about another and still be unwilling to make himself vulnerable to the other's actions (Mayer et al., 1995). Thus, holding trusting beliefs for an entity is a prerequisite for having trusting intentions but, at the same time, having trusting intentions is not certain in any case that we hold trusting beliefs for another (McKnight, Choudhury, & Kacmar, 2002). The trusting intention of interest in our work is the intention to buy from the trusted party. Intending to buy from a trusted party may represent a willingness to be vulnerable in many ways. For example, if a customer purchases a product he/she exposes himself/herself to the risk of inadequate service or manufacturing faults of the product he/she purchases (Hoffman, Novak, & Peralta, 1999). This leads us to expect that a client who holds trusting beliefs about a vendor will have an increased probability to buy from this vendor (Stewart, 2003).

They are cases in which high initial levels of trusting beliefs and intentions might be observed between two entities. Factors that can explain high initial levels are 1) a high individual's disposition to trust (Rotter, 1967), 2) the existence of assurance mechanisms (Zucker, 1986), 3) security felt in the situation in which the first encounter between the two entities takes place (Lewis & Weigert, 1985), 4)

calculations regarding the incentives and penalties to the trusted party of acting in an untrustworthy manner (Lewicki & Bunker, 1996) and 5) cognitive processes such as biases and categorization (McKnight et al., 1998). In most other cases, the trusting beliefs and the trusting intentions about another is usually low in the first encounter as it is apparent that trust does not manifest itself on short notice and is highly dependent upon other situational factors. Therefore, it is likely that trust will be missing or low if the 1) two entities are new to each other, 2) the two entities differ along the dimensions of personal traits, physical characteristics, ethnic origin, status, personal habits and others, 3) the two entities have not been able to establish a pattern of positive attributions, and 4) in a case of a sale, when a lack of familiarity with the product sold is exhibited by the two parties (Milliman & Fugate, 1988). In such cases, as we show, trust transfer can enhance the trusting beliefs and intentions of a person to another entity (a person, a group, an institution etc.).

In an offline context, the client interacts with the salesperson. The salesperson can determine the heuristics (the combination of importance, probability and salience of various rewards and penalties connected to the transaction) used by the client and apply basic persuasion tactics as appropriate to influence the desired decision outcome. In short, the salesperson learns to persuade the potential client to accept information which is consistent with closing the sale (Funkhouser & Parker, 1999). In such a context, trust can be transferred from different kinds of sources. Firstly, an individual can serve as the source of trust transfer to unknown targets (Uzzi, 1996). For example, when a person suggests a particular vendor to a given individual, the level of trust which the individual will develop for the vendor depends on the level of trust which the individual has for the person who suggested it. The explanation behind such a transfer is that a third person can offer to each person a definition of the other as trustworthy. Each person accepts or rejects this definition largely on the basis of his trust for the third party's judgment (Strub & Priest, 1976). So, in such a context, it is obvious that the trust on the third party's judgment is translated to trust to the other entity by association and such trust transfer can take place when the trust to the third-party judgment is high. A second type of trust transfer in an offline environment can be made from a place (Henslin, 1968) or an industry association to an individual. For

instance, the salesperson who represents a famous brand or a brand in a particular industry can receive the trust that the potential client has to this particular brand or industry (Milliman & Fugate, 1988). An example of how trust can be transferred from a place is the survey of Henslin (1968) concerning taxi drivers who based their trust on the clients on account of their place of embarkation. The way that this transfer takes place is based on the stereotypes about particular places.

Now, it is about time to show the cognitive function of trust transfer and consider both the process of transfer from a context to an individual entity and from one individual entity to another. Here, context refers to the situation in which a trusted person is encountered, especially the institutional framework in the situation. Such a context could be a neighborhood or particularly in our work, a channel like the internet. A fundamental principle in this discussion is entitativity which can be described as the extent to which an assembly of individuals is recognized as forming a group. In other words, a high entitativity in a group of people means that these people are perceived by others and perceive themselves as forming a group. Here, we should discern between two kind of groups: groups formed based on interaction (DeLamater, 1974) and groups based on similarity (Wilder & Simon, 1998). When we form a group based on interaction we are bound to observation of members' behavior (Wilder & Simon, 1998). Observations of interactions that can cause perception of entitativity include, for example, standing in a line at a supermarket, working with others on a research project and play on a school sports team (Lickel et al., 2000). When we form a group based on similarity, a group is akin to a social category (Wilder & Simon, 1998). In this case, the group could be a real one or a perceived one based on the biases and stereotypes of the individual. Entitativity is very important for trust transfer both on an individual level and between groups and individuals. On an individual level, people tend to expect consistency from others (Hamilton & Sherman, 1996). Thus, an individual when first encounter another forms an impression quickly (Hastie & Park, 1986) and as more information is accumulated through subsequent encounters, they seek to verify that impression causing new information to be understood in a manner consistent with the already formed impressions (Hamilton, Driscoll, & Worth, 1989). On the other hand, when people first encounter a group,

they expect less consistency (Hamilton & Sherman, 1996). In this case, an individual does not form an impression quickly or as information is received but rather, when called upon to make a judgment about the group, then he/she forms the impression based on memory (Hamilton, Dugan, & Trolier, 1985). Now, in the case of a first encounter with an individual belonging to a group, an initial impression is formed about this individual and other group members are perceived in terms of this impression and information about them is processed in such a manner so as to try to confirm the impression (McConnell, Sherman, & Hamilton, 1997). From this discussion, we can understand that if an individual is trustworthy, which essentially means that he/she behaves in an honest and consistent way, trust transfer can occur. As a consequence, if one member of a group is believed to be trustworthy and a new member of the same group is encountered, that group member may be perceived to be trustworthy to the degree that the group is thought to be high in entitativity, namely the perception of similarity among group members.

Before we move to the dynamics of trust transfer evolving in an online context, we should point also some differences between online and offline markets that affect the mechanisms of trust transfer. We have described that in offline context, the interpersonal relationship between the salesperson and the client is the main means of trust building and trust transfer. However, in an online environment there is a decreased presence of human and social elements (D. Cyr, Head, Larios, & Pan, 2009; Hassanein, Head, & Ju, 2009). This lack of interpersonal contact has often been mentioned as one of the major drawbacks of online commerce in the past (Pavlou & Gefen, 2004). This happens, because the online environment eliminates social cues like body language, impose additional unique risks (Lee, 1998) and consequently, hinters the building of a trustworthy atmosphere. These problems have been partially surpassed by incorporating Web 2.0 capabilities in the respective websites. This new evolution that has been called social commerce (Huang & Benyoucef, 2013; Shin, 2013; Yadav, de Valck, Hennig-Thurau, Hoffman, & Spann, 2013) has ameliorated this lack of physical contact, as new design features build upon social media and Web 2.0, including recommendation lists, ratings, comments, social proof and reciprocity applications (Huang & Benyoucef, 2013; Olbrich & Holsing, 2011), enhance client

participation and allow them to collect socially rich information resulting in a more trustworthy and sociable online transaction environment. Moreover, the increased popularity of social technology over the last couple of years, including social media and social network, has spawned an ever-expanding range of social commerce tools and opportunities (Liang & Turban, 2011; Mardsen, 2010). This evolution has led to the formation of a definition about social commerce, a term first introduced by Yahoo in 2005 to describe online places where people is possible to exchange experiences, give and receive advices from others, find services and goods and in turn, purchase them (Mardsen, 2010). A more proper definition is that social commerce is the delivery of e-commerce activities and transactions via the social media environment (Liang & Turban, 2011). It can be viewed both as a new evolution of e-commerce (Huang & Benyoucef, 2013; Wang & Zhang, 2012) and as a subset of e-commerce that involves using social technologies to assist e-commerce transactions and activities (Yadav et al., 2013). Essentially, social commerce is a mix of commercial and social activities (Liang & Turban, 2011; Zhou, Zhang & Zimmermann, 2013). In this context, social media-based brand communities play the role of the intermediary and the interpersonal contact between their members substitute the interpersonal contact between a salesperson and a client.

From this mechanism, we can understand a basic way of how trust is transferred in a social media-based brand community. Thus, a new member can approach a social media-based brand community in different ways. Firstly, he/she can come in contact directly with the community. In this case, he/she forms his/her trusting beliefs about the group based on memory. This memory can stem from association (a known acquaintance's suggestion, common interest, place etc.). In case that this association is positive, trust can be transferred to the group. In addition, an individual can come into contact with a social media-based brand community through a member. In this case, if the group member makes a trustworthy first impression, as new information about the group is received, this trust will be transferred to the group. Finally, we should mention that research (Lickel et al., 2000) has shown that group size is negatively correlated to perceived entitativity. In the above-mentioned mechanism, this means the higher the number of the members of a group, the less likely a trust

transfer to occur. The size of a group is negatively correlated to entitativity because its salience to both members and observers increases as group size decreases (Taylor, Fiske, Etcoff, & Ruderman, 1978). Therefore, smaller groups are perceived as more similar than larger ones. As a result, trust transfer can happen easier between a smaller group and an individual than between a larger one and an individual.

This simple mechanism that is explained above is good to present how trust transfer occurs in a social media-based brand community, but the actual situation is a little more complex. Therefore, two types of trust exist for a website marketplace from a buyer's perspective: 1) the marketplace itself and 2) sellers resided in the marketplace (Lu, Hirschheim, & Schwarz, 2015). This happens because every social media-based brand community has a particular context. This context is defined by the institutional structure of the internet. This institutional structure can create trust in itself. Simply put, institution-based trust encapsulates the security an individual feels about a situation because of safety nets, guarantees, and other structures (McKnight et al., 1998). Such trust is derived from the conviction that generic and impersonal structures are set up to encourage and promote trustworthy behavior in a given situation (Zucker, 1986). From this definition, we can understand, due to the impersonality of the World Wide Web, the importance of institution-based trust. Further, McKnight et al. (1998) suggested that institution-based trust will affect trusting beliefs about an individual or a group because during initial encounters, beliefs about the entity like trustworthiness and beliefs about the situation in which the entity is encountered, such as the institutional factors in force, are yet to be made distinct. Hence, the tendency toward avoidance of mental fatigue and cognitive consistency may result in a positive relationship between the two. In other words, a person can transfer trust from the institutional framework in place during the first encounter with an individual or a group. Here, it is important to note that contextual inference can differ greatly among individuals. This essentially means that the institutional framework can be interpreted differently (as more trustworthy or less trustworthy) based on the religious makeup (La Porta, Lopez-de-Salinas, Shleifer, & Vishny, 1997) and the communication moral and ethics (Fisman & Khanna, 1999) of an individual. From this reasoning, it is clear that the safety nets of a social media-

based brand community which can include privacy aspects and transaction security are elements that can transfer trust to a new potential member.

Another important element of context is the social presence of the website. Social presence of a website is built upon signals transmitted in a communication medium, such as virtual agents (Hess, Fuller, & Campbell, 2009), IT-enabled human-like interaction (Pavlou, Liang, & Xue, 2007), socially-rich text, personalized greetings (Gefen & Straub, 2004), chat (Qiu & Benbasat, 2005) or message boards (Cyr, Hassanein, Head, & Ivanov, 2007). Thus, the more the social design features and consequently, the social presence of a website, the higher the level of transparency which shortens the perceived social distance between buyers and sellers (Pavlou et al., 2007) and in turn, it is easier for a buyer to form a trustworthy relationship when the perceived social distance is short. In other words, a high social presence of the website positively affects trust on it (Hassanein et al., 2009).

One last element that influences the transfer of emotions such as trust between different contexts is what we call affect generalization. Affect generalization is a common phenomenon in which affect towards one attitude spreads to other related attitudes. This spread is one source of the halo effect in perception for a person, in which the affect associated with a component of an attitude object such as his/her intelligence spreads to the overall behavior as a whole or to other traits, such as a person's physical attractiveness (Cooper, 1981). Similar diffusion of affect is probable to take place in organizational settings as well. It has been shown, for example, that affective commitment associated with a group of coworkers or feeling towards a supervisor generalize to the organization as a whole and vice versa (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Riketta & Dick, 2005; Vandenberghe, Bentein, & Stinglhamber, 2004). Thus, we expect an affect generalization to take place in the context of a social media-based brand community.

Moreover, trust can be transfer based on the above reasoning from one context to another. This means that a person who based trust on the institutional structures in place in the context of the encounter can transfer this trust to another context. For example, if context A has weak institutional structures and therefore, generates low

institution-based trust and context B has strong structure with consequence to generate high institution-based trust, and a trusted party, who associate itself to context B, finds itself in context A, can receive trust through trust transfer in such a situation and trust in context A is increased (Bacharach & Gambetta, 2001). Analogous to this, in a social media-based brand community, if a potential new member knows the brand offline and it is satisfied with its institutional framework and consequently, has a high institution-based trust in it, he can transfer this institutional trust to the online shop and brand community based on the clarity of the association of the shop and the community with the physical infrastructure of the brand (even when the online shop does not really merit such trust).

All in all, we have explained extensively how trust can be transferred between members of a social media based brand community and between an individual and a group (brand community or the brand itself) and we have shown that this trust transfer is based on both situational (like place, institutional factors, industry categorization, etc.) and cognitive (stereotypes, biases, impression, etc.) factors.

2.6 How people become engaged to vendors

Our aim, here, is to analyze how the building of emotions that we have described earlier transforms into bonds. In the previous section, we have given a detailed account of the different kinds of bonds and emotions that can be present in relational exchanges taking place in a social media-based brand community. Here, we try to elaborate on the antecedents of this bond which forms amongst the actors.

As we have described above people taking part in a relational exchange develop emotions. These emotions can differ among members of a community based on the perception, the level of involvement and the orientation of every participant. Although we have discussed extensively how the relational exchange is affected by different factors explaining these antecedents, we have not analyzed thoroughly the antecedents themselves. The level of involvement and the perception of a participant can be summarily described by the notion of customer engagement. Despite being similar to the notion of participation (active – passive users), customer engagement has a distinct character in the formation of bonds. From a practitioner's perspective,

customer engagement can be defined as activities which facilitate interactions that strengthen the psychological and physical investment a customer has with a brand (Sedley, 2006). This approach aligns with a vendor perspective about customer engagement. If, now, we examine customer engagement from a customer perspective, we can academically define it as the intensity of customer participation with both representatives of the organization and with other customers in a collaborative knowledge exchange process (Wagner & Majchrzak, 2007).

It is obvious that in the context of an online brand community in social media, both definitions are highly relevant. The online environment of such a community makes the customer participation easier and the mere existence of the brand community facilitates this information and knowledge exchange process, while, at the same time, the increasing number of interactions between participants (due to the ease of access) demands a higher personal investment from the members. Classical definitions of customer engagement have a narrow scope and exclude the participants' prospects (what a customer expects in terms of service and quality from a particular vendor) and potentials (what possibilities of furthering a relationship between a customer and a particular vendor exist) (Vivek, Beatty, & Morgan, 2012). As we have analyzed in the previous sector, participants' prospects and potentials play a major role in the creation of emotions and as a result, in the formation of bonds. Here, we will not stay more on examining the role of prospects and potentials which we have analyzed above but we will delve deeper in the classical definitions of customer engagement which we have expressed above.

There are many multi-dimensional conceptualizations of customer engagement (Brodie, Ilic, Juric, & Hollebeek , 2013; Hollebeek, 2011; So, King, Sparks, & Wang, 2016b; van Doorn et al., 2010). For the purposes of this study, we will mainly focus on the conceptualization proposed by So, King, Sparks, & Wang (2016a). They anticipate customer engagement as a client's personal connection to a brand manifested through cognitive, affective and behavioral responses outside of the purchase. We can see that this approach aligns perfectly with the affection theory of Lawler (2001), which we have been explained previously and this new approach envelops areas outside the actual moments of interaction which are analyzed through

Lawler's theory (2001). Taking both into account, we can have a complete picture of the cognitive, affective and behavioral elements that shape a client's attitude.

So, King, Sparks, & Wang, (2016b) construct customer engagement as deriving from the following factors: 1) enthusiasm (vigor), 2) attention, 3) interaction, 4) absorption and 5) identification. Enthusiasm refers to a client's strong level of excitement and interest regarding their focus of attention (engagement), such as a brand. Additionally, attention describes a customer's attentiveness and focus on the brand. Interaction refers to a customer's online and offline participation with the brand or other customers outside of purchase. Here, we can see that the two theories (the one of Lawler (2001) and the one of So et al. (2016a)) superficially overlap as customer engagement encapsulates interactions not related with the actual purchase of a product but contrary to the theory of Lawler (2001), the theory of customer engagement does not touch the interactions related to actual purchases and it does not try to explain the microlevel of the emotional, cognitive and behavioral aspects of those interactions and their dynamics. Furthermore, absorption is characterized by being totally concentrated and engrossed with an item of attention (a brand, a product of a brand, etc.) and while time passes, it is difficult to detach yourself from it or from your assumed role. Last but not least, identification is an individual's perceived closeness with or belongingness to a brand. These five factors encompass all the psychological and behavioral aspects of the notion of customer engagement (So et al., 2016a).

Customer engagement is conceptually similar to involvement (Vivek et al., 2012), as they both increase the motivation of an individual towards a specific object (a brand, a product, etc.) (Hollebeek, 2011). Research (Celsi & Olson, 1988) has found that involvement is a motivational state that leads customers or potential customers to devote more attention on advertisements, expend greater cognitive and physical effort to comprehend the marketing messages, focus greater attention on product-related information in ads and elaborate more on the actual product information of the chosen brand (the one which is the object of involvement). Involvement creates a sense of ongoing psychological commitment to a brand by focusing the clients' thoughts, feelings and underlying behaviors on it (Bowden, 2009; Gordon, McKeage, & Fox, 1998; Swinyard, 1993). Research has shown that a minimum level of involvement

with a brand is required in order for a client to become engaged to a brand and as a result, to exhibit the five elements, characteristic of customer engagement (Hollebeek, 2011).

Now, if someone wants to understand bond formation through the prism of customer engagement, he/she has to focus on the five elements comprising it. Individuals who exhibit enthusiasm, absorption, identification, attention and interaction for a brand (consequently, for a product of a brand as well) and thus, present a high level of involvement and customer engagement are expected to form not only transactional bonds but also emotional bonds with a brand. This happens as individuals who exhibit such a high level of attachment and commitment can pass from a generalized exchange to a productive exchange in their interactions with the brand and everyone associated with it (e.g. members of the social media-based brand community). This would happen as high customer involvement in a product or a brand provide a strong basis for expanding and personalizing the client-vendor relationship (Christy, Oliver, & Penn, 1996) Moreover, supporting this line of thought, empirical research has suggested that highly-involved individuals are more likely to value their existing relationship (Gordon et al., 1998) and to develop a tendency to engage in similar relationships with other vendors (Odekerken-Schröder, De Wulf, & Schumacher, 2003) or service providers (Varki & Wong, 2003). These research findings strongly point to this transformation of the relational exchanges with the brand or the elements associated with it (e.g. social media-based brand community) from generalized ones to productive ones, as the customers find a common goal and purpose and identify their interest with the ones of the brand. As we have mentioned earlier, a productive exchange can produce the most persistent and strongest emotions of any kind of relational exchange. Thus, (Lawler, 2001; Lawler & Thye, 1999; Lawler, Thye, & Yoon, 2000) in such a situation, the client not only develops transactional bonds from the calculative trust (Garbarino & Johnson, 1999; Morgan & Hunt, 1994; Sashi, 2012) but also forms strong emotional bonds and enhances his/her affective trust towards the brand (Sashi, 2012).

Further, strengthening the point that high customer engagement leads to both transactional and strong emotional bonds between customers and vendors is the

surveys of Gallup Consulting (2009, 2010). Gallup has found that fully engaged customers represent an average 23% premium while totally disengaged clients correspond to a 13% discount relative to average customer on a scale based on share of wallet, profitability, revenue and relationship growth for vendors. Despite refraining from defining customer engagement, Gallup points that engaged customer are not just satisfied or loyal, they are emotionally attached to the vendors' brand or service (Gallup Consulting, 2010). As we can also point from the same research, a customer who is not actually engaged with a vendor or who is actively disengaged from him/her cannot form any positive emotional bond and even if some emotions exist in such a relationship, they further contributes to customer aversion due to their negative character (Gallup Consulting, 2009, 2010).

Customer engagement has shown relevance to the interactions taking place online as well. In an e-marketing context, "the customer engagement concept is intended to increase the time or attention a customer or prospect gives to a brand on the web or across multiple channels" (Chaffey, 2008). An alternative definition of customer engagement online can be summed up as follows "Repeated interactions between a customer and brand that strengthen the emotional, psychological or physical investment a customer has in that brand" (Chaffey, 2007). Still, research about the shape of customer engagement in an online context is in its infancy. Some researchers propose that customer engagement encapsulates a number of dimensions 1) product involvement, 2) purchase frequency, 2) service interactions frequency, 4) types of interaction, 5) online behavior, 6) referral behavior and velocity (Shevlin, 2007). Other researchers suggest that customer engagement in an online environment forms a cycle consisting of 1) awareness, 2) consideration, 3) inquiry, 4) purchase and 5) retention stage (Ertell, 2010). Still, the prevailing opinion is that both above mentioned expositions related better to a purchase decision rather that customer engagement (Ertell, 2010). Finally, additional opinions argue that from most theories two critical stages of customer engagement are missing, these being satisfaction and referral (Ertell, 2010).

Sashi (2012) has proposed that a complete customer engagement cycle has the following stages, a) connection, b) interaction, c) satisfaction, d) retention, e)

commitment f) advocacy and g) engagement. Sashi (2012) also points this path as the one from turning a transactional casual customer to a fan, building strong emotional bonds between the said customer and vendor in the process. Sashi (2012) also tries to differentiate between purchase, retention, loyalty, satisfaction and customer engagement. He points that only if a customer proceeds through a buying process to a purchase, the seller's needs for profitability can be met. However, the mere purchase of a product does not signify customer engagement. At minimum, the purchase of a product should lead to other related purchases (of the same product or a different one) of the same brand or of the same company (if the company is a retailer). This concept of repeat purchases is a very important concept, especially in non-contractual settings as the one which we examine. If the purchase leads to satisfaction for the customer, then he/she engages in repeat purchases and retention of the customer is likely for the vendor. However, even satisfaction and retention does not necessarily show customer engagement, although they increase its likelihood (Sashi, 2012). Without satisfaction, it is unlikely for retention to occur. Retention over time leads to loyalty but not necessarily to customer engagement (Sashi, 2012). Last but not least, (Sashi, 2012) argues that only if loyal customers develop feeling of intimacy and emotional attachment, namely strong emotional bonds, are fully engaged and become fans of a product, brand, or a company.

All in all, we can see that the exact role of customer engagement in an online context is not clearly defined and can be ambiguous at times. Our research is trying to shed light to this role and to the role of emotional bonding and emotional creation and interaction in the process.

2.7 Churn

The annual turnover of the market base for a vendor is defined as customer attrition or churn (Stourse, 1999). In other words, churn is the percentage of the subscriber base which disconnects from a provider during a defined period (Madden, Savage, & Coble-Neal, 1999). As a marketing-related term, churn is characterizing whether a current customer decides to take his business elsewhere (Coussement & Van den

Poel, 2008; Lemmens & Croux, 2006). Churn is a matter of research in marketing due to its importance as losing subscribers or customers who go from one vendor to a different one may lead to losses and affect the shareholders of the company significantly in a negative way (Song, Yang, Wu, & Tang, 2006). This is especially important for online customers, as the phenomenon of customer churn appears to be very rapid and difficult to grasp in an online setting (Peng, Quan, & Zhang, 2013).

Moreover, research has shown that the cost of acquiring a new customer can greatly exceed the cost of maintaining the customer base (Seo et al., 2008; Siber, 1997). This is especially true when we refer to vendors operating in a highly competitive or mature business market such as telecommunications, financial markets etc. (S. Lee, Yu, Yang, & Kim, 2011). In such a market, instead of trying to entice new customers or lure them away from competition, defensive marketing which aims at reducing customer exit and brand switching is preferred (Fornell & Wernerfelt, 1987). Reichheld (1996) has estimated that in such markets, a small increase in customer retention rates (like 5%) can lead to a huge increase (from 35% to 95%) in the average net present value of a customer for the company. Overall, it is obvious that customer churn can significantly affect the profitability of a company, both in the long-term and in the short-term time horizon.

Despite the significance of customer churn, it is very difficult for a company to manage it efficiently, as it would require a full understanding of a customer's behavioral churn path and the factors pertaining to the customer churn. There have been some factors identified in the relevant literature affecting customers' churn. These factors can be connected to the customer satisfaction, the customer status, the customer switching cost and the customer demographic factors (Gustafsson, Johnson, & Roos, 2005). If the company offers services, another important factor related to churn is the service usage, whereas if a company sells products, another important factor related to churn is repeat purchases.

Trying to analyze the above-mentioned links, we need to elaborate more in describing these factors (customer satisfaction, customer status, customer switching cost and customer demographic factors) and their constituent parts. As far as customer

satisfaction is concerned, we can identify a number of specific customer churn determinants. For example, in the mobile telecommunication industry, the network and call quality are key drivers of customer satisfaction (Gerpott, Rams, & Schindler, 2001; Kim & Yoon, 2004; Kim, Park, & Jeong, 2004; Lee, Lee, & Feick, 2001). In the services sector, Keaveney, (1995) has shown that about half (44%) the population of those who churned did so due to core service failures. Moreover, services failures are "triggers" that accelerate a customer decision to stop the customer-vendor relationship (Bolton, 1998; Bolton, Kannan, & Bramlett, 2000; Kim, 2000; Mozer, Wolniewicz, Grimes, Johnson, & Kaushansky, 2000). To summarize, core service failures and core product failures are one factor diminishing customer satisfaction and thus, increase the probability of the customer to churn.

Another factor related to customer satisfaction is a customer's complaint behavior (Day & Landon, 1977; Bearden & Teel, 1983). Complaining customers can undertake some actions which can eventually lead to churn such as no further purchase, negative word of mouth, redress-seeking efforts and appeals to third-party consumer affairs bodies (Day & Landon, 1977). Although Fornell & Wernerfelt (1987) suggest that good complaint management can lower the probability of customer's churn and as a result, decrease marketing costs, it is actually true that most of the times, customer complaint management programs are not effective, which leads the complainants to churn (Keaveney, 1995; Solnick & Hemenway, 1992). Moreover, recent research (Ahn, Han, & Lee, 2006) has shown that customers' complaints is the single most important factor influencing customer satisfaction and as a consequence, their probability to churn. From the above discussion, we can infer that customers' complaints are an important factor affecting customer satisfaction and thus, their probability to churn.

Another important factor that can be described as an influence in the probability of a customer to churn is what we term as switching costs. Switching costs are the factors that act as constraints preventing customers from freely switching to other vendors or service providers (Ahn et al., 2006). Burnham, Frels, & Mahajan (2003) distinguish three different switching cost types. Firstly, the procedural switching cost which is the type of switching cost which initially has to do with the spending of time and effort

and consists of the economic risk, evaluation, learning, and setup costs. Secondly, the financial switching costs which include benefit loss and financial-loss costs, this type of switching cost also involves the loss of financially quantifiable resources. The personal relationship loss and brand relationship loss costs are lastly known as the relation switching costs. It involves psychological or emotional discomfort due to the loss of identity and the breaking of bonds (Burnham et al., 2003; Carter, Wright, Thatcher, & Klein, 2014; Chuang, 2011). This latter part is obviously affected by trust between the customer and the vendor for which we speak in detail in the next part of this text.

Concerning the financial parts of switching cost, Kim et al. (2004) have found that loss of loyalty points for a customer enrolled in a customer award program has both a direct effect and an adjustment effect on customer loyalty, constituting an important switching cost. This happens because current loyalty points are forfeited as a customer switch from a vendor or service provider. This leads even dissatisfied customers to show increased loyalty to the current vendor or service provider (Gerpott et al., 2001). Additionally, except for loyalty point programs, companies usually foster membership card programs (they could also be one and the same). The aim of such programs is to keep the customers close to the company by providing benefits to the cardholders. If such benefits are not available from other competitors, they work as a switching barrier to customer churn. As Bolton et al. (2000) explain, members in loyalty rewards programs may overlook or minimize negative evaluations of the company concerning the product, the quality or the price against competitors. However, Ahn et al. (2006) have found that although the volume of the accumulated loyalty points is a factor lowering the probability of churn, the membership in such a program increases the probability of customers to churn. In conclusion, it is clear that accumulated loyalty points and membership card programs can constitute a significant switching barrier to churn, especially due to their financial consequences, which affect directly the customer loyalty (Ahn et al., 2006).

Another important factor affecting a customer's probability to churn is service usage. If the vendor does not provide a kind of service but a product, the usage translates to the need of the customer to purchase repeatedly the same product. Service usage can

be described in a distinct way each time depending on the kind of service or product offered. For example, in the telecommunication industry, some measures of service usage can be the minutes of telephone use, the frequency of calls and messages and the total number of distinct receivers conducted by the customer (Wei & Chiu, 2002). In the services sector, service usage as expressed by the monthly charge is one of the most popular behavioral predictors of customer defection (Buckinx & Van den Poel, 2005). Mozer et al. (2000) concurs that monthly charges and usage amounts of a service are linked to churn. Moreover, it has been shown that overpaying (above your contractual fees) for a service can lead to an increased probability of customer churn (Ascarza, Iyengar, & Schleicher, 2016; Ater & Landsman, 2013; Iyengar, Ansari, & Gupta, 2007; Lambrecht & Skiera, 2006). Still, there are many instances in which it is unclear if the relationship between service usage and customer churn is really positive or negative (Ahn et al., 2006). Finally, there are instances when a client has an unpaid balance to the company (obviously, this is the result of service usage) and he/she is forced by the company to leave (or in most cases he/she is forbidden to leave). Thus, in these cases, the customer has to leave (or has to stay in) the company involuntarily. All in all, we see that service usage and repeat purchasing are important factors affecting a customer decision to churn. Their relationship with the actual price of the service or the product is of paramount importance for customer churn (Gustafsson et al., 2005). Few studies have analyzed the customer churn of industries selling tangible products. In all these studies, churn was defined as the possibility of the customer not to return to make another purchase for a long time after purchasing a tangible product (Chen, 2016). The result of those studies follows the general patterns of service usage explained above.

Most customers have not churned spontaneously from a vendor or service provider but actually churn takes the form of a gradual estrangement from the vendor. When we speak about a service, customers usually stop usage on a temporary basis first, then they suspend the service and finally, they leave the provider. Ahn et al. (2006) have shown that this kind of partial defection from a service provider is usually observed. Actually, the customers who are undergoing a non-usage of the service has a four times increased probability to churn than a normal customer and clients who

have a suspending status have a 25 times increased probability to churn than a normal customer (Ahn et al., 2006). On a non-contractual setting, this gradual estrangement takes the form of less frequent visits to the shop, less repetitive purchases and a gradually increase in purchases from competitor until the complete break of the relationship between the client and the vendor. Buckinx & Van den Poel (2005) have discovered this kind of partial defection in a non-contractual setting. To summarize, customer status is an important determinant of the actual probability of a customer to churn.

Last but not least, demographic data can have an influence in the customer churn probability. Research has shown (Seo et al., 2008) that different age and different gender groups display different retention behaviors. Moreover, different age and gender groups tend to have different complexity on their service packages (Seo et al., 2008). We have seen that the complexity of the contract plays a role in customer churn as it affects service usage, monthly bill amounts and overpayments (amounts paid outside the service contract usage). Seo et al. (2008) have shown that customers under the age of 26 are more likely to churn irrespective of gender, whereas females over 25-years of age are most likely to stay with the current provider in comparison to any other age or gender group. Furthermore, Seo et al. (2008) have argued that males have a far higher drop-call ratio, which represents a core failure element for a service provider, due to their higher mobility compared to females, something leading them to higher churn probability. In conclusion, age and gender can affect the customer churn probability both directly and indirectly.

To conclude core failures, complaints, monthly bill amounts, and unpaid balances are positively associated with the probability of customer churn both in a contractual and a non-contractual setting. In contrast, accumulated loyalty points are negatively associated with the customer churn probability. Moreover, loyalty program memberships, demographic factors like gender and age, and customer status plays a role in the probability of customer churn. The above-mentioned factors constitute main determinants of customer satisfaction, customer loyalty and customer status which in turn, affect customer churn.

2.8 Trust and its role in customer churn

The existing literature emphasizes two different dimensions of relationship commitment that can induce loyalty among the actors and have a meaning in the context of the customer-vendor relationship.

These dimensions are affective commitment as created through personal interaction, reciprocity and trust and calculative commitment which is shaped by the switching costs (Bendapudi & Berry, 1997; Fullerton, 2003; Garbarino & Johnson, 1999; Morgan & Hunt, 1994). In this context, calculative commitment is the more rational, less emotional and economic-based reliance on product benefits because of switching costs or a lack of choice (Anderson & Weitz, 1992; Dwyer, Schurr, & Oh, 1987; Heide, & John, 1992). On the contrary, affective commitment is a more emotional factor which develops through the extent of reciprocity or personal involvement that a client has with a vendor and results in a higher level of trust and commitment (Garbarino & Johnson, 1999; Morgan & Hunt, 1994). Affective and calculative commitment form a customer's loyalty.

The mechanism for the creation of loyalty is of great significance for customer churn as customer loyalty is often interpreted as actual customer retention in the customer relationship management literature (Gustafsson et al., 2005). Customer satisfaction is built over time. It also mediates the effects of product quality, service quality and price on loyalty (Bolton & Lemon, 1999; Fornell, Johnson, Anderson, Cha, & Bryant, 1996). This could be perceived as the calculative component of customer satisfaction. On the other hand, a significant affecting component which is created through the repeated product or service usage is included in customer satisfaction and loyalty (Oliver, 1999).

From the above discussion, it can be inferred that trust affects directly the affective commitment and indirectly, the calculative commitment, shaping customer loyalty in the process. As a result, trust plays a significant role in customer retention (we have referred above to the indispensable relationship between customer loyalty and customer churn), totally discrete from the other factors affecting customer churn and

described in the previous section. We try in the next paragraphs to analytically present these indirect and direct links.

Trust affects directly the affective commitment of a customer. A trusting customer has a higher probability to stay with a vendor as he/she is more willing to accept a price increase for the same service without complaining (Reichheld & Sasser, 1990). Moreover, (Lawler, 2001) has shown that people develop emotions in the transactions with vendors (namely, in any relational exchange). After its interaction with the vendor, the client (based on its outcome) feels good (namely, has an emotional uplift) or feels bad (has an emotional down) depending if his/her interaction consummated successfully or not (J. A. Russell et al., 1989). This "feeling good" or "feeling bad" respectively constitutes a special class of reward or punishment which is both internal and self-induced (Bandura, 1996). So, these emotions have value for the participants even if they cannot be monetary-valued. Furthermore, they are motivating in themselves because "feeling good" is positive value in itself and "feeling bad" is negative value in itself (Izard, 1991). Affected by these emotions, customers tend to select not the choice that maximize their utility but the choice which is conceived as the best after weighting both the transactional and the emotional part of the decision, even if this choice is suboptimal in terms of utility (Macy, 1993; Molm & Cook, 1995). In these emotions, a sense of trust which is developed by the repeated interaction between the client and the vendor or the service provider is also included. Furthermore, social influence is able to create a kind of social contagion on social behavior (Kumar, Petersen, & Leone, 2007; Van den Bulte & Wuyts, 2007). In other words, people who belong to the relationship network of the customer can affect the customers' behavior against the vendor or the service provider (for example, one way to do this is through negative word of mouth about the vendor or the service provider). In addition, we have seen that it is possible for the trust to transfer from one person to the other (Stewart, 2003) and therefore, a third person whom we trust can affect our relationship with a vendor. Thus, in this way, either through trust transfer or trust building, the relational exchange transforms from a general one (the weakest form in terms of commitment) to a reciprocal or productive one (far stronger forms of

relational exchanges in terms of commitment) (Lawler, 2001), decreasing the probability of customer churn.

Trust also affects the probability of a customer to churn indirectly by influencing his/her calculative commitment. As we have referred above, a trusting customer is willing to accept a higher price for the same level of service quality or product, showing a lower elasticity to price than the average customer (Reichheld & Sasser, 1990). Moreover, the switching costs and especially, the emotional part of them, are higher for a trusting customer. Moreover, trusting customers tend to develop a repulsion for competition and its products (Zaglia, 2013). Furthermore, the gradual character and the difficulty in trust building highlight an increase in the personal type of switching costs as a trusting customer will be unwilling to spend the time amount required for breaking the existing customer-vendor relationship and building another one with a new vendor from scratch (Burnham et al., 2003; Carter et al., 2014; Chuang, 2011). All these points show that trust can act indirectly as a diminishing factor to the customer churn probability.

Overall, trust can have a significant influence, both directly and indirectly, in the effort of the company to decrease the customer churn probability.

Here, note that all the research referred above focuses on trust and its influence in customer churn mostly in an offline setting of personal interactions. The effect of social media-based brand communities in this customer-vendor relationship is inadequately investigated. The few studies (Karnstedt, Hennessy, Chan, & Hayes, 2010; Ngonmang, Viennet, & Tchuente, 2012) trying to investigate the relationship between trust and churn in social media centers on the churning of members of social media and not on the effect in a customer-vendor online relationship.

2.9 Trust in a non-contractual setting: our particular case

Our research focusing on a non-contractual purchase setting, which belongs to the fast-moving customer good (FMCG) retail sector. In such a setting, the retention of customers is a far more significant issue as the customers have great flexibility to constantly interchange between retail vendors. Moreover, due to the lack of contract, the customers are able to change their purchase behavior constantly and without the

company's prior knowledge. Research has shown that in supermarket shopping, more than 70% of customers tend to shop from different points of sale and change during a month (Nielsen, 2001). All in all, switching costs in such a setting are minimal and customer retention is very difficult.

To be more specific, our research centers on the supermarket retail sector. There is no standard definition about what constitutes a supermarket. Generally, if a retail shop which sales FMCGs has an area of more than 200 square meters and at least 2 cashiers can be called a supermarket. In contrast, if the same kind of shop has an area of more than 2.500 square meters in each point of sale can be considered a hypermarket. Still, the area of the point of sale is not the only defining factor about what can be classified as a supermarket. The grade variety of products that it sells and the area of the market that it covers can be additional factors for classifying a specific shop as a supermarket. Moreover, even the shop parameters which we refer to above can vary between countries around the globe.

In an attempt, to classify the supermarkets in categories in different groups for this thesis, we can discern the following:

- big chains with sale networks around a whole country or/and even internationally
- small chains, which have a local sales network
- independent supermarkets with only one point of sale
- discount stores which can have a variably distributed sales network, but they have a limited range of products which they offer at discount prices, and
- cash and carry shops which usually aim at bulk selling.

It is also a very common phenomenon for small chain supermarkets or independent supermarkets to cooperate together under a cooperative in order to be able to share a common trademark and to increase their purchase power against their suppliers. This practice is also widespread in Greece which is the country that our sample derives from.

Internationally, the supermarket sector (including cash and carry shops) had annual revenues of 1.24 trillion dollars in 2015. From this amount, about 598 billion dollars (48%) constitute revenues of the two biggest chains, Wal-Mart stores and Costco wholesale corporation, two brands which are based on USA. The biggest European chain which is ranked 4th in terms of revenues with 94.4 billion dollars in 2015 is the German Schwarz group.

In terms of the European market, the biggest FMCG market is Russian with 283.9 billion euros in 2017 (institute of grocery distribution). The Russian market is projected to grow to 399.4 billion euros in 2022. The 20 biggest markets for FMCG are presented in the following table.

It is also worthy to note that there is a global trend towards buying FMCGs on the internet with online sales presenting an increase of 15% in 2017 alone, when at the same time period, the total FMCG sales increased by only 1.9% (Kantar world panel, Europe panel, Intage). This fact highlights the increasing role that online tools like a social media-based brand community play in attracting new clients, solidify the customer base and retain old ones in the FMCG retail sector, increasing the total sale volume in the process.

As our data mainly derive from Greece, we should make a brief reference about the retail sector and the supermarkets in this country. We can start with a short comparison of the two sectors and a description of buying habits of customers. In a recent survey (ICAP, 2018), the supermarket sector has presented a drop of 1.3% in revenues in 2017, whereas the revenues in retail shopping has increased by 0.8% at the same time period. In Greece, 52.7% of customers tend to buy from more than 1 supermarket chain. Furthermore, the supermarket customers tend to visit a point of sale 6 times monthly on average (Baltas, 2014). In addition, despite the fact that the majority of customers (94.5%) state that they know what kind of products would buy before proceeding to visit the supermarket, only 47.3% of the said customers have decided which specific brand would buy.

Moving from the customer behavioral patterns in Greece, we can mention a few things about the structure of the supermarket sector. In 2016, there were 4.117

57

supermarket brands in Greece of which 1.995 were chains with more than 1 points of sale and 2.122 were branches with a sole point of sale. From the 1.995 chains, 1.759 have a network of more than 16 points of sale. These figures represent a drop of 8.2% from the corresponding data about 2015 (this general figure represents a 13.5% drop for supermarket chains and 2.6% drop for brands with a sole point of sale. This drop is even higher for supermarket chains with more than 16 points of sale at 14.6%). The total revenue of the supermarket sector (including cash and carry shops) in Greece for 2018 is valued at 11.21 billion euros representing an increase of 1.81% from the revenues of the sector in 2016.

The supermarket sector in Greece is characterized by a high concentration. The top 5 chains in market share have a market concentration of 71%. This fact is a result of the constant trend for mergers and acquisitions of small supermarket brands by the large chains, a trend which was only intensified by the Greek financial crisis. The top 3 brands (according to market share) are Greek supermarket Sklaveniti, AB Basilopoulos and Lidl Hellas with a market share of 21%, 19%,13% respectively. The first two chains represent Greek businesses, whereas the 3rd one is the Greek branch of the German chain of supermarkets LIDL. The brand that we use in our research, SYN.KA Super Markets, has the 9th highest market share with 1.6% of the Greek market. As of April 2019, SYN.KA Super Markets have 50 points of sale, ranking 12th among the supermarkets which operate in terms of the number of points of sale.

We can also present some financial info about the supermarket sector in Greece and the brand that we use in our research SYN.KA Super Markets. The gross profit margin for the sector is about 19.8%. For the top 14 supermarket brands in terms of revenue for 2017 this figure is slightly increased to 21.8%. This high gross profit drops significantly when the operating profit is calculated due to high operating expenses. The operating profit margin is only 1.6% on average for the whole sector and slightly better at 1.8% on average for the top 14 brands. Furthermore, the EBITDA margin for the whole sector stands on average 3.3% and for the 14 top brands stands higher at 3.8%. Finally, the net profit margin for the whole sector is estimated at 1.5%, whereas it is estimated at 1.7% on average for the top 14 brands. Based on its published financial statements, SYN.KA Super Markets is shown to have

slightly better profit ratios than the sector averages for the year 2017 it has a gross profit margin of 23.2% an operating profit margin of 1.7%, an EBITDA margin of 3.7% and a net profit margin of 1.7%. SYN.KA Super Markets had an annual business cycle of 175.73 million euros in 2017 compared to about 2 billion euros of the market sector leader AB Basilopoulos.

Continuing our financial analysis, the supermarket sector presents a return on equity (ROE) ratio equal of 15.2% for the years between 2013 and 2017. The same ratio for the 14 top brands was shaped a little higher at 17.5% during the same time period. For SYN.KA Super Markets, which belongs to the 14 top brands, this figure stands at 14.2% on average for the said time period. The return on investment ratio stands at 3.5% on average in the supermarket sector for the 5 years between 2013 to 2017. It fluctuated a little higher at 3.7% in the same time period for the top 14 brands. SYN.KA Super Markets has a ROE of 3.1% on average annually during the same time period.

2.10 Some last notes on trust and its importance on churn in an online environment

Before we finally refer to our contributions and close this literature review, it could be a good idea to say a few words on some last issues that can arise for trust and its importance in an online environment. Here, we should note that we will not refer at all either to the trust dynamics which we have extensively analyzed earlier or to the kinds of bonds that develop in an online community, a subject for which we have already made some references.

We have already seen that trust contributes to the creation of two kinds of commitment, calculative commitment and affecting commitment (Bendapudi & Berry, 1997; Fullerton, 2003; Garbarino & Johnson, 1999; Morgan & Hunt, 1994). We have pointed earlier on how trust affects these kinds of commitments. Thus, we can say that we have already examined two types of trust, economic-based trust and identification-based trust (Hsu, Ju, Yen, & Chang, 2007). Economy-based trust is a calculative process trust based on economic benefits and fear of punishment for any misgivings (Luo & Najdawi, 2004; Panteli & Sockalingam, 2005). This kind of trust embodies what we have defined as calculative commitment. On the other hand,

identification-based trust refers to the customer emotional attachment with the vendor (or the service provider) who they believe as working for their benefit and properly addressing any complaint (S. Kim, Chang, Wong, & Park, 2015). It is obvious that identification-based trust corresponds to the notion of affective commitment. These two elements usually shape the meaning of trust in a client-vendor relationship.

However, for getting a full picture of trust in an environment that part of the contact happens online, we have to add a third element of trust. This element can be called information-based trust. This kind of trust is formed based on familiarity with the other party and his/her belief that the behavior of the other actor is predictable and safe (Libaque-Sáenz, Wong, Chang, Ha, & Park, 2016). This notion is mainly focused on privacy issues and personal information handling by the other party. It is clear that such issues are of paramount importance in an online environment. Research has shown that information-based trust is not a significant mediating factor in a face-to-face communication with a vendor (Kim et al., 2015) but it is important in an online context due to the lack of physical contact (Culnan & Armstrong, 1999). Thus, we see that a client in an online context not only has to evaluate a vendor's (or service provider's) economic or personal characteristics but also to address concerns that derive from the electronic nature of the communication medium and the impersonal character of content in an online setting (despite web 2.0 technological improvements).

Additionally, concerning trust in social media-based brand communities, one fundamental question is why someone would want to participate in such a community. What value he/she can earn from his/her activity. In an online community, value is tied directly to the social capital of the community. The loss of social capital through member loss or significant drops in activity of existing members may precipitate an endless cycle of churn (Karnstedt, Hennessy, Chan, Basuchowdhuri, et al., 2010). An important finding of member behavior in such communities is that members, with the exception of spammers and fake ones, make contribution to the community without expecting any immediate return (Constant, Sproull, & Kiesler, 1996; Kollock, 1999). In sociology, this type of activity can be explained in terms of the "gift economy" (Rheingold., 2000). Unlike the exchange of

good and services, in a gift transaction there is an unstated expectation based on an implicit social contract that the benefits of a gift will be reciprocated by the recipient at some unspecified but reasonable time in the future. In a social media-based brand community, these transactions, namely relational exchanges, are riskier, as they involve what we have defined earlier as a "generalized exchange". In a generalized exchange, the giver's generosity is reciprocated, not by the recipient but by some other members in the group (Lawler, 2001). In brand communities on social media, this exchange mechanism applies to all active members who offer their time and expertise but do not seem to receive immediate benefits. However, in any such community, there is always the potential risk that the group will not assume responsibility for reciprocating to the individual member (giver) and the contributor will never be reimbursed analogously. In the worst case scenario, if all members of the group never contribute (free-load), no one will benefit and the exchange system will break down (Karnstedt, Hennessy, Chan, Basuchowdhuri, et al., 2010). This additional risk that exists in a social media-based brand community and in any kind of communication in which online brand communities play a role and does not exist in a direct face-to-face communication between a client and a vendor (or a service provider).

Thus, logically, someone could ask why a user wants to participate in a social media-brand community if such a risk exists. Despite the above-mentioned risk, there are many incentives for an online user (potentially, a client) to participate in such a community. A first incentive is the expectation of reciprocity in a generalized exchange as described above. In other words, individual members think that there will be sufficient payback in terms of information and agreeable social relations from other members over time. A second incentive to actively participate in the community is the contributor's desire to enhance his reputation and prestige by being recognized as a valuable and popular source of information. An active member can also be motivated by the adoption of his/her ideas by other members in the group. Moreover, an additional motivation is caused by the value of affection the contributor places on the group. We do not refer to this last incentive further, as we have thoroughly explained the role of affection earlier. All in all, trust is playing a much more

significant role in such an environment due to the higher uncertainty and generalized nature contained in the relational exchanges, which are developed in a brand community on social media.

In conclusion, we see that when we have to investigate a client-vendor relationship and the role that the social media-based brand communities play on it, we have to consider additional elements of trust deriving from the riskier nature of the communication medium in a generalized setting created by the impersonal, non-dyadic character of the communication.

Chapter 3: Contributions and Hypothesis Formulation

Our work aims at investigating the role of trust and its dynamics in the new setting created by the advent of social media and social media-based brand communities and its effect on brand loyalty and the possibility of reducing customer churn.

As we have explained above, customer trust is a major component for the success of a vendor. This happens as trust plays a more critical role when uncertainty and potential negative consequences can arise from the interaction (Mayer et al., 1995). This crucial role of trust in completing a sale is even more evident in an online setting as uncertainty is exacerbated by the lack of face-to-face interaction and the asynchronous means of communication. The actual situation in e-commerce is complicated further by social media, namely hubs of social networking with novel communication tools, and the new social constructs created in them, like social media-based brand communities. As we have pointed above, brand communities based on social media have distinct characteristics from offline brand communities and therefore, it is unsafe to assume that the dynamics about trust building and trust transfer work in the same way as in an offline context and have the same effect on brand loyalty and customer churn.

For this reason, the first step in our study is to investigate the role of trust and the process of trust building and trust transfer in an online setting. We also see the mediating role that the social media-based brand communities have in trust building and trust transfer and how the interactions developed in such a community affect these processes. Our aim from these two first steps is to see how this new dynamic setting and the new social constructs affect brand loyalty. We also examine the role of bond formation in the development of trust and brand loyalty and we investigate the factors which lead to the creation of these bonds between the customer and the vendor. Finally, we try to examine how trust and bond formation affect customer churn in an online setting through its role on brand loyalty and how the existence of a brand community in social media can affect this relationship.

After discussing briefly our research goals, we proceed with the formulation of our hypotheses.

3.1 Hypotheses

Every exchange of activity (interaction), tangible or intangible, between at least two persons or entities can be defined as a social exchange. The success of a social exchange depends on self-interest and interdependence. The combination of the rational and psychological needs of the actors, namely the individual self-interest, is what drives the exchange process among them. These needs can be encapsulated in the individual characteristics that an actor presents during the exchange. This self-interest and its realization are complicated by the interdependence of actors in situations with more than two parties involved in the social exchange. In a relational exchange, actors develop emotions. These emotions have value for the participants even if they cannot be monetary valued. Emotions act as reinforcing factors in repeating or avoiding an exchange. It is obvious that a relational exchange with more than two actors is fitting to the environment of a social media-based brand community. Following this line of thought, an actor's personal goals which can essentially summarize his/her self-interest as well as his/her personal orientation, namely his/her predisposition towards the relational exchange, play an important role in the creation of certain emotions during a relational exchange.

The intrinsic value of these emotions is taken into account by the participants in maximizing their utility (Lawler, 2001). These emotions act as reinforcing factors in repeating or avoiding an exchange. Furthermore, Lawler (2001) argues that emotions can defer in magnitude and in persistence based on the mode of the exchange from which they arise. He discerns between four modes of exchanges: productive, negotiated, reciprocal and generalized (see also, Ekeh, 1974; Emerson, 1981; Molm, 1994; Molm & Cook, 1995).

Trust depends on emotions and the level of commitment. Commitment has two components the calculative component and the affective component[19]. Successful relational exchanges cause positive emotions and in turn increase affective trust. Moreover, the rationality component included in an interaction affects what we have defined as calculative trust. Based on this rationale, Sashi (2012) has suggested that there are two kinds of members in an online community, 1) people who don't develop

---

[19] See the section 2.8 in the literature review for more details.

affective trust to the other members of the community or the community itself but they exhibit what we call calculative trust and 2) members who actively participate in the community and form emotional bonds with other members of the community, the community itself and the brand (Sashi, 2012). In both cases, members who exhibit these behaviors have increased trust. Our work comes to examine if Sashi's (2012) theoretical propositions have application in the more specific context of a social media-based brand community. Based on the above discussion, we expect the built up of trust among the members of a social media-based brand community depending on the type of interaction (the type of the relational exchange) which can be shaped by the individual characteristics of the members.

Finally, we have to point that trust can also be transferred between different contexts and actors. Three types of trust transfer can take place in social commerce and therefore are relevant in our work: 1) the trust transfer from the offline to the online shop, namely the perception which is created to the person from the interaction from the physical shop of the brand and how this translates to trust in the online shop, 2) the trust transfer from the other members of the social media-based brand community which reinforces both the trust of the subject to the community and the trust of the subject to the brand and 3) the trust transfer from the community as a whole which translates to increased brand loyalty from the community as a whole. Based on the above-discussion, we differentiate in our analysis between two samples, one capturing the total customer population of the SYN.KA. Super Markets, and one mirroring only the part of the customers who participate in the social media-based brand community of SYN.KA Super Markets in order to be able to measure the effect of participation in the community in the customer's trust.

From the above discussion, we can infer our first two hypotheses.

Hypothesis 1: *Personal characteristics of individuals (members participating in a social media-based brand (SMB) community and non-members) affect the trust (through trust creation or transfer) to the brand.*

Hypothesis 2: *Personal characteristics of individuals (members participating in a social media-based brand (SMB) community) affect the trust (through trust creation or transfer) to the brand.*

Table 3.1 Expected changes on trust associated with the existence of an individual characteristic

Individual characteristics	Expected Effect on Trust
Involvement	+
Participation (active/passive members)	+
Interaction Outcomes/ Personal Goals	- / +
Reciprocity/ Feedback	+
Individual orientation	- / +

In the third hypothesis, we examine how trust works in the micro level of interaction (relational exchange) that develops between two members in the social media-based brand community. These interactions are very important because we expect that the micro dynamics developing inside the brand community among its members affect the level of trust and the possibility of the members to churn, leading to a reinforcement of brand trust for the individual and a lower possibility to churn, In other words, we expect that participation in the community and the level of this participation affect the participant's level of brand trust, a point that we examine in another hypothesis. Thus, here, we try to examine the micro level in order to investigate how these isolated interactions contribute to the collective effect of participation in those elements and to measure the impact and the strength of relevant reciprocal acts by other members to the individual's behavior. To the best of our knowledge, this thesis is the first study which examines with an experimental game the above-mentioned micro dynamics and give a complete picture of the effect of the interactions developed in a social media-based brand community among members, identifying potential ways for explaining the effect of participation in the social media-based brand community on an individual's level of brand trust. The confirmation of Hypothesis 3 bears significant implications for the vendor as it could entail that a potential fostering of trust among the community members in the

community setting could translate to an increased brand trust for those individuals through positive feedback (reciprocity) and trust transfer.

A fundamental aspect of trust transfer is entitativity which can be described as the extent to which an assembly of individuals is recognized as forming a group. Entitativity is very important for trust transfer both on an individual level and between groups and individuals. In the case of a first encounter with an individual belonging to a group, an initial impression is formed about this individual. Other group members are identified in terms of this impression and information about them is processed in such a manner to try to verify the impression (McConnell et al., 1997). The higher the perceived entitativity of a group, the higher the imprint of the initial impression to the evaluation of the other members (Stewart, 2003). Analogous to this, on an individual level, a person when first encounters another forms an impression quickly (Hastie & Park, 1986) and as more information is accumulated through subsequent encounters, they seek to verify that impression causing new information to be translated in a manner consistent with the already formed impressions (Hamilton et al., 1989). Thus, we see that people tend to expect consistency from others (Hamilton & Sherman, 1996). Based on this discussion, we expect that if a member who participates in a relational exchange interprets new information as a confirmation of his/her first positive impression, his/her trust towards the other party of the encounter increase with each subsequent interaction as trust is directly linked to the perception that we have about the other party (Stewart, 2003). Therefore, our hypothesis can be formulated as follows.

Hypothesis 3a: *If the first interaction is consummated successfully between members of a SMB community, this fact reinforces further the levels of trust of the said members in each subsequent interaction.*

Most studies (McKnight et al., 2002; Stewart, 2003; Strub & Priest, 1976; Uzzi, 1996) assume that there is symmetry between a trustor and a trustee. Thus, researchers take for granted that if A trusts B, then B must trust A and they also assume that each party has about the same level of trust for the other party. In other words, they not only assume that trust is reciprocal between the parties (Castelfranchi, 2008) but also that

the two parties display equivalent trust behaviors among them (Serva, Fuller, & Mayer, 2005). This actually is not a correct notion as there are empirical analyses which show that trust transfer is not necessarily symmetric. Delgado-Márquez, Hurtado-Torres, & Aragón-Correa (2012, 2013) have shown that one party's trust behavior affects the other party's reciprocal trust behavior but not always in a symmetric manner. In our work, we try through a two-stage dyadic experiment to show if first, reciprocity exists in the case of an initial trusting attitude from one party to another, as most studies suggest, in the novel setting of a social media-based brand community (see Hypothesis 3a) and secondly, in the case of such an occurrence, this experiment will allow us to measure the extent of the reciprocal acts (higher, equal or lower) relative to the strength of the initial trusting behavior. Thus, the following hypothesis can be formed.

Hypothesis 3b: (*In a relational exchange taking place in a SMB community) if a member shows trusting behavior to another member, the later will tend to reciprocate more.*

Brand trust has been shown to have a positive impact to brand loyalty (Laroche et al., 2013). This finding applies both to a physical contact and an online contact setting. We examine this relationship in a unique novel setting, the setting of a social media-based brand community in our research, as many different characteristics are exhibiting in such an environment. Brand communities on social media have some distinct features which differentiates them from traditional brand communities and other online communities, such as the lack of any structure or hierarchy separating the old members from the new ones (Habibi et al., 2014), a unique social context (Habibi et al., 2014), a far greater scale with millions of members (Boyd & Ellison, 2007), a different content and storytelling which is much more generalized and customable than the one of other online communities or traditional communities (Patterson, 2012) and the ability to easily connect with myriads of other affiliated brand communities (Zaglia, 2013). Thus, the very nature of the social media networks which enable the social media-based brand communities to have these features and the unique dynamics that develop on a social media-based brand community due to these features can differentiate how customer trust translate to customer loyalty. Our research aims

to examine this relationship in this particular setting and therefore, the following hypothesis is formed.

Hypothesis 4: *A higher trust to the brand can lead to an increased brand loyalty*

Churn of a customer (of the brand) who is also a SMB community member is the exact opposite of what we call as customer loyalty because customer loyalty is often interpreted as actual customer retention in the customer relationship management literature (Gustafsson et al., 2005). In turn, the existing literature emphasizes two different dimensions of relationship commitment that can induce loyalty among the actors and have a meaning in the context of the customer-vendor relationship. These dimensions are affective commitment as created through personal interaction, reciprocity and trust and calculative commitment which is shaped by the switching costs (Bendapudi & Berry, 1997; Fullerton, 2003; Garbarino & Johnson, 1999; Morgan & Hunt, 1994). Affective and calculative commitment form a customer's loyalty. We have shown previously that trust affects directly the affective commitment and indirectly, the calculative commitment, shaping customer loyalty in the process. Therefore, trust place a significant role in customer retention, totally discrete from the other factors affect customer churn, and we expect that an increase in trust between the members of the community will lead to a decreased possibility of these members to churn if they are also customers of the company. This discussion leads us to our next hypothesis.

Hypothesis 5: *A higher trust due to the community participation can diminish the possibility of a member to churn.*

As we have described above, people taking part in a relational exchange develop emotions. These emotions can differ among members of a community based on their individual characteristics like the perception, the level of involvement and the orientation of every participant. The level of involvement and the perception of a participant can be summarily described by the notion of customer engagement. Despite being similar to the notion of participation (active – passive users), customer engagement has a distinct character in the formation of bonds. From a practitioner's perspective, customer engagement can be defined as activities which facilitate

interactions that strengthen the psychological and physical investment a customer has with a brand (Sedley, 2006). This definition aligns with a vendor perspective about customer engagement. If, now, we examine customer engagement from a customer perspective, we can academically define it as the intensity of customer participation with both representatives of the organization and with other customers in a collaborative knowledge exchange process (Wagner & Majchrzak, 2007). Customer engagement consists of five elements: enthusiasm, absorption, identification, attention and interaction.

The online environment of such a community makes the customer participation easier and the mere existence of the brand community facilitates this information and knowledge exchange process, while, at the same time, the increasing number of interactions between participants (due to the ease of access) demands a higher personal investment from the members. Moreover, we have shown in our literature review that participants' prospects and potentials play a major role in the creation of emotions and as a result, in the formation of bonds.

Now, if one wants to understand bond formation through the prism of customer engagement, he/she has to focus on the five elements comprising it. Individuals who exhibit enthusiasm, absorption, identification, attention and interaction for a brand (consequently, for a product of a brand as well) and thus, present a high level of involvement and customer engagement are expected to form not only transactional bonds but also emotional bonds with a brand. This happens as individuals who exhibit such a high level of attachment and commitment can pass from a generalized exchange to a productive exchange in their interactions with the brand and everyone associated with it (e.g. members of the social media-based brand community). This will happen as high customer involvement in a product or a brand provide a strong basis for expanding and personalizing the client-vendor relationship (Christy et al., 1996). Moreover, supporting this line of thought, empirical research has suggested that highly-involved individuals are more likely to value their existing relationship (Gordon et al., 1998) and to develop a tendency to engage in similar relationships with other vendors (Odekerken-Schröder et al., 2003) or service providers (Varki & Wong, 2003). These research findings strongly point to this transformation of the

relational exchanges with the brand or the elements associated with it (e.g. social media-based brand community) from generalized ones to productive ones, as the customers find a common goal and purpose and identify their interest with the ones of the brand. As we have mentioned earlier, a productive exchange can produce the most persistent and strongest emotions of any kind of relational exchange. Thus, (Lawler, 2001; Lawler & Thye, 1999; Lawler et al., 2000) in such a situation the client not only develops transactional bonds from the calculative trust (Garbarino & Johnson, 1999; Morgan & Hunt, 1994; Sashi, 2012) but also forms strong emotional bonds and enhances his/her affective trust towards the brand (Sashi, 2012). Therefore, we expect that depending on the individual characteristics of a customer member in a social media-based brand community stronger or weaker emotional or transactional bonds will be formed between the said customer and the brand. From this discussion, the following hypothesis can be created. Note, here, that we differentiate between two samples (one randomly selected from all customers of SYN.KA Super Markets and one selected from members of the SYN.KA Super Markets social media-based brand community only), as we expect participation to the social media-based brand community to exert an influence in bond formation between the customer and the brand.

Hypothesis 6: *The individual characteristics of a person (customer-member in a SMB community or non-member) play a significant role in the bonds formed between the said customer and the brand.*

Hypothesis 7: *The individual characteristics of a customer-member in a SMB community play a significant role in the bonds formed between the said customer and the brand.*

Table 3.2 Expected influence on bonds associated with an individual characteristic

Individual characteristics	Expected Effect on Bonds
Involvement	+
Participation (active/passive members)	+
Interaction Outcomes/ Personal Goals	- / +
Reciprocity/ Feedback	+
Individual orientation	- / +

According to Sashi (2012), we can discern between two kinds of customers, a transactional customer and a delighted customer. Analogous to this, we can make a distinction between two kinds of members in a social media-based brand community, passive members who emulate a transactional behavior and active members who adopt an affectionate stance. Users who are contacting only functional use of the community's web page and local social network activities among friends can be considered passive members and they are lowly involved to the activities of the community. On the contrary, users who are also involved in community activities can be considered active and highly involved (Oestreicher-Singer & Zalmanson, 2009). Concerning the former, we can say that they participate in a generalized exchange, whereas the latter feel united under the banner of the community's goals imitating, in this way, a productive exchange (Lawler, 2001).

Based on the above-mentioned discussion, we can expect that active members develop a strong and persistence relationship with other members of the community leading to the building of a positive sentiment towards the community as a whole. As the previous analysis has shown, this, in turn, leads 1) to increased trust to the other members of the community and the community as a whole, 2) to increased commitment in accomplishing the community's goals, 3) to increased repetition of interaction with the other members of the community and 4) to decreased perception of risk in these interactions among members of the community[20] (Lawler, 2001). This emotional attachment which increases the affectionate bonds between the active members of the community leads to their transformation to fans as suggested by Sashi (2012).

From the above discussion, it is obvious that as emotional bonding, contrary to transactional bonding, creates an increased level of trust and taking into account the fact that the level of participation and involvement of the individual members in a social media-based brand community can vary, we expect members who have strong

---

[20] We should note here that from the above four points, we care more about the first one as it directly relates sentiments and emotions to trust. The second and third points refer to individual characteristics (involvement and participation) which we assume that are indirectly linked to trust. The fourth points is by default present in any trusty interaction as by the very definition of trust it is described as a belief or expectation that the word or promise of the seller can be relied upon and the seller will not exploit the consumer's vulnerability (Geyskens, Steenkamp, Sheer, & Kumar, 1996).

emotional bonds with the other members of the community and the community as a
whole to have an increased level of trust in the brand which the community
represents. In turn, these members who form long- lasting[21] emotional bonds and
exhibit increased trust to the brand, we expect to show increased customer loyalty and
as a result, a lower possibility to churn as we have repeatedly stated that customer
loyalty can be considered the exact opposite of customer churn in our work.

Thus, the following hypotheses can be articulated from this discussion.

Hypothesis 8: *The stronger and the more emotional the bond of the customer to the
brand, the higher the level of trust in the brand.*

Hypothesis 9: *The stronger and the more emotional the attachment of the customer to
the brand, the lower the possibility of the said customer to churn.*

Table 3.3 Table of Hypotheses

Hypothesis	Independent Variable	Dependent Variable	Way of measurement the Independent Variable	Way of measurement the Dependent Variable
Hypothesis 1	*Individual characteristics of individuals*	*Trust to the brand*	*Involvement: Questions from the Questionnaire Participation: Questions from the Questionnaire Interaction outcomes: Experimental Game Reciprocity: Experimental Game Personal orientation: Questions from the Questionnaire*	*Questions from the Questionnaire*
Hypothesis 2	*Individual characteristics of members participating in a (SMB) community*	*Trust to the brand*	*Involvement: Questions from the Questionnaire Participation: Questions from the Questionnaire Interaction outcomes: Experimental Game Reciprocity: Experimental Game Personal orientation: Questions from the Questionnaire*	*Questions from the Questionnaire*
Hypothesis 3a	*Trust in a member in the 1st interaction*	*Trust in a member in subsequent interaction*	*Experimental Game*	*Experimental Game*
Hypothesis 3b	*The existence of trusting behavior in another member*	*Tendency to reciprocate the trusting behavior, degree of reciprocity*	*Experimental Game*	*Experimental Game*

---

[21] For more on that, see (Lawler, 2001) and the discussion in the "relation, emotions and decisions" part
of our text.

Hypothesis 4	Trust to the brand	Increased brand loyalty	1.Questions from the Questionnaire	1.Questions from the Questionnaire
Hypothesis 5	Trust due to the community participation	Diminish the possibility of a member to churn	1.Questions from the Questionnaire 2.Experimental Game	1.Questions from the Questionnaire 2.Experimental Game
Hypothesis 6	Individual characteristics of an individual	Bonds formed	Involvement: Questions from the Questionnaire Participation: Questions from the Questionnaire Interaction outcomes: Experimental Game Reciprocity: Experimental Game Personal orientation: Questions from the Questionnaire	Questions from the Questionnaire
Hypothesis 7	Individual characteristics of members participating in a (SMB) community	Bonds formed	Questions from the Questionnaire	Questions from the Questionnaire
Hypothesis 8	Strength & type	Trust to the brand	Questions from the Questionnaire	Questions from the Questionnaire
Hypothesis 9	Strength & type	Possibility of a customer member to churn	Questions from the Questionnaire	Questions from the Questionnaire

To conclude, we can summarize the above-mentioned points in the following questions which we try to answer.

1. How the trust created or transferred, and the interactions conducted in such a community affect the level of trust between a client and a vendor in a highly dynamic online setting?

2. How trust and the mediating role of brand communities embedded in social media, through their implications to customer trust researched above, can affect customer churn for an online vendor?

3. How bonds are formed between a customer and a vendor and what is the influence of customer participation in the social media-based brand community? Have the stronger and more emotional bonds formed from such a participation an effect on customer's brand trust and his/her possibility to churn?

Lastly, we want to point here that most of the questions posed above have been suggested as open questions in the literature (Laroche et al., 2013).

Closing our presentation, the following scheme gives a complete picture of our conceptual framework.

Figure 3.1 Conceptual Framework
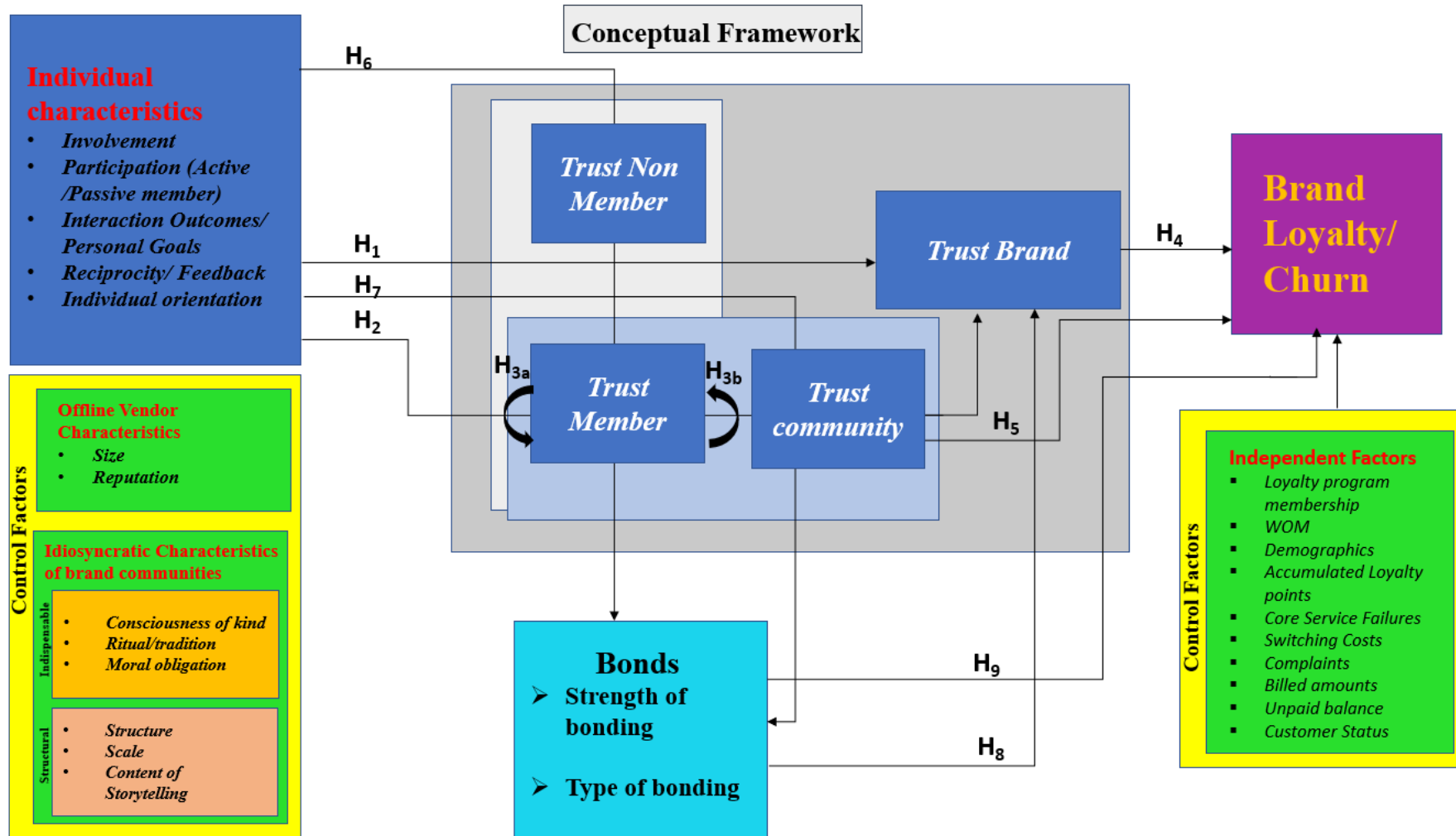
Chapter 4: Measurement of trust in a social media-based brand community

Here, we analyze some alternative ways of measuring different facets of trust taking into account the dynamics developed during the interactions in a brand community on social media and we provide a brief description of the way they can be employed for the partial or full analysis of our data.

Interpersonal trust can be broadly defined as a psychological state that comprises the intension to accept vulnerability based on positives expectations of the intensions or behavior of another person (Rousseau, Sitkin, Burt, & Camerer, 1998). An interpersonal trust relationship involves two entities: the trusting party (the trustor) and the party to be trusted (the trustee). The basic assumption that the activities of others cannot be monitored is inherent in such interpersonal relationships (Misztal, 1996). Consequently, not every interaction between two parties involves trust and relationships always involve some uncertainty (Tsai, Laczko, & Bjørnskov, 2011). In previous parts, we analyzed in great detail how trust is built and how different entities transfer trust among them outside or inside of a social media framework. Therefore, here, we do not analyze these items and we focus completely on the measurements of trust in such a relationship between two entities in a framework of multiple interactions, such as the one in a social media-based brand community.

Generally, the assessment of trust has traditionally relied on survey questions. More recently, some attempts of experimental designs have been used to measure trust. This lack of progress in measurement of trust presents a significant research gap (Beugelsdijk, 2005; Glaeser, Laibson, Scheinkman, & Soutter, 2000; Stiglitz, Sen, Fitoussi, & others, 2010). Some examples of trust measurement are questionnaire surveys which have been conducted since 1972 and include attitudinal survey questions, such as the World Values Survey, the General Social Survey and the European Social Survey. All these surveys measure trust as the percentage of respondents who answer positively from one up to three questions related to trust (van der Horst & Coffé, 2012). In recent years, the European Social Survey has also adopted an interval scale ranging from 0 to 10 except for the questionnaire in order to measure trust more accurately (Nieminen et al., 2007;

77

Reeskens & Hooghe, 2007). Although, these and other questions used in survey questionnaires are interesting (Dinesen, 2011; Requena, 2003; Tan & Tambyah, 2011), recent studies have noted that these questions are also vague, glib and difficult to interpret. Variation in such survey responses might arise for numerous reasons, such as differences in beliefs regarding the trustworthiness of a common group of individuals, discrepancies in awareness of what it means to be able to trust someone or variation in the ability to elicit trustworthy behavior from other people (Glaeser et al., 2000). Moreover, such qualitative approaches have at least three important limitations to measuring trust. First, most such analyses of trust have assumed symmetry between the parties involved. Some recent studies have showed that trust is not necessarily symmetrical and thus, involved parties may not trust one another equally (Castelfranchi, 2008). Second, although the literature has focused on analyzing how the trust of one party influences the trust that is returned by another party (trust reciprocity) (Schoorman, Mayer, & Davis, 2007), there is almost no study addressing the trusting behavior of trustors and trustees separately (Serva & Fuller, 2004). Third, previous research gives no attention to situations in which third parties can influence the trusting behaviors between trustors and trustees and trust transfer can occur such as in a social media-based brand community. From all the above, it is obvious that a simple "questionnaire" approach is not enough for measuring trust in a multipersonal environment of continuous interaction with trust transfer possibilities, such as the one in social media.

For this reason, we focus more on experimental designs that can help us create an index of trust measurement which can encompass all the aspects of the dynamic environment we examine. There is a generalized use of experiments to measure trust (Camerer, 2003; King-Casas et al., 2005). We have to discern between laboratory and field experiments. The former presents two main advantages compared with the latter, replicability and control of external variables. As a result, we focus on laboratory experiments to build the measure. Given the impossibility of creating an experiment that generally applies to any trust-based relationship, laboratory experiments allow the researcher to create settings that are similar to the real-world by emulating real-world conditions in the laboratory (Kim, Barua, & Whinston, 2002). One of the most widely used experimental settings that target to measure and quantify trust is the trust game (Berg,

Dickhaut, & McCabe, 1995). In this game, pairs of trustors and trustees interact under certain conditions to enable an observer to evaluate trust and its characteristics. We use this game as a basis for our proposition.

Our proposition is focused on general dynamic measures (Delgado-Márquez et al., 2012, 2013). Before we proceed, we need to explain in greater detail the trust game that we referred above. In it, pairs of individuals participate. Each pair is composed of a trustor and a trustee. Each trustor receives an initial fee, which will be referred to as the "initial endowment". The trustor first chooses between the actions ''Send'' and ''Do not send''. If the trustor chooses ''Do not send'', then he/she receives the initial endowment at the end of the game, and the trustee receives nothing. If the trustor chooses ''Send'', then the amount that the trustor passes to the trustee (x euros) is tripled (this positive amount multiplying x is known as the multiplier) and given to the trustee (i.e. reflecting a return on an investment). The trustee then chooses between the actions ''Keep'' and ''Return''. If the trustee chooses ''Keep'', then the trustee receives triple the amount that the trustor sent (3*x euros). On the other side, the trustor receives the initial endowment minus the amount that he passed to the trustee. If the trustee chooses ''Return'', then the trustee receives triple the amount that was sent by the trustor minus the amount that the trustee decided to return to the trustor (r euros). Additionally, the trustor obtains the initial endowment minus the amount that he passed to the trustee plus the amount returned by the trustee.

The structure of this game reflects the critical components of trusting acts: posing one agent to become vulnerable based on the positive expectations regarding the intentions or behavior of another agent in an easily observant manner (Rousseau et al., 1998). Any money that is sent to the trustee renders the trustor immediately vulnerable because the trustee can return as little as he wishes. The trustee has no economic incentive to return anything. In this game, the amount that is sent by each trustor may be considered a natural measurement of trust (Glaeser et al., 2000). In such a game, traditional theory predicts for a rational individual no cooperative behavior based on the principles of dominance and backward induction (Myerson, 1991). Nevertheless, trustors typically lack the knowledge skills, time, resources and information that are necessary to make decisions in a manner that is compatible with economic notions of rational behavior (Boero,

Bravo, Castellani, & Squazzoni, 2009; Engle-Warnick & Slonim, 2004; Lyon, Mollering, & Saunder, 2012). This was highlighted even by the results of the first application of this game by Berg et al. (1995). As our goal is to examine both the trust that is transferred by trustors and the trust that is returned by trustees in an environment in which both the trustors and the trustees are affected by third parties (the trustors and trustee's friends), an environment that emulates brand communities in social media, we have to modify the trust game in line with Delgado-Márquez et al. (2012, 2013). The modification that we plan will be with an aim to include a trustor friend's influence on the trustor's decisions and a friend's of the trustor friend influence on the trustor's decisions. Symmetrically, we do the same for the trustee.

Based on the above-mentioned literature background, our approach for measuring trust is twofold, consisting of an experimental game and an independent questionnaire.

4.1 Experimental Game

Starting from this generic game, we can adapt it to this case. Practically, we can prepare an experiment in which the participants, members of a social media-based brand community in one of the most commonly used social media platform, will answer an electronic questionnaire properly prepared to reflect the most important characteristics involved in trust building and trust transfer.

In this questionnaire, we create a simple game in which the participants will be called to make an initial decision to trust another member of the community which is unknown to them. This first initial phase could be considered as a natural measure of trust like in the experiments of Delgado-Márquez, Hurtado-Torres, & Aragón-Correa (2012, 2013) as it shows an individual's propensity to trust. This approach has the additional advantage that it shows this natural inclination in the exact same setting in which we want to examine it. As a second step, we give an option to the participants to offer something with a positive intrinsic value (it could be from a small monetary amount to just simple stickers in social media) to their new acquaintance. This way, the initial subjects will be the trustors (the ones who trust the others) and the persons contacted will be the trustees (the persons to whom the trust is put). Then, the trustees will be asked to return a similar item of equal, greater or lower value. Still, they will have the option to not return anything. In the case that the trustees don't return anything, they will just keep their

gift and no further contact with the trustors would be needed. In the case that the trustees return something, its value will be deducted from the initial amount which the trustor spent, and it will be returned to him/her (probably through its ability to be used by the trustors). This way, we have a similar game like the one presented above because the trustees rationally will have no motive to cooperate and return anything and the trustors initially will have no incentive to offer anything to the trustees. Therefore, in a world of rational choice, they would have no incentive to cooperate due to dominance and backward induction.

Here, we should note that most studies (McKnight et al., 2002; Stewart, 2003; Strub & Priest, 1976; Uzzi, 1996) assume that there is symmetry between a trustor and a trustee. Thus, researchers take for granted that if A trusts B then B must trust A and they also assume that each party has about the same level of trust for the other party. In other words, they not only assume that trust is reciprocal between the parties (Castelfranchi, 2008) but also that the two parties display equivalent trusting behavior among them (Serva et al., 2005).

This actually is not a correct notion as there are empirical analyses which show that trust transfer are not necessarily symmetric. Delgado-Márquez et al. (2012, 2013) has shown that one party's trust behavior affects the other party's reciprocal trust behavior but not always in a symmetric manner. Our experiment above can show this difference in reciprocity as it allows the second party to have the option to return or not an item of material value to the first party after the first party has already put some trust on him or her during the initial phase of the experiment. This setting is exactly the one which could demonstrate the initial trusting behavior (of the trustor) and the reciprocal trusting behavior (of the trustee). Thus, our experiment will give us a measure of the reciprocity exhibited to trusting behavior of individual members in a brand community based on social media.

4.2 Independent Questionnaire

Additionally, in order to account for specific factors that affect trust, the participants are called to answer a distinct questionnaire in which we present some questions[22]. 11 of the items (which concern trust and brand loyalty) are picked in the survey used in the work of Delgado-Ballester, Munuera-Aleman, & Yague-Guillen (2003). These questions are prepared in such manner that

---

[22] The complete questionnaire is provided in the Appendix of this document.

they are able to identify different factors, sociological, demographic and emotional, which affect trust building. These items quantify trust in the brand by measuring essentially two distinct components, brand reliability and brand intensions. Brand reliability can be summarized by the extent to which the potential clients believe that the brand accomplishes its value promise. Trust based on brand reliability represents a set of attributions with a technical or competence-based nature. Essentially, it refers to the accomplishment of the promise about what the brand represents to the market (Andaleeb, 1998; Doney & Cannon, 1997). This point is particularly important for clients as it is a measure of confidence about the occurrence of future satisfaction. Consequently, if a brand satisfies the individual's needs in a consistent positive manner, the consumer builds up a positive brand attitude which becomes a driver for a repurchase in a relational exchange (Morgan & Hunt, 1994). Therefore, these items that measure brand reliability effectively try to catch brand factors which affect trust, like reputation and the size of the company.

Besides, brand intensions refer to the emotional security on the part of the individuals from the actions of the brand. It represents a deeper belief that the brand's behavior is guided by favorable intentions towards the welfare and interest of the clients in the long run, irrespective of any short term problematic situation (Andaleeb, 1998). Convictions of this nature are, therefore, held and acted on in the current situation with the confidence that future events will confirm them. This feeling is tantamount to the notion of trust as it assumes that the brand will not take advantage of the consumers' vulnerability, a point which essentially corresponds to the definition of trust. Usually, positive brand intentions are associated with feelings of altruism (Frost, Stimpson, & Maughan, 1978), benevolence and honesty (Larzelere & Huston, 1980), dependability and fairness (Rempel, Holmes, & Zanna, 1985) on the part of the brand. Here, we should note that in this analysis, we use the term "client" whereas our setting concerns the members of a social media-based brand community. We do this as every member of a brand community is a potential client of the company (if not already an existing one) and the purpose of the creation of the brand community on the part of the brand is the fostering of increased purchases. Therefore, for the purpose of our analysis, we can consider the members of a brand community as clients (which, as we showed above, equals to prospective clients as well) in this setting. As a last step, in

accordance with Delgado-Márquez et al. (2012, 2013), we build a trust scale[23] from the answers in this questionnaire, except for the potential identification of the underline causes for the trust building. This scale is created through a five-step Likert-scale which has as "1" the complete disapproval of the item and as "5" the complete approval.

From this two-stage approach, we can see that we manage to identify the trust building, the trust transfer and the underlying causes and at the same time, we should be able to quantify and measure their power and persistence. From the experiment, it is obvious that its first phase allows us to measure the elements of natural trust which can differ from individual to individual and to isolate them from our experiment, while at the same time we are able to measure the impact of trust transfer contacted in the social media-based brand community. From the second stage, we identify and measure the inherent factors affecting trust building and stemming from other sources than human interaction among the members.

Finally, the repetition of the two-stage cycle of the experiment (we refer to the game, not the separate questionnaire) one more time allows us to see if the previous trusting behavior and the reciprocity experiences could have an effect on the future transfer of trust between the same members and among other members of the community. For this reason, we plan to repeat the above-mentioned experiment with a second cycle (so, with the same members making a second similar transaction) and with a second contact (the initial subject should be given the opportunity to contact a second unknown person in a similar manner). This way, we be able to discern the effect of the initial trusting behaviors and its reciprocity to subsequent encounters with the same and different subjects in a standard setting.

To summarize we would contact a two-stage, two cycle experiment among members of a social based brand community. The experiment combines a laboratory case (conducted on the social media platform) with the completion of a separate questionnaire. This approach allows us to measure trust and its causes in a quantifiable manner and it also measures the level of trust transfer and reciprocal trust transfer in our sample.

---

[23] By trust scale, we mean a categorization of the answers given through the 5-point Likert scale we employ in our suggested questionnaire. We do not necessarily refer to a numerical trust scale. However, for the purposes of our research, we need a kind of scaling in the levels of trust at least in a qualitative form.

Chapter 5: Measurement of existing constructs

In this chapter, the existing literature about the potential methods of measurement of the elements presented in our theoretical framework are discussed and the way of measurement in this thesis is mentioned.

5.1 Measurement of elements in our conceptual framework

In this section, we give a detailed account of the different measurement possibilities presented in the existing literature for each one of the elements that we have used in our theoretical framework.

We present the measurement options for each element along with a short citation of the meaning of each item with the corresponding literature references. The data is given in the following tables.

Table 5.1 Individual Characteristics measurement and short description of sources

Individual Characteristics	Measurement	Sources and short description
Involvement	1) The number of repeat purchases (Bowden, 2009; Buckinx & Van den Poel, 2005) as "If I repeatedly come back to this object, it matters to me, and if it matters to me, I should have an opinion about it that signals that it matters, and a neutral or near neutral opinion does not do that"(Soderlund, 2002, p.866) 2) Qualitative questions in a questionnaire (Bowden, 2009; Delgado-Ballester & Luis Munuera-Alemán, 2001; Gordon et al., 1998; Swinyard 1993) with Linkert scale 3) Measuring the type (active/passive user) of participation in a brand community: looking for the kind of activity that the participant performs,1) if functional and social network activities only -> lowly involved 2)if community activities -> highly involved (Oestreicher-Singer & Zalmanson, 2009).	Sources which use (or suggest to use) the 1st measure: (Bowden, 2009; Buckinx & Van den Poel, 2005; Soderlund, 2002). Sources which use (or suggest to use) the 2nd measure: (Bowden, 2009; Delgado-Ballester & Luis Munuera-Alemán, 2001; Gordon et al., 1998; Swinyard, 1993) Sources which use (or suggest to use)the 3rd measure: (Oestreicher-Singer & Zalmanson, 2009)
Participation	1. Measuring simple participation in a brand community: number of clicks/likes/posts (Relling et al., 2016). 2. Measuring the type (active/passive user) of participation in a brand community: looking for the kind of activity that the participant performs,1) if functional and social network activities only -> passive user 2)if community activities -> active user (Oestreicher-Singer & Zalmanson, 2009).	Sources which use (or suggest to use) the 1st measure: (Relling et al., 2016) Sources which use (or suggest to use) the 2nd measure: (Oestreicher-Singer & Zalmanson, 2009).
Interaction Outcomes/ Personal Goals	1. Experimental settings (games, trials etc.) creating a relational exchange (like a chat in a social media-	Sources which use (or suggest to use) the 1st measure: (Izard, 1991;

Brand Loyalty Factor	Measurement	Sources and short description
	based brand community) (Izard, 1991; Lawler, 2001; Russell et al., 1989). 2. In our work, we have an experimental game which accounts for interaction outcomes (See section "How to measure trust in a social media-based brand community"). Moreover, it accounts how the previous outcomes of an exchange affects any subsequent outcome. (Berg et al., 1995; Camerer, 2003; King-Casas et al., 2005)	Lawler, 2001; Russell et al., 1989). Sources which use (or suggest to use) the 2nd measure: (Berg et al., 1995; Camerer, 2003; King-Casas et al., 2005)
Trust Reciprocity/ Feedback	1. Experimentally (better in a control environment or setting) (Berg et al., 1995; Camerer, 2003; King-Casas et al., 2005). 2. In our work, we use such an experimental design in the form of a game which allows the second party to have the option to return or not an item of material value to the first party after the first party has already put some trust on him or her during the initial phase of the experiment. This setting is exactly the one which could demonstrate the initial trusting behavior (of the trustor) and the reciprocal trusting behavior (of the trustee).	Sources which use (or suggest to use) for the measure: (Berg et al., 1995; Camerer, 2003; King-Casas et al., 2005).
Individual orientation	1) Experimental settings (games, trials etc.) creating a relational exchange (like a chat in a social media-based brand community) (Berg et al., 1995; Izard, 1991; Lawler, 2001; Russell et al., 1989). 2) Questionnaires (despite they present shortcomings) (like WVS etc.) 3) In our research, we count individual orientation in general through qualitative questions but as far as the orientation towards trust, we measure it through the initial phase of the game (For more, see section "How to measure trust in a social media-based brand community").	Sources which use (or suggest to use) the 1st measure: (Berg et al., 1995; Izard, 1991; Lawler, 2001; Russell et al., 1989). Sources which use (or suggest to use) the 2nd measure: (WVS surveys) The third entry is how we combine the use of both measures in our research.

Table 5.2 Brand loyalty factor measurement and short description of sources

Brand Loyalty Factor	Measurement	Sources and short description

Loyalty program membership	1. Existing membership or not (from the company records) ((Bolton et al., 2000); Ahn et al. 2006). 2. Questions in our proposed questionnaire.	Sources which use (or suggest to use) the measure: (Bolton et al. 2000; Ahn et al. 2006) Here, we should highlight that the second entry in measure is not a different measure but a different way of using the same measure (in the first entry, we take the info directly from the company's records whereas in the second case we take the same info indirectly through question in the questionnaire. In the latter case, the questions are based on the above-mentioned sources as well).
Word-of-mouth	1. Posting of participants on the brand community (Goyette, Ricard, Bergeron, & Marticotte, 2010) 2. Questions from our questionnaire(Day & Landon, 1977) As a factor, it could be merged with complaints – written complaints in any form (negative word of mouth is what we mainly care) (Ahn et al., 2006; Day & Landon, 1977).	Sources which use (or suggest to use) the 1st measure: (Goyette et al., 2010). Sources which use (or suggest to use) the 2nd measure: (Day & Landon, 1977).
Demographics	1. Questions in our sample questionnaire (Buckinx & Van den Poel, 2005; Reinartz & Kumar, 2003; Seo et al., 2008).	Sources which use (or suggest to use) the measure: (Buckinx & Van den Poel, 2005; Reinartz & Kumar, 2003; Seo et al., 2008).
Accumulated Loyalty Points	1. Checked from their membership accounts (from the company archives) (Ahn et al., 2006; Gerpott et al., 2001; Kim, 2000; Kim et al., 2004) Questions in our proposed questionnaire.	Sources which use (or suggest to use) the measure: (Kim et al. 2004; Gerpott et al., 2001; Ahn et al. 2006; Kim, 2000) Here, we should highlight that the second entry in measure is not a different measure but a different way of using the same measure (in the first entry, we take the info directly from the company's archives, whereas in the second case, we take the same info indirectly through question in the questionnaire from each customer. In the latter case, the questions are based on the above-mentioned sources as well).
Core Service Failures	1. Number of returns (cancelation of sale) and Number of orders not served (Buckinx & Van den Poel, 2005; Chen, 2016). 2. Questions in our proposed questionnaire.	Sources which use (or suggest to use) the measure: (Chen, 2016). Here, we should highlight that the second entry in measure is not a different measure but a different way of using the same measure (in the first entry, we take the info directly from the company's archives, whereas in the second case, we take the same info indirectly through question in the questionnaire from each customer. In the latter case, the questions are based on the above-mentioned sources as well).
Switching costs	1. Time length (as expressed from the moment of the first purchase) of the relationship between a customer and a seller (Relation Switching Costs) (Buckinx & Van den Poel, 2005; Burnham et al., 2003; Chuang, 2011; Gutek, Groth, & Cherry, 2002; Reinartz & Kumar, 2003; Seo et al., 2008; Verhoef, Franses, & Hoekstra, 2002) 2. Questions in our proposed questionnaire (Carter et al., 2014). Here, we should point that other categories of switching costs, not accounted by our proposed	Sources which use (or suggest to use) the measure:(Buckinx & Van den Poel, 2005; Burnham et al., 2003; Chuang, 2011; Gutek et al., 2002; Reinartz & Kumar, 2003; Seo et al., 2008; Verhoef et al., 2002) Here, we should highlight that the second entry in measure is not a different measure but a different way of using the same measure (in the first entry, we take the info directly from the company's archives, whereas in the second case, we take the same info indirectly through question in the questionnaire from each customer. In the latter

	measure, are near zero or non-existent in our case (or measured by another factor).	case, the questions are based on the above-mentioned sources as well).
Complaints	1. Number of written complaints (mailed, e-mailed, posted, chatted) (Ahn et al., 2006; Day & Landon, 1977; Lee, Lee, & Feick, 2001; Solnick & Hemenway, 1992). 2. Number of returns (due to a defect or inadequacy) (Buckinx & Van den Poel, 2005). 3. Questions in our proposed questionnaire.	Sources which use (or suggest to use) the 1st measure: (Ahn et al., 2006; Day & Landon, 1977; J. Lee et al., 2001; Solnick & Hemenway, 1992) Sources which use (or suggest to use) the 2nd measure: (Buckinx & Van den Poel, 2005). Here, we should highlight that the third entry in measure column is not a different measure but a different way of using the same measure (in the first two entries, we take the info directly from the company's archives, whereas in the last case, we take the same info indirectly through questions in the questionnaire from each customer. In the latter case, the questions are based on the above-mentioned sources as well).
Billed Amounts	1. Interpurchase Time (IPT) (measured as the average number of days between two shopping visits)(Buckinx & Van den Poel, 2005). 2. Number of Complaints about pricing and billing (mailed, e-mailed, posted, chatted) (Ahn et al., 2006). 3. Questions in our proposed questionnaire.	Sources which use (or suggest to use) the 1st measure: (Buckinx & Van den Poel, 2005) Sources which use (or suggest to use) the 2nd measure: (Ahn et al., 2006) Here, we should highlight that the third entry in measure column is not a different measure but a different way of using the same measure (in the first two entries, we take the info directly from the company's archives, whereas in the last case, we take the same info indirectly through questions in the questionnaire from each customer. In the latter case, the questions are based on the above-mentioned sources as well).
Unpaid balance	1. Balance of accounts of wholesale customers (if any existing and used in our search) (Ahn et al., 2006). As far as the retail customers are concerned, the company provides no credit.	Sources which use (or suggest to use) the measure: (Ahn et al., 2006).
Customer Status	1. Number of repeat purchases and Time of last purchase (Ahn et al., 2006; Buckinx & Van den Poel, 2005)measured through questions in the questionnaire.	Sources which use (or suggest to use) the 1st measure (Ahn et al., 2006; Buckinx & Van den Poel, 2005).

5.2 Bond measurement

Due to the importance of the formation of emotional and transactional bonds in our research, we decide to dedicate a whole section on the different ways of measurement for bonds in the existing literature and how we can implement them in our research.

The affect theory of social exchange by Lawler (2001) which we have analyzed extensively above supports that the task "jointness" of an exchange or interaction determines if a participant perceive the social unit as a source of the individual's emotions of feelings. More specifically,

participants in a social exchange tend to attribute their individually-felt emotions to the relationship with the other party or a group if the task is high in "jointness". On the contrary, if the task is low in "jointness", they're inclined to attribute their feelings to themselves or another's behavior.

"Jointness" can vary based on many subjective and objective elements. For instance, a manager may objectively create tasks in which the employees closely interact. So, the "jointness" here is high on purpose. In contrast, if we assume that we have parental responsibilities which can be defined as loose and intermingled and thus, "parenting" should foster a greater sense of "jointness" responsibility even if the tasks are not objectively structured. The main focus of the discussion here is that both objective and subjective conditions surrounding a task are important.

Lawler, Thye, & Yoon, (2008) theory posits a sharp distinction between global emotions, namely spontaneous feelings and specific emotions that emerge for subsequent interpretation of these spontaneous emotions. We have analyzed extensively above that important feelings for the shaping of relational exchanges between two parties and any emotional bond are the latter. This distinction presented in Lawler's (2001) affect theory is based on Weiner's (1986) attribution theory of emotion and Damasio's (1999) notion that "feeling feelings" make salient that one is being affected in a manner. As we have explained, global emotions like "feeling good" or "feeling bad" are involuntary felt as a result of any exchange or any social interaction. On the other hand, specific emotions are related to a particular social object like ourselves or a social entity. Theoretically, specific emotions like pride in ourselves or gratitude/ hate toward another emerge as participants in an exchange experience and interpret the origins of their global feelings.

Theory and previous research indicate that individuals are inclined to attribute positive events to themselves and negative events to others or the environment of the exchange (Jones & Davis, 1965; Kelley, 1967; Mezulis, Abramson, Hyde, & Hankin, 2004- for more, see locus of control, Judge, Erez, Bono, & Thoresen, 2002). The implication is that people participating in a "jointness" task will tend to take pride for the group successes rather than feeling grateful for the others' contributions whereas they would feel easier hate and anger towards others in a case of a group failure. This self-serving behavior supports the notion that it is not easy for repeated

exchanges to create positive feelings about a group or a social entity. The affect theory of Lawler (2001) overcomes this problem by specifying certain conditions under which emotional attribution will overcome or mitigate self-serving biases to create personal attachments. More particularly, it proposes that there are objective (real structural elements) and subjective (cognitive and phycological elements) conditions that define when global emotions are attributed to social units. The main element for a proper attribution is the degree that each individual participation to achieve success is easily distinguishable and separate or indistinguishable and non-separate. One visible example of this condition is that for example, specialized or independent role in a work setting make salient the individual responsibility, whereas collaborative work roles make salient shared or collective responsibility. Following this line of thought, this notion implies that structures fostering collective responsibility generates greater "jointness" construed by two elements 1) the non-separability of task behaviors and contributions which correspond to the objective part in a social exchange setting and 2) the sense of shared responsibility of success or failure which represent the subjective part in a social exchange environment (Lawler et al., 2008). In order to explain the latter part in greater detail, we can consider the following example. If employees in a professional establishment perceive a shared responsibility for collective success, positive emotions from the task completion are more likely to generate affective attachments towards the cooperating colleagues. In contrast, if the same people share in the responsibility for a collective failure, the resulting negative emotions will probably generate affective detachment from the group. These two elements which comprise "jointness" are also interrelated. In other words, the non-separability of task activity create an increased perception and in turn, shared responsibility produces affective attachment creating in this way a circle which reinforces the attribution of emotions (for more on this circle, see affect theory of emotions(Lawler, 2001) and theory of relational cohesion (Lawler et al., 2008)).

Based on the above discussion, it is clear that the formation of not only relational bonds but also emotional attachments is the result of the level of "jointness". An exchange with an increased level of "jointness" leads to the formation of both relational and emotional bonds. On the contrary, a relational exchange with a low level of "jointness" can lead only to the formation of relational bonds, if any. Therefore, our goal here is to measure the level of "jointness" in an

exchange. Luckily, we can do this in a very simple way on our proposed experimental setting. As we have explained above, the level of "jointness" can be translated to the four forms of social exchange (negotiated, reciprocal, productive and generalized). The lowest level of "jointness" are evident in a generalized exchange (this exchange contains third parties which cannot be felt as sharing responsibility and the tasks developed in the exchange are unrelated one another) and the highest level of "jointness" can be found in productive exchange (productive exchanges are joint-ventures in which participants cooperate in a series of related tasks to achieve a certain goal). Negotiated and reciprocal exchanges stand somewhere in between.

By the rules of the experimental game that we have described in detail, the tasks which will be completed by the participants are interrelated and interconnected and therefore, our game is shaped in a way that it is objectively structured to have non-separability of each individual task while at the same time keeps the exchange coherent and cohesive. Therefore, all the participants in our experiment start from a common base in terms of "jointness" and they are given the same incentives (in our case, discounts to certain products from the shop which we examine) to foster a shared responsibility. In this way, in our experiment, the only element that affects the level of "jointness" is the perception of shared responsibility. Our experiment measures the level of reciprocity which can be used as a proxy for the level of perceived shared responsibility. A higher level of reciprocity will demonstrate a more aligned approach from each participant so as to achieve a collective outcome (which, in this case, could be the maximization of discounts for both parties). In contrast, the low level of reciprocity will exhibit a higher level of disengagement of the other party and a focus solely on self-interest. Thus, we can derive meaningful results for our second study from the game presented in the first one by conducting a different analysis in our collective data through our experimental game.

To check alternatively how this bond formation is translated (through the reciprocity rewards) in higher brand loyalty, we can add some questions in our existing questionnaire to measure ex post the perception of shared responsibility of the participants during the experimental game (the questions could be the following: 1. Do you think that you shared a common goal with the other party in the game? and 2. Do you think that the outcome was the result of your own action or of the collective actions of both parties?). The reciprocity level and these question items together

with the question items referring to brand loyalty which already exist in our questionnaire can give us a clear picture how (and if) emotional bond formation translates to increased brand loyalty. Moreover, despite being here related with part of the game, these questions can be transferred to the general context of the customer-vendor relationship and provide useful information in the customer-vendor bond forming.

Chapter 6: Data and methodology

After we presented the different possible metric tools that we can use in our research, we can analyze the exact tools that we use in our case. We also provide a concise description of the statistical techniques, material and samples which we use in our analysis.

6.1 Participants

The company that is examined in this thesis is SYN.KA Super Markets a representative example of the Greek supermarket business sector[24]. The participants are 641 customers of the company. The customers are randomly chosen without taking into consideration any personal or professional or demographic characteristics of the individuals. In fact, they are blindly chosen.

The number of the participants was derived from two distinct samples. In the one sample, 504 people answered a given questionnaire. These participants were randomly chosen from customers in different physical points of sale and from potential customers passing by outside the physical points of sale. They were called to answer an independent questionnaire referred to our measurement section. These questionnaires were provided in paper format. Of those people, 494 persons who exhibit no internet activity in the brand community of the company on the web, whereas 10 individuals were members of the social media-based brand community by their statement.

In the second sample, 174 individuals were chosen from the customers who participate in the social media-based brand community of the company through direct random contact on Facebook. The participants in both samples are adult customers of different age. The participants of the second sample were called to answer the same above-mentioned questionnaire[25] (in electronic form). For the second sample, we asked the participants to play the proposed experimental game presented in our measurement section. Here, we have to point that our original call to participate in the above-mentioned game was extended to many more individuals

---

[24] For more details on SYN.KA Super Markets and its position to the market, see section 2.9 and visit the website www.synka-sm.gr

[25] This questionnaire will be analyzed in detail in section 6.2.

(more than 500 randomly-picked individuals) but only 174 of those people (a percentage of about 30% of our initial contacted persons) were able and willing to participate in all stage of the experiment. In addition, from the second sample, a significant portion (37 individuals or 21%) of participants did not answered the above-mentioned questionnaire which resulted in 137 valid questionnaires from this sample.

In any case, questionnaires which were not properly and fully answered were discarded and results of games not properly contacted were eliminated. The final pool of properly completed questionnaires (641 questionnaires, out of which 504 from the first sample and 137 from the second one, representing 494 non-members of the social media-based brand community of the company and 147 members of the online community of the company) and the results of properly contacted experimental games from the second sample were used in the subsequent analysis.

Finally, for the estimation of the universal predictor for the churn possibility, we used data received from SYN.KA Super Markets consisting of the buying habits of about 10.000 anonymous and randomly selected customers. More specifically, the following data entries of each individual were used as inputs to the classification/ regression models:

1. average shopping basket (weekly, monthly, 3-months, 6-months and 1-year period)
2. visits (weekly, monthly, 3-months, 6-months and 1-year period)
3. total visits from the first purchase
4. Value of last purchase
5. Points of last purchase
6. Total turnover
7. Current total points in bonus card
8. Total used bonus card points

6.2 Procedure

Our survey is conducted simultaneously through two different tools. Every participant is called 1) to participate in the game that we have briefly described in our measurement sector[26] and 2) to answer a given questionnaire/ or both.

The above-mentioned questionnaire was designed in order to translate the thesis' information needs (described in detail in the measurement section) into questions that supermarket consumers will be able to answer. The language used in the questionnaire was familiar to everybody that lives on Greece. It used a simple vocabulary that made the questions easy to understand. In most cases, more than one question was used to proxy specific elements of our conceptual framework in order to increase the validity of the information received. The questions did not require too much effort to answer and did not cause mental fatigue. In most cases, respondents were asked to tick their chosen answer; the majority of the questions had answers fitting the Likert-scale method (5-point Likert–scale), as it is mentioned in the measurement section.

The questionnaire was structured in a logical order, organized around the topic areas. The first part of the questionnaire was related with consumer habits while the second part questioned the word-of-mouth. The questionnaire continued with the core service failures and the complaints which constituted the third part. Questions regarding the bond measurement, the size and the fame of the vendor follow. Subsequently, the following part was aiming to quantify the brand trust and the brand loyalty of the respondents. It continued with questions concerning the individual characteristics and the demographics of the respondents. A complete copy of the questionnaire is attached in Appendix A.

A random sample of 10 consumers was used in order to pilot-test the questionnaire which was then finalized and distributed.

---

[26] This call will be limited only to participants from the second sample as described in Section 4.1.

Figure 6.1 Experimental Game
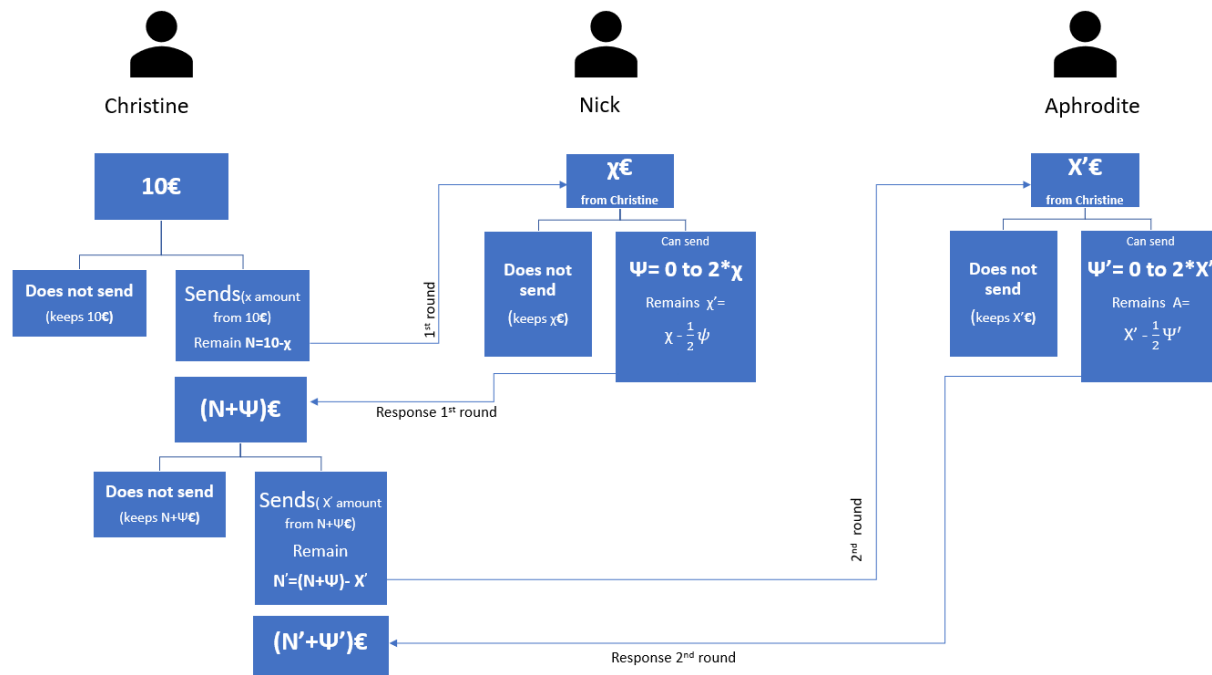
Our experimental game is contacted in two phases. Participants of the game are split in two groups, group A and group B. The categorization of the players is random, and it is kept constant throughout the phases of the game. Separate instructions are given to participants of each group, instructions which define their conduct during the game. In the first phase, a participant of group A is given a monetary discount (10€) and the option to share part of this monetary gift with an unknown member of the social media-based brand community of the company. It is highlighted that the unknown member remains anonymous and does not belong to the contacts of the participant. However, the participant was notified that the unknown member could send him in turn without knowing his/her identity a monetary gift in the form of a discount with a value up to double the value of his/her original gift. In this manner, if the participant of group A choose not to share his/her discount at all, he/she would receive a coupon for the amount of the discount (10€) and terminate his/her participation in the game. In case in which the participant chooses to share its discount, this portion would be deducted from his/her original discount. However, in the second case, the potential gift from the unknown member is added to his/her original discount.

Therefore, his/her total payoff in this case is equal to original discount- shared amount + gift from unknown member. This would conclude the first round for the participant of group A. In this case, after the completion of the first round, he/she are given the choice to play the same game a second time with a different unknown member of the online community. If he/she agrees, he/she would complete the same steps and his/her payoff is decreased by the amount of his/her new sharing and increased by the amount of the new potential gift made from the new unknown member. If he/she rejects to participate in the second round, he/she would take the payoff of the first round whereas if he/she agrees to participate in this new round, he/she would receive the payoff as described above.

On the other hand, the participant of group B is notified that an unknown member (anonymous and not belonging to his/her contacts) have sent him/her a monetary gift in the form of the discount and he/she is given the option to return an amount of up the double of this discount to this unknown member. In the case, in which he/she returns nothing, his/her participation in the game ends and he/she receives the initial discount. In the case, in which he/she shares a portion of the initial discount, half of this amount would be deducted from his/her initial discount. However, in this case, the unknown member who makes the initial gift and receives the return (anonymously) from the participant is given the option to return (anonymously) to the participant an amount up to double the value of the participant's gift. Thus, the payoff in this case of the participant is equal to original discount offered (from unknown member) – half the value of the shared discount + the second gift from the unknown member (up to double the value of the shared discount).

We have to stress here that in no point there is direct contact between the participants, but all the messages are relayed through a moderator (the researcher). Moreover, all participants of both teams are notified that they cannot share an information concerning the game or even their participation with other members (contacts or not) privately or publicly. In such a case, their participation in the game is discarded and their monetary gifts invalidated. In addition, the researcher actively monitors the public posts and the matching between the participants in order to verify that no prior knowledge between the pairs exists.

Based on the above description, the game is conducted in two iterations. Methodologically, in the first iteration, we check for initial evidence about Hypothesis 3b as we measure the level of reciprocity between the participants in the game. In the second iteration, we check Hypothesis 3a and we actually see whether a first successful interaction leads to increased level of trust in any subsequent interaction of the same parties. This test could be achieved by comparing the results of the participants who have a first successful interaction and those who have not. If the difference among the two samples (those with a successful interaction and those without a successful first interaction) is statistically significant and positive, it leads us to support the confirmation of our hypothesis. We also find additional evidence to further evaluate hypothesis 3b as we have now a complete picture of the level of reciprocity of both parties in the game. We do this by comparing the level of contributions of the members between the first and the second iteration. Here, for our statistical comparisons, we use hypothesis testing with t-statistic. The t-distribution is suitable for our case, as we do not know either the exact mean and variance of our population (reciprocity reward, initial reward etc.) or the actual distribution of it and our sample is quite big. In such situations, the t-statistic is the most appropriate for statistical testing (Halikias, 2017).

More particularly, in order to account for the level of reciprocity and to examine whether it is affected by a first successful (trusting) interaction, we estimate the following two tests.

In the first round of our experimental game, one player has the possibility to give an amount of money (in the form of a discount) to a second anonymous player. In turn, the second player can reciprocate this act by providing money (in the form of a discount) in the first one anonymously. So, as a first step we calculated as a percent of the total amount possible to be given the initial amount offered and the reciprocal amount. Then, we take the upper part (30%) and the lower part (30%) of our sample in terms of the initial amount given (calculated as a percent) as two new distinct sub samples. In this way, we have discerned from our sample the individuals who offer the highest amount of money to the second co-players and those who offer the smallest amount of money. A high amount of money given initially could lead to an increase in trust and a stronger reciprocal act. It also could be perceived by the two players as a successful (trusting) interaction. On the contrary, a very small or zero initial amount of money given could lead to a

decrease in trust and a weaker (or no) reciprocal act. It also could be perceived by the two players as an unsuccessful interaction. To eliminate the monetary constraints of our experimental game, we recalculate the amounts as a percent of the total amount possible to be given in each phase of the interaction. If our hypothesis is correct, a high amount (expressed as a percent) initially given should be followed by a higher reciprocal (expressed as a percent) amount. If our hypothesis is not valid, the reciprocal amount should not be linked as a percent to the initial amount given. In order to check the veracity of our claims, we run a t-test between the means of the two subgroups HIGH/LOW. In the two subgroups, we assume that a different variance exists and for this reason, a Welch t-test (Welch, 1947) is run. With this method, we have the added advantage that even in the case of equal variances between the two groups, the Welch t-test is consistent and robust (Derrick, Toher, & White, 2016; Ruxton, 2006; Zimmerman, 2004). So, the hypothesis for the two groups are that

$$\mathbf{H_0}: \mu_{high} > \text{to } \mu_{low} => \mathbf{H_0}: \mu_{high} - \mu_{low} > 0$$

$$\mathbf{H_1}: \mu_{high} \leq \text{to } \mu_{low} => \mathbf{H_1}: \mu_{high} - \mu_{low} \leq 0. \ (\text{Test } 1)$$

The test is conducted on a significance level a = 1% (confidence level 99%) (in contrast to any other statistical test which is conducted in a significance level a=5% in this thesis).

In the second round, we examined if a first successful interaction affects the subsequent interaction of the individual with other members. So, in our experimental game, the individual of group gives a certain amount to an anonymous individual of group B and in turn, the individual of group B reciprocates with the certain amount to the individual of group A anonymously. In the second round, after this exchange, the same individual of group is called to offer a new amount to another anonymous individual of group B. If our hypothesis is correct, the individuals who receive a high amount (and therefore, they can assume a successful first interaction) should be eager to give a higher new amount to this new exchange in contrast to individuals who have experienced low reciprocal amounts in their previous transaction. To eliminate the monetary constraints of our experimental game, we recalculate the amounts as a percent of the total amount possible to be given in each phase of the interaction. As a further step, we split the upper (30%) and bottom (30%) part of our sample based on the reciprocal amounts (expressed as a

percent) they received from the first round. In this way, we created a high group of individuals from group A (people who receive high reciprocity) and a low group of individuals of group A (people who receive small or zero reciprocity). If our hypothesis is correct, the two groups (Low and High) should have a different mean of amount in this new second interaction (the high groups should have a higher mean). If our hypothesis is not confirmed, the means of two group should not have a statistically significant difference (or the low group would have a statistically higher mean than high group). We conduct a t-test to check the mean difference. Again, we assume that the two samples have unequal variances and we use a Welch t-test. So, our hypothesis could be

$$\mathbf{H_0}: \mu_{high} > \text{to } \mu_{low} => \mathbf{H_0}: \mu_{high} - \mu_{low} > 0$$

$$\mathbf{H_1}: \mu_{high} \leq \text{to } \mu_{low} => \mathbf{H_1}: \mu_{high} - \mu_{low} \leq 0. \text{ (Test 2)}$$

The test is conducted at a significance level a=1% (confidence level 99%).

The analysis of the questionnaire is conducted in phases. In the first step, we examine the answers received in each question. In this way, we highlight the representativeness of our sample to our target population and we comment on the particular dynamics concerning trust developed between the participants and the brand. Thus, in the first part, we present a detailed analysis of descriptive statistics about each question.

As a second step, after completing our first exposition about the questions in the questionnaire, we proceed to check whether there is an association between two different questions. This analysis focuses on questions which try to capture the same characteristics; either it refers to an individual characteristic of a participant or it refers to trust and loyalty. This kind of analysis is very important as it not only shows us important correlations about our sample (and correspondingly for our population) but also it helps us eliminate any multicollinearity issues from our subsequent regression analysis. This part consists of a cross tabulation table between the answers of the questionnaire and a χ^2 test of association which identifies the statistical significance of any link between the two questions. For brevity, in our discussion of the crosstabulation table, we focus our discussion only on the most common (dominant) answer.

Leaving the first part of basic analysis concerning the questionnaire we employ partial least squares regression (PLS) and ordinal regression for testing the greatest number of our hypotheses. PLS regression is a statistical technique that partly presents principal component regression. It estimates a linear regression model by projecting to a new space the predicted and the observable variables. This method facilitates the use of big sets of independent variables and dependent variables (even correlated ones) in contrast to ordinary linear regression and helps overcome traditional problems of multicollinearity between the variables. By definition, it also allows the dependent (latent) variable to be proxied by a group of categorical or continuous variables. Therefore, PLS shows the fundamental relationship between the two matrices (one for the dependent variable and one for the independent once); it represents a latent variable approach aiming to model the covariance structures between the two spaces. Essentially a PLS model identifies the multi-dimensional direction in the independent variables space which interpret the maximum multidimensional variance direction in the dependence variable space. This feature makes PLS regression suitable for analyzing problems with a high number of variables and few observations and problems presenting multicollinearity among the independent variables. This makes this method appropriate for our analysis for the individual characteristics of the participant and their link to trust as some questions which measure the same trait could present multicollinearity. So, through PLS we examine this link on an aggregate level (H. Abdi, 2010; Jöreskog & Goldberger, 1975; Jöreskog, Olsson, & Wallentin, 2016; Wold, Sjöström, & Eriksson, 2001).

On the contrary, in the ordinal regressions that follow we examine specific questions based on our previous association analysis with once sole question (or statement) that monitors trust. We test the validity of hypothesis 1 and hypothesis 2. Ordinal regression is a type of regression used to predict a dependent variable taking an ordinal form by one or more independent variables. The most common model of ordinal regression uses a logistic model (for this reason it is also called ordinal logistic regression), but alternative models using Probit or complementary log-log distribution exist. Ordinal regression it is a generalized form of both multiple linear regression and binomial logistic regression. There are four important assumptions for an ordinal regression model to be valid. The first assumption is that the dependent variable should be expressed in an

ordinal form such as a Likert scale. This assumption is satisfied in our analysis as our ordinal regression models have as a dependent variable an ordinal one. The second important assumption is that all independent variables should take the form of either continuous or categorical variables. In the case of an ordinal variable being an independent variable, it can be treated as either continuous or categorical. In our case all ordinal variables which are placed as independent variables are considered as categorical. The third important assumption for the proper calculation of an ordinal regression model is the lack of significant multicollinearity. Multicollinearity takes place when two or more independent variables are highly correlated with one another. In our case, we satisfy this assumption by eliminating potential collinear questions from our analysis based on our association analysis. Finally, the fourth assumption for the appropriate estimation of an ordinal regression model such as the ones employed in our analysis is that we have proportional odds. This assumption implies that each independent variable has an identical effect at each cumulative split of the ordinal dependent variable because we use SPSS for our estimations, we employ the test of parallel lines in which a fitted location model is compared to a model with varying location parameters. The test of parallel lines is quite conservative and sometimes can lead to rejection of models that actually have proportional odds (Gutiérrez, Pérez-Ortiz, Sánchez-Monedero, Fernández-Navarro, & Hervás-Martínez, 2016; McCullagh, 1980; Winship & Mare, 1984).

With ordinal regression we try to identify, based on the responses collected through our questionnaire, whether the individual characteristics of a participant are linked to the level of trust towards the brand and we investigate the role of the individual characteristics of a participant to the creation of bonds with the brand and their strength. In addition, we show how increased trust relates to increased brand loyalty. Finally, we also examine if other factors such as demographics, visitation frequency etc. which are expected to be related to brand loyalty but not necessarily to trust affect the level of trust as well.

The last part of our methodology is centered on the methods which we employ for churn estimation and the examination of the potential link between the individual characteristics of a participant, trust and the possibility to churn. More specifically, in order to analyze customer churn, we use a two-stage approach. We use a large sample of about 10000 individuals of the

company's customers and their buying habits (purchase frequency, purchase value, demographics) and we created alternative models through various machine learning approaches including Support Vector Machines, K nearest neighbors, Discriminant Analysis, Naïve Bayes, Decision Trees, Ensemble Learning Algorithms and Classification Trees (see section 6.2.1 models) from this random sample to predict a customer's churn. Due to the special nature of the fast-moving customer goods (FMCGs) that the supermarket sells, the perishability of such goods and the customer visiting frequency which was presented in previous researches about the supermarket sector and the structural hypothesis of the examined models, we assume that a customer who has not visited a point of sale for more than a week has churned. After we estimate different measures for selecting the most appropriate model for our sample [Compute Area Under the Receiver Operating Characteristic Curve (ROCAUC) accuracy, precision, recall and f1-score], we peak the most appropriate model for our dataset.

In the second stage of our approach, we take observations concerning the buying habits of the customers directly from the company for the last year for the individuals who participated in our experimental game, which is conducted in the social media-based brand community of the company. By using the predictor of the churning possibility of the previous stage, we proceed to run it in this new sample. Then, we take the questionnaire answers from this new sample and we evaluated what the possibility of churn is based on the questions asked there. The predictor which we created in our previous steps take into account only monetary factors, visitation patterns and demographics; it did not include any emotional factors in its estimations, and it considered a randomly selected average customer. On the contrary, our new sample was randomly selected but it shared one particularly important common characteristic, all individuals participate in the social media-based brand community. We have seen from the previous results of our research that customers who participate in the social media-based brand community of the company exhibit a higher level of trust than the average customer of the company. Therefore, if our hypothesis, that is trust developed in the social media-based brand community decreases the possibility of a customer to churn, is correct, then the possibility of a customer to churn based on the questionnaire we asked to this particular sample should be lower than the one predicted from the one estimated through the universal predictor of the previous step. In order to additionally

102

confirm our hypothesis, we would make a second test. We take a random sample from the customers who answered our questionnaire, but they do not participate in the social media-based brand community of the company. Thus, again this group has every random characteristic of the sample that we used in the first stage of our analysis, except for the non-participation of the individuals in the social media-based brand community. Based on our theoretical analysis and our previous research, if our hypothesis is correct then the possibility of this group to churn based on their answer should be higher (due to the lack of trust which is developed through the social media-based brand participation and dynamics) than the one estimated by the universal predictor of our first step. Given the fact that in our questionnaire, there is a particular question (question 4) that asks exactly about the time of the last purchase of a customer, there is no possibility of any misspecification bias about the dependent variable as taken from our questionnaire and as estimated in the universal predictor (note that the possibility of the customer not to buy from a point of sale during a week = possibility of a customer to churn based on our assumptions).

6.2.1 Models

In this section of the thesis, we present a short description of the alternative models used for the creation of the universal predictor and a brief analysis of the criteria employed for the best model selection for the universal predictor estimation.

6.2.1.1 k nearest neighbors

In pattern recognition, the k-nearest neighbors ($k$nn) algorithm is a non-parametric method used for classification (Bhatia & Vandana, 2010). Input consists of the k closest training examples in the feature space. Output depicts a class membership. An object is categorized by a majority vote of its neighbors, with the object being allocated to the class which is most common among its k nearest neighbors (k represents a positive integer, typically small). In case $k = 1$, then the object is merely allocated to the class of that single nearest neighbor. $k$nn is a type of lazy learning, or instance-based learning, where the function can only be approximated locally and until classification, all computation is deferred.

If we use some labeled samples as the training set S, the $k$nn algorithm creates a local sub-region $R(x) \subseteq R^{m \times m}$ of the input space, which is placed at the estimation point x. The predicting region $R(x_i)$, which contains the closest k training points to x_i, is written as follows:

$$R(x_i) = \{\hat{x} | d(x_i, \hat{x}) \leq d_{thrs}\}$$

where d_{thrs} is a predefined threshold. Given all points $\hat{x}_i \in R(x)$, $i = 1, \dots, k$ and their corresponding outputs $\hat{y}_i$, point x_i is allocated with classification label y that has smallest expected misclassification cost among the values $\hat{y}_i$.

6.2.1.2 Decision trees

Decision tree learning employs a decision tree in the formation of a predictive model which projects observations about an item to conclusions about the item's target value. In classification tree structures, leaves represent class labels and branches represent conjunctions of features that lead to those class labels. Each internal (non-leaf) node is marked with an input feature. The arcs coming from a node marked with a feature contain labels with each of the possible values of the feature. Each leaf of the tree is marked with a probability distribution over the classes or simply, a class.

Algorithms for creating decision trees often work in a top-down fashion, by choosing a variable at each step that splits the set of items best (Rokach & Maimon, 2005). Different algorithms employ different metrics for estimating what is "best". These metrics generally account for the homogeneity of the target variable within the alternative subsets. These metrics are calculated for each candidate subset, and the resulting values are combined (e.g., averaged) to produce a measure of the split quality.

Given a set of items, suppose $i \in \{1, \dots, m\}$, and p_i the portion of the items labeled with i among the m alternatives. The most common algorithm for split evaluation is the Gini impurity:

$$I_G = 1 - \sum_{i=1}^{m} p_i^2$$

6.2.1.3 Ensemble learning algorithms

Adaptive boosting (AdaBoost) is an ensemble learning algorithm, which is more resistant to over-fitting, but it is usually sensitive to outliers and noisy data (Freund, Iyer, Schapire, & Singer, 2003). AdaBoost constructs a strong learner (a classifier that is correlated adequately to the true classifier) by repetitively adding weak learners (a classifier that is correlated slightly to the true classifier). In every new round of training, a new weak learner is placed to the ensemble and a weighting vector is fine-tuned to focus on examples which have been misclassified in previous rounds. This results in a classifier that provides higher accuracy than the weak learners' classifiers. A boost classifier can take the form:

$$H_T(x_i) = \sum_{t=1}^{T} h_t(x_i)$$

where each h_t depicts a weak learner that takes an object x as input and produces a real valued result representing the class of the object. The sign of the weak learner output characterizes the predicted object class and the absolute value indicates the confidence in the classification result. Every weak learner returns an output, hypothesis $h(x_i)$, for every sample in the training set. At every different iteration t, a weak learner is picked and is given a coefficient αt such that the sum training error E_t of the resulting t-stage boost classifier is reduced:

$$E_T = \sum_{i} E[H_{t-1}(x_i) + a_t h(x_i)]$$

The term $H_{t-1}(x)$ is the boosted classifier constructed by the prior stage of training, $E(H)$ represents some error function and $f_t(x) = \alpha_t h(x)$ represents the weak learner that is under consideration for addition to the final classifier. At each iteration of the training process, a weight is allocated to each sample in the training set with a value equal to the current error $E(H_{t-1}(x_i))$ on that sample. These weights can be employed to inform the training of the weak learner, for instance, decision trees can be produced that promote splitting sets of samples with high weights.

In our case, ensemble learning was applied over discriminant and decision tree classifiers.

6.2.1.4 Support vector machines

Support vector machines (SVMs) represent supervised learning models with associated learning algorithms that recognize patterns and analyze data, employed for classification analysis (Scholkopf & Smola, 2001). An SVM model depicts a representation of the examples in the form of points in space, mapped so that the examples of the separate categories are split by a clear gap that is the widest possible. New examples, in turn, are mapped into this same space and assumed to belong to a category on the basis of the side of the gap they fall on. The mappings employed by SVM schemes are estimated through a kernel function (x,) carefully selected to suit the problem.

6.2.1.5 Discriminant Analysis

Linear discriminant analysis (LDA) or discriminant function analysis is a generalization of Fisher's linear discriminant, a technique employed in pattern recognition, statistics, and machine learning to identify a linear combination of features that separates or characterizes two or more categories of items or events. The resulting function can be employed as a linear classifier or mostly, for dimensionality reduction before additional classification.

Discriminant analysis is employed when groups are known in advance (contrary to cluster analysis). Each item should have a score on a group item and a score on a number of quantitative predictor items. In other words, discriminant function analysis is a technique for answering classification problems.

LDA is associated with the analysis of variance (ANOVA) method and regression analysis, which also try to express a dependent variable as a linear function of other features or measurements (McLachlan, 2004). However, ANOVA employs a continuous dependent variable and categorical independent variables, while, in contrast, discriminant analysis uses a categorical dependent variable and continuous independent variables (Debra, 2011). Probit regression and logistic regression are more closely related to LDA than ANOVA is, as they interpret a categorical variable by the values of continuous independent variables as well. These alternative methods are preferred in applications where it is logical to assume that the independent variables are not normally distributed, which is a key assumption of the LDA.

106

In addition, LDA is closely related to factor analysis and principal component analysis (PCA) in that they both try to identify linear combinations of variables which explain the available data best (Martinez & Kak, 2001). The LDA method mainly tries to model the difference among a number of classes of data. On the contrary, factor analysis creates the resulting combinations based on differences rather than similarities and PCA does not account for any difference in class. Moreover, discriminant analysis differentiates from factor analysis in the fact that it is not an interdependence technique: independent variables and dependent variables should be distinct and such a distinction must be made a priori.

LDA is suitable when the data deriving from each observation of the independent variables are continuous quantities. On the contrary, when someone has data deriving from categorical independent variables, the appropriate technique with an equivalent outcome is called discriminant correspondence analysis (Hervé Abdi, 2007; Perrière & Thioulouse, 2003).

Linear Regression
Linear regression analysis refers to the study of linear, additive relationships between variables. Let y_i depict the "dependent" variable whose values we wish to predict, and let $\boldsymbol{x}_i = [x_1, \dots, x_m]$, $i = 1, \dots, n$ represent the "independent" variables from which the prediction of y_i derives. Then the equation for estimating the predicted value of y_i is:

$$\hat{y}_i = b_0 + \sum_{j=1}^{m} b_j x_{i,j}$$

In this estimation, the prediction for y_i is a linear function of independent variables. The coefficients of the independent variables are represented graphically by the slopes of their individual relationships with y_i and are denoted by $b_1, \dots, b_k$,. That is, b_i is the change in the predicted value of $\hat{y}_i$ per unit of change in $x_{i,j}$, other things being equal. The additional constant b_0, the so-called intercept, is the prediction that the model would make if $\boldsymbol{x}_i = 0$ (if that is possible). Both the coefficients and intercept are computed by the Least Squares method.

6.2.1.6 Naïve Bayes classification

Naïve Bayes classification is referring to the estimation of a group of simple probability classifiers deriving from the application of Bayes' theorem under strong (naïve) independence assumptions between the data features. They can be considered one of the simplest Bayesian network models.

Naïve Bayes classification was introduced in the 1960s for text categorization with the employment of word frequencies as features (Maron, 1961). Since then, it has been extensively studied (Rennie, Shih, Teevan, & Karger, 2003) and today, it is successfully applied in other important fields, such as automatic medical diagnosis (Rish, 2001).

Naïve Bayes classifiers present high scalability, needing only a number of parameters linear in the number of variables in the examined learning problem. A maximum-likelihood estimation can be computed by evaluating a closed-form expression, which uses linear time, rather than by performing more resource-demanding iterative approximation as it is the case for a great number of other types of classifiers (Russell & Norvig, 2003).

6.2.2 Evaluation criteria

The classification performance is estimated using various metrics calculated over the generated confusion matrix. The most common performance metrics are: accuracy, precision, recall, and F_1-score. For the binary classifier performance assessment ROCAUC score is also used, since it provides insightful information.

The confusion matrix is the primary tool for performance evaluation. Given a classifier and an instance, there are four possible outcomes. True Positive (TP): If the instance is positive and it is classified as positive, False Positive (FP): if the instance is negative and it is classified as positive, False Negative (FN): if the instance is positive and it is classified as negative and True Negative (TN): if the instance is negative and it is classified as negative.

In our case, we consider as positive case when churn occurs. Thus, true positive describes a customer who has left the company and the model predicted he would leave the company.

108

Consequently, true negative describes when a customer remain at the company and the model also says so.

The confusion matrix for binary classification.

Table 6.1 Confusion matrix for binary classification

Predicted Actual	Yes	No
Yes	True positive (TP)	False negative (FN)
No	False positive (FP)	True negative (TN)

Based on his/her needs the researcher chooses the better or more convenient classifier for all the cases. The following is the short description for these known measures.

Accuracy is the measure of proportion of true positives and true negatives, which are correctly identified. It presents the overall effectiveness of a classifier (Sokolova, Japkowicz, & Szpakowicz, 2006; Sokolova & Lapalme, 2009). Accuracy should not be used when we have unbalanced datasets.

$$\text{Accuracy} = \frac{TP+TN}{TP+FP+FN+TN}$$

Precision (Positive predicted value) is the number of correctly classified positive examples (actual churn) divided by the number of examples labeled by the system as positive (estimated churners). It shows the class agreement of the data labels with the positive labels given by the classifier (Sokolova et al., 2006; Sokolova & Lapalme, 2009).

$$\text{Precision} = \frac{TP}{TP+FP}$$

Recall (or Sensitivity): the number of correctly classified positive examples divided by the number of positive examples in the data. It gives us the effectiveness of a classifier to identify positive labels (Sokolova et al., 2006; Sokolova & Lapalme, 2009).

$$\text{Recall} = \frac{TP}{TP+FN}$$

F_1-score is a composite measure which benefits algorithms with higher sensitivity and challenges algorithms with higher specificity (Sokolova et al., 2006; Sokolova & Lapalme, 2009).

$$F_1\text{-Score} = \frac{2*Recall*Precision}{Recall+Precision}$$

Moreover, to assess the performance of all classification methods, we used the area under the receiver operating characteristics curve (ROCAUC). It is frequently applied in customer churn prediction studies (Bose & Chen, 2009; Burez & Van den Poel, 2009; Hanley & McNeil, 1982; Lemmens & Croux, 2006; Verbeke, Dejaeger, Martens, Hur, & Baesens, 2012), while it offers a more robust evaluation metric that accounts for the overall performance of a classification technique by considering all possible cut-off points on the receiver operating characteristics curve. Finally, this ranking-based measure of posterior churn probabilities is intuitively clear and offers clear statistical interpretations: The ROCAUC is the estimated probability that a randomly chosen churner has a higher posterior churn probability than a randomly selected non-churner. Thus, if a churn model indicated an ROCAUC of 0.60, this means that if one randomly picks an actual churner and a non-churner from the dataset, then 60% of the times the churner will have a higher churn probability output by the classifier than the non-churner. A random model has an ROCAUC of 0.50 (Coussement, Lessmann, & Verstraeten, 2017; De Caigny, Coussement, & De Bock, 2018; Fawcett, 2006).

To sum up, for examining customer churn, as a first step, we create a universal predictor for assessing the possibility to churn of our target population. By comparing different models, we end it up with the best universal predictor. We conduct hypothesis testing in order to identify whether the mean churn probability between the two estimations (one derived from the universal predictor of the target population and one observed through the actual answers for this particular sample) for an individual of the two groups presents a statistically significant difference. Through this analysis, we try to investigate whether the trust developed in the social media-based brand community influences the possibility of a participant to churn.

Chapter 7: Results

In this section of the thesis, the results of our questionnaire survey and experimental game are presented and discussed. We start our exposition by a detailed analysis of the answers that we received through our questionnaire survey. We present descriptive statistics of the responses given to each question of the questionnaire. This presentation is a helpful tool to understand the dynamics of our sample and how they match our target population. It can also help us draw some first basic results about the objectives of this research concerning trust and brand loyalty.

In the second part, we examine the association between the responses regarding the questions aiming to monitor the same characteristic. In our questionnaire, we try to capture the effect of a certain characteristic (trust, loyalty, involvement etc.) through multiple questions. From our results, we can derive the association of these questions and eliminate some of them from the subsequent regression analysis in order to avoid multicollinearity issues.

In the third part, we present the results of the PLS regression analysis. Through the use of PLS regression, we try to observe the effect of individual characteristics of SMB community members on trust for the brand and eventually, to brand loyalty. PLS regression through the construction of new proxies for the characteristics limits any endogeneity in the independent variables. The results show some significant association between the individual characteristics and trust.

In the fourth part, we include the results of the ordinal regression. In this stage, we further verify the link found through the PLS regression between the individual characteristics and trust. We also examine the validity of the other hypothesis concerning trust. The results lead to the verification of the core points of our hypothesis.

In the fifth part, we present the results of the ordinal regression concerning the creation of bonds between the members and the brand. We observe that the individual characteristics have an impact on the creation of bonds. These results validate our related hypotheses.

In the sixth part, we work with the responses collected via our experimental game. We present the results from comparisons between two groups (giving the highest and lowest amount of

discount). Our results point to the fact that when an individual has a first trusting experience, he/she tends to reciprocate more. On the contrary, when an individual after receiving a higher reciprocal gift have to make a second decision for a gift to another individual is affected more from his/her natural level of trust and not from the higher reciprocal gift which he/she received. These findings refute earlier theories which supported that reciprocity always equals the first act (which is reciprocated).

In the seventh part, we depict the first results about churn. In this part, we show how we create a universal predictor about the churning possibility of the target population. These predictors would help us in the last part of our analysis about the relation of the trust developed in the SMB community and the possibility of the member to churn.

In the eighth part of our analysis, we display the results from comparisons between samples with members of the SMB community and customers who are not members of the above-mentioned community. The results show that the customers - members of the SMB demonstrate a statistically significant lower possibility to churn than the non-member customers. They also spend more on their average basket than non-members. We suggest that these findings are a result of the increased trust which develops in the SMB community and we document in previous parts of our analysis.

To conclude, in the first part of this section, descriptive statistics and discussion about the responses to our questionnaire is presented; in the second part, the association between the given responses to the questionnaire is discussed; in the third part, the results of the PLS regression analysis are presented; in the fourth part, the results of ordinal regressions concerning trust are analyzed; in the fifth part, the results of the ordinal regressions concerning the bond creation between customers and the brand are discussed; in the sixth part, the outcomes of the experimental game are used for statistical comparisons; in the seventh part, universal predictors for our target population are created and in the eighth and final part, the above-mentioned predictors are compared to the actual results of particular samples in an effort to examine the connection between the trust developed in the SMB community and the possibility of the member to churn.

7.1 Descriptive statistics for the responses to the questionnaire

The first part of the analysis includes an analysis based on descriptive statistic measures of answers obtained through the questionnaire.

In this section of the empirical analysis, a simple analysis of the data with descriptive statistic measures is shown which was obtained from the research questionnaire.

7.1.1 Profile of respondents

This section presents the analysis of the respondents' demographics. It shows the sex, age, monthly family income, monthly personal income, belief of personal income, number of family members, education level, and occupation of the 641 random consumers surveyed.

Table 7.1 shows that from 641 people who participated in the survey, out of which 391 were women (61%) while 228 were men (35.6%). It should be noted that based on cultural traits and behavioral patterns in a household, the majority of people who go to the supermarket in Greece are women, a point confirmed by the above mentioned measures verifyng the representativeness of our sample for the total population that we examine in this thesis.

Table 7.1 Frequencies and Percentages of those who participated in the survey

Gender	Frequency	Percentage
Man	228	35.6%
Woman	391	61%

The majority of the consumers (Table 7.2) who participated in the survey were between 31 to 40 years old, while a big percentage of people who answered were between 41 to 50 years old. Interestingly the people who were between 21 to 30 years were well represented in the survey. Moreover, elderly people (51 and over) have a percentage of around 14% while young adults (less than 20) were not well represented (1.5%). The findings indicate that the more economically active individuals (grown adults) in a household also do the necessary shopping for covering the needs in FMCGs.

Table 7.2 Age of respondents

Age	Percentage
<20	1.5%
21-30	23%

31-40	37.2%
41-50	23.9%
>51	14.4%

The most common answer was referring to a monthly family income from 501€ to 1500€ (51.2%). 26.5% of the respondents have an average monthly household income from 1501€ to 2500€, while 13.2% of the respondents have an average monthly household income less than 500€. Finally, 6.6% of the respondents earned an average monthly household income from 2501€ to 4000€, while only 2.5% of the sample has income greater than 4001€ (Table 7.3).

Table 7.3 Monthly family income of respondents

Monthly family income	Percentage
<500€	13.2%
501€-1500€	51.2%
1501€-2500€	26.5%
2501€-4000€	6.6%
<=4001€	2.5%

The most common answer concerning the average monthly personal income was from the one referring to an income between 501€ and 1200€ (56.5%). 30.5% of the respondents have an income less than 500€, while 10% of the sample has an income from '1201€ -2000€'. Finally, only 2.9 % have earnings more than 2001€ (Table 7.4). The above presented income distributions point to the relative uneven distribution of wealth in Greece (according to World Bank (2014), Greece has a Gini ratio equal to 35.8), where the average GDP per capita is 20,408€ annually or 1700.67€ on a monthly base (International Monetary Fund, 2018). Our findings show a customer distribution tilted towards the left side (negative side) of the expected distribution based on average GDP per capita.

Table 7.4 Monthly personal income of respondents

Monthly personal income	Percentage
<500€	30.5%
501€-1200€	56.5%
1201€-2000€	10%
2001€-3000€	1.6%

<=3001€	1.3%

From Table 7.5 as far as the size of the families of those taking part in the survey is concerned, 47.2% of the respondents have three to four member families, around 42% have one to two member families and 10.1% of the respondents has more than five to six members in their family. The rest of the sample (0.7%) has more than seven members in the family. We see that about 89.2% of our respondents has a family with one to four members.

Table 7.5 Family size of respondents

Family size	Percentage
1-2	42%
3-4	47.2%
5-6	10.1%
≥7	0.7%

As far as education is concerned (Table 7.6), it is observed that the majority of those who participate in the study hold a bachelor's degree from a University or Technical Institute, while 16.7% have extended their studies to master's level. 23.1% of the people surveyed have gone to senior high school, while only 15.2% of the participating consumers have finished college. Finally, 6.4% of the participating customers had only a diploma from a primary or junior high school. The high percentage of respondents (70.4%), who have completed some kind of tertiary education, highlights the general pattern of the Greek population, which puts increased value to education.

Table 7.6 Education level of respondents

Education	Percentage
Primary school-Junior high school	6.4%
Senior high school	23.1%
College (IEK)	15.2%
University or Technological Institute (TEI)	38.5%
Postgraduate Studies	16.7%

Table 7.7 shows that more than 69% of the respondents are employed, while pensioners formed only 9% and unemployed formed only 9% of our sample. 4.8% of the respondents are (not employed) housewives, whereas only 8 % of the respondents are students. These results further confirmed our point in table 7.7 about the economically active members of a household to be the main shoppers for the household as well.

Table 7.7 Occupation of respondents

Occupation	Percentage
Employed	69.2%
Unemployed	9%
Pensioner	9%
Housewife	4.8%
Student	8%

7.1.2 Consumer habits

In this part of the questionnaire, the customers were asked to answer questions which show some general characteristics of their consumer habits.

From Figure 7.1, it is observed that 30.63% of respondents purchased last time from SYN.KA Super Markets a week ago. Around 18.6% purchased yesterday from SYN.KA Super Markets while 16.67% a month ago. Today as their purchase day replied 13.17% of respondents while 9.05% of respondents noticed that they had shopped more than a month ago from SYN.KA Super Markets. Interestingly, 11.9% of the consumers, who participated in our survey, have never made a purchase from SYN.KA Super Markets but they still know and have formed an opinion for the brand.

Figure 7.1 Percentages of Last time of purchase from SYN.KA
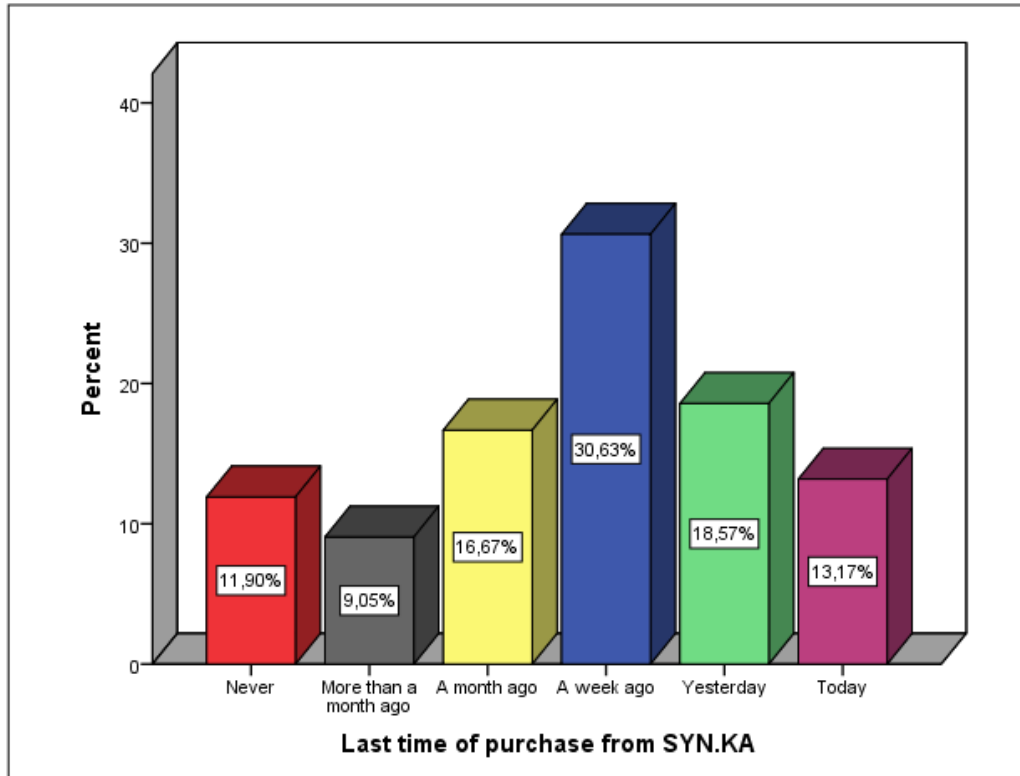
Relevant to the frequency of visits to the SYN.KA Super Markets, around 29% of the participating shoppers go to the supermarket once per month or less frequently, while 23.24% of the respondents go to the supermarket 2-4 times per week on average. 22.36% of the respondents shop once every week. Finally, only 13.2% of those go once every fortnight, while 12.85% of the respondents go almost every day. Figure 7.2 depicts how often the shoppers go to the supermarket.

Figure 7.2 Percentages of the times that they go shopping at the supermarket
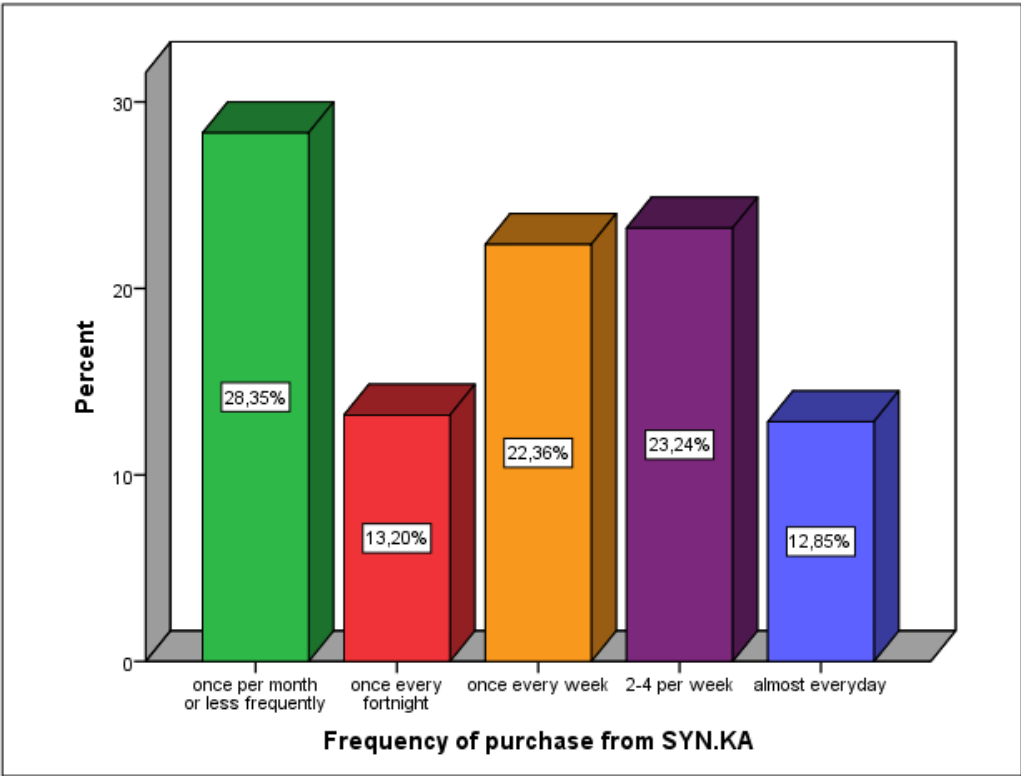
Regarding the frequency of visiting the SYN.KA Super Markets during this month, around 42% of the shoppers participating in our survey have gone to the supermarket 0-2 times this month while 26.6% of the respondents have shopped 3-6 times this month. 18.2% of the respondents have shopped 7-15 times this month. Finally, only 13.6% of the participants have visited SYN.KA Super Markets for a purchase more than 15 times this month (Table 7.8).

Table 7.8 Times of visiting SYN.KA this month

Times of visiting SYN.KA this month	Percentage
0-2	41.6%
3-6	26.6%
7-15	18.2%
>15	13.6%

Concerning the relationship of the respondents to the brand, 60.7% of the participants answered that they are customers of SYN.KA Super Markets more than 5 years. 22.8% of the sample states that they are customers for '2-5years', while 12.6% of the sample is customers only for a year. A

small percentage (2%) of the respondents is customers only the last month and an equal percent of the participants are customers only for a week (Table 7.9).

Table 7.9 Time of being customer on SYN.KA

Time of being customer of SYN.KA	Percentage
Last week	2%
Last month	2%
Last year	12.6%
2-5 years	22.8%
More than 5 years	60.7%

Moving to the amount of money that they spend when visiting the SYN.KA Super Markets, more than 27% of the participants spend '11€ - 20€' at the supermarket every time they go. About 27% of the respondents spend '21€ to 30€' on average, while 25.35% of the sample spends '31€-50€' on average in each visit. Only 12.5% of the respondents spend more than 50€ on average in each visit, while 7.57% of the participants spend less than 10€' (Figure 7.3).

Figure 7.3 Percentages of the money spending in every visit at SYN.KA
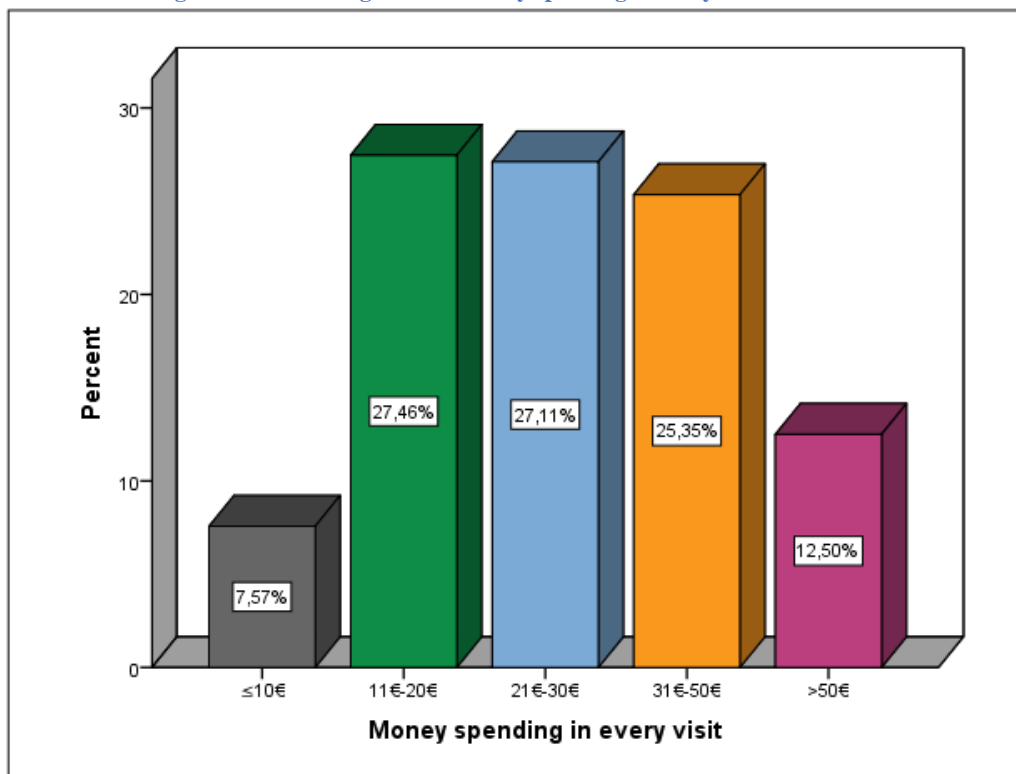
Figure 7.4 which refers to the timing of the visit to the SYN.KA Super Markets, illustrates that around half of the respondents are purchasing from supermarkets during 'noon:12-16'. The second more common time of purchasing during the day was the 'afternoon:16-19', third comes the 'evening:19-21', while the least frequent answer was the 'morning:8.30-12', probably due to the employment status of most respondents.

Figure 7.4 Percentages of the time of purchase during the day
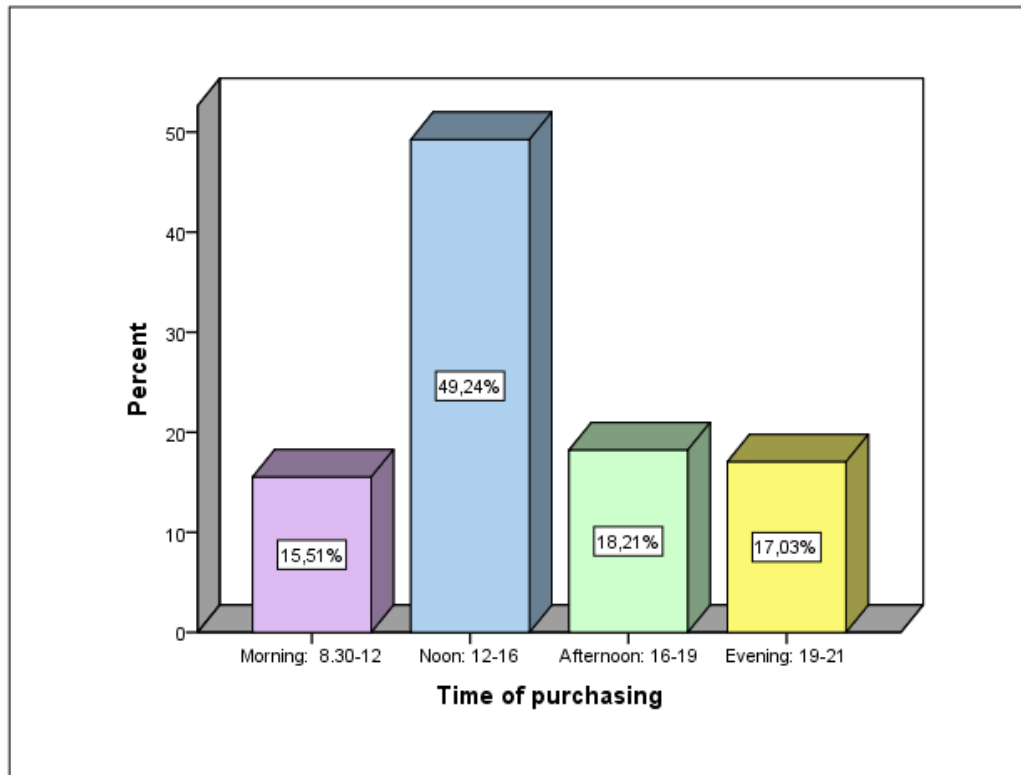
7.1.3 Word-of-Mouth

In this part of the questionnaire, the customers were asked about their word-of-mouth communication related to SYN.KA Super Markets.

The Tables below (Table 7.10 and Table 7.11) present the opinion of the respondents about the SYN.KA Super Markets and their word-of-mouth communication. The former table depicts that the majority of the respondents (49.3%) say mostly positive things to others about SYN.KA Super Markets and 41.1% have spoken favorably about SYN.KA Super Markets to others. Less than 10% of the people (9.6%), contacted for this survey, have usually said negative things and have spoken with no flattering words about SYN.KA Super Markets to others.

Table 7.10 Shared opinion of the respondents about SYN.KA Super Markets

Which statement is more representative for you?	Percentage
I have spoken favorably about SYN.KA Super Markets to others	41.1%
I say mostly positive things to others about SYN.KA Super Markets	49.3%
I usually say negative things about SYN.KA Super Markets to others	7.7%
I have spoken with no flattering words about SYN.KA Super Markets to others	1.9%

Table 7.11 shows that around 44% of the respondents do not speak about SYN.KA Super Markets to many people, while only about one quarter of respondents speak about SYN.KA Super Markets to many people. Almost 19% of participants speak about SYN.KA more often than any other similar company and the remaining percent of participants speak about SYN.KA Super Markets more often than for companies of any other type. From both tables, we can infer a positive but relatively weak word-of-mouth communication for the SYN.KA Super Markets brand.

Table 7.11 Frequency of word-of-mouth communication of the respondents about SYN.KA Super Markets

Which statement is more representative for you?	Percentage
I speak about SYN.KA Super Markets more often than any other similar company	18.7%
I speak about SYN.KA Super Markets more often than for companies of any other type	12.6%
I speak about SYN.KA Super Markets to many people	24.5%
I'm not speaking about SYN.KA Super Markets to many people	44.1%

Table 7.12 below, which investigates the topic of attention in a communication by a customer concerning the SYN.KA Super Markets brand, presents that the majority of respondents do not discuss about the user friendliness of the SYN.KA Super Markets web, the variety of products offered, the quality of the products offered, the convenience of trading on my purchases, the quick customer service and the reputation of SYN.KA Super Markets. On the contrary, they mainly discuss about the prices of the products offered.

Table 7.12 Content of word-of-mouth communication of the respondents about SYN.KA Super Markets

Which statement is more representative for you?	No (percentage)	Yes (percentage)
I discuss the user friendliness of the SYN.KA Super Markets web site	89.5%	10.5%
I discuss the prices of the products offered	35.3%	64.7%
I discuss the variety of products offered	63.5%	36.5%
I discuss the quality of the products offered	59%	41%
I discuss the convenience of trading on my purchases	87.6%	12.4%
I am talking about the quick customer service	79.1%	20.9%
I am talking about the reputation of SYN.KA Super Markets	83%	17%

7.1.4 Core service failures - Complaints

In this section of the thesis, we discuss the results from the answers concerning the core service failures and the complaints of the respondents about the SYN.KA Super Markets operation and the problems they might have encountered during their purchases.

In general, 89.4% of the participants have never been forced to stop purchasing from SYN.KA Super Markets for some time due to a lack of payment options. However, interestingly, about 2.2% of the respondents have been forced to stop purchasing from SYN.KA Super Markets three times and more due to such a lack (Table 7.13).

Table 7.13 Forced to stop purchasing from SYN.KA Super Markets due to lack of payment options

Forced to stop purchasing from SYN.KA	Percentage
Never	89.4%
Once	5.6%
Twice	2.8%
Three times	0.4%
More than three times	1.8%

Almost 90% of the respondents have never experienced a problem (technical problem, lack of employees, long queues, etc.) during their purchase, while the remaining ones have encountered at least once such a problem (Figure 7.5).

Figure 7.5 Percentages of respondents who faced a problem in their interaction with SYN.KA Super Markets and did not shop.
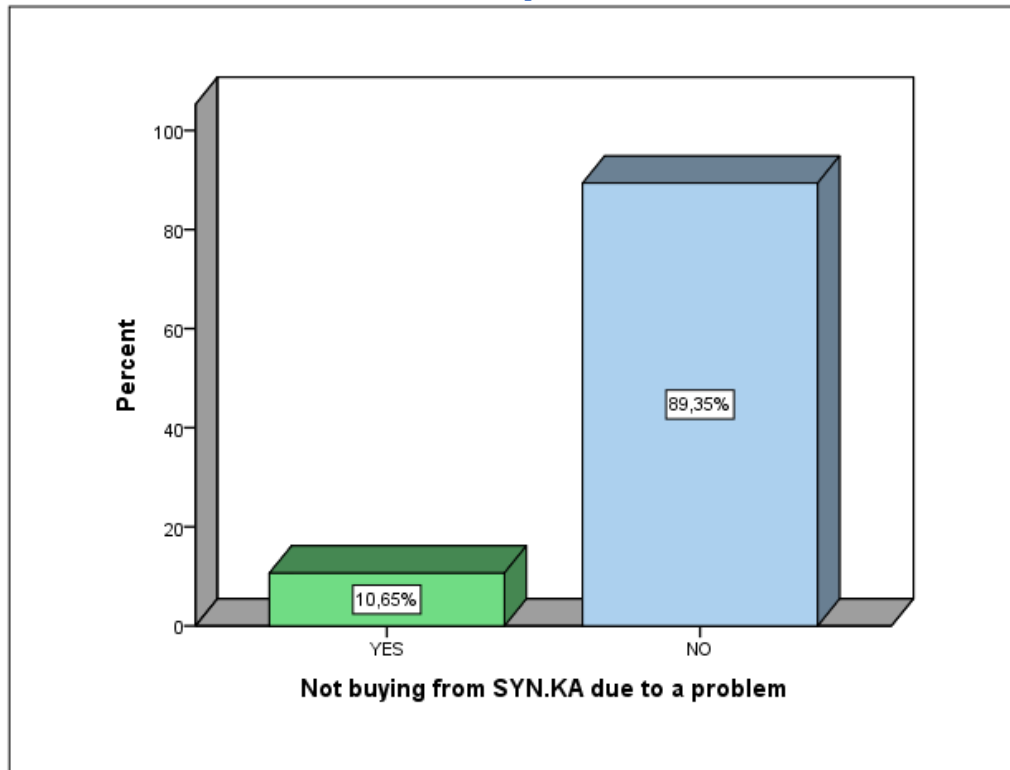
The majority of respondents (70.7%) has never returned a product bought from SYN.KA Super Markets. 14.4% of those, who responded to our survey, have returned a product in rare occasions, while 10.4% of the participants have returned once a product that bought from SYN.KA Super Markets. 4% of the respondents have returned sometimes a product bought from SYN.KA Super Markets. Only a few people (0.5%) mentioned that they had several times returned a product bought from SYN.KA Super Markets (Table 7.14).

Table 7.14 Respondents who returned a product bought from SYN.KA Super Markets

Returned a product that you bought from SYN.KA	Percentage
Never	70.7%
Once	10.4%
Rarely	14.4%
Sometimes	4%
Several times	0.5%

As shown in Table 7.15 most consumers (68%) had no complaints to address at SYN.KA Super Markets. A significant percentage (19.5%) had a complaint at some point but did not express it in a store while 9.4% of the participants had a complaint, they expressed it and they were satisfied with the treatment of SYN.KA Super Markets. The rest of the sample (3.1%) had a complaint, it expressed it in the store, but it was not satisfied with the treatment provided by SYN.KA Super Markets.

Table 7.15 Complaints that have been referred to SYN.KA Super Markets staff

Had a complaint that you have never been able to expose it to a SYN.KA	Percentage
I had no complaints	68%
I had a complaint and I did not express it in a store.	19.5%
I had a complaint, I expressed it in the store, and I was satisfied with the treatment.	9.4%
I had a complaint, I expressed it in the store, and I was not satisfied with the treatment	3.1%

The pie chart below (Figure 7.6) illustrates that from those who had a complaint and did not express it in a store and those who expressed it in the store but they were not satisfied with the treatment, almost 35% have had such an experience more than once while the rest have encountered such a problem only once.

Figure 7.6 Percentage for a respondent of having a complaint more than once
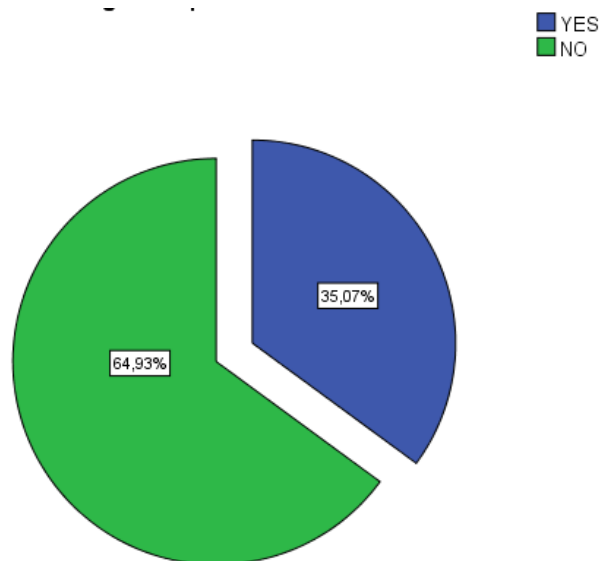
7.1.5 Bonds

This part of the discussion concerns the bonds that the respondents have developed with the SYN.KA Super Markets brand during their customer-vendor relationship.

Figure 7.7 shows that almost 63% of the participants share a common goal with the company, while the rest of the sample does not share a same goal with SYN.KA Super Markets.

Figure 7.7 Percentage for a respondent of sharing a same goal with the company
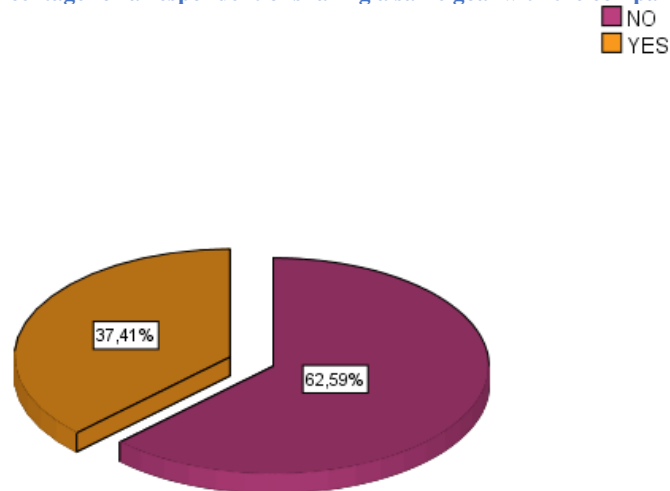
Concerning Table 7.16, respondents were asked to consider their relationship with SYN.KA Super Markets and to respond what they think about SYN.KA Super Markets. About half of them replied that SYN.KA Super Markets is a business that takes care of their satisfaction. Almost 21% of them mentioned that SYN.KA Super Markets takes care of the customer-buyer relationship while around 19% of them characterized SYN.KA Super Markets as a vendor. Finally, 5.2% of the participants believe that SYN.KA Super Markets is a friend, whereas 4.7% of the respondents think that SYN.KA Super Markets is a partner.

Table 7.16 Perception concerning SYN.KA Super Markets as an interacting entity

SYN.KA Super Markets is	Percentage
A vendor	19.4%
A business that takes care of the customer-buyer relationship with you	20.6%
A business that takes care of your satisfaction	50.1%
A partner	4.7%
A friend	5.2%

Concerning the purchase choices of the respondents, around 50% of the respondents in the survey buy products that they consider to be good deals from SYN.KA Super Markets. 23% of the participants supply their household from SYN.KA Super Markets, whereas 18.6% of the respondents think that SYN.KA Super Markets is interested in their satisfaction and it will try to keep them as customers. Finally, 6.5% of the sample love SYN.KA Super Markets while 2.8% of the sample consider SYN.KA Super Markets as a partner. (Table7.17)

Table 7.17 Interaction of respondents with SYN.KA Super Markets

Interaction with SYN.KA Super Markets	Percentage
I buy products that I consider to be good deals (or discounts)	49%
I supply my household from SYN.KA Super Markets	23%
I think SYN.KA Super Markets is interested in my satisfaction and it will make an effort to keep me as a customer	18.6%
I consider SYN.KA Super Markets as a partner	2.8%
I love SYN.KA Super Markets	6.5%

Concerning the origin of their satisfaction from their purchases, more than half of the respondents mentioned that their satisfaction stems from both their own actions and the actions of SYN.KA Super Markets. A significant percentage (31.8%) noticed that they are satisfied mainly as a result of the actions undertaken by SYN.KA Super Markets while only 16.8% of the respondents identify as the root of their satisfaction their own actions (Table 7.18).

Table 7.18 Source of satisfaction deriving from interactions with SYN.KA Super Markets

Satisfied, mainly because of:	Percentage
Your own actions (e.g. good preparation for your purchases, good mood, right product choices)	16.8%
The actions of SYN.KA Super Markets (e.g. pleasant staff, good customer service, offers, beautiful environment ...)	31.8%
Both your own actions and the actions of SYN.KA Super Markets	51.4%

Concerning the satisfaction of the respondents from their purchases in SYN.KA Super Markets, 43.5% of the respondents are adequately satisfied with their purchases at SYN.KA Super Markets. Moreover, 30% of the participants are very satisfied, while 16.3% of the sample state that they are extremely satisfied. In contrast, 8.2% of the respondents are inadequately satisfied, while only 1.9% are not at all satisfied with their purchases at SYN.KA Super Markets (Table 7.19).

Table 7.19 Respondents' satisfaction with SYN.KA Super Markets purchases

Satisfied with your purchases at SYN.KA	Percentage
Not at all	1.9%
A little	8.2%
Enough	43.5%
Very	30%
Absolutely	16.3%

7.1.6 Size – Fame

In this part of the thesis, we discuss about the size and the fame of SYN.KA Super Markets.

Moreover, 43.6% of the participating individuals expressed that SYN.KA Super Markets is a vendor operating in many regions of Greece while almost 40% of the sample consider it a local vendor. "A vendor operating through Greece" is an answer chosen by 9.2% of the sample (Table 7.20). "A small local seller" has been selected as an answer by 5.9% of the respondents, while the rest of the sample mentioned that SYN.KA Super Markets is a national seller with an international presence.

Table 7.20 Perception of respondents concerning the size of SYN.KA Super Markets

SYN.KA Super Markets is	Percentage
A small local seller	5.9%
A local seller	39.8%
A vendor operating in many regions of Greece	43.6%
A vendor operating throughout Greece	9.2%
A national seller with an international presence	1.5%

As far as the reputation of the SYN.KA Super Markets brand is concerned (Table 7.21) , it is observed that 45.3% of the respondents think that SYN.KA Super Markets' reputation is widespread locally, while 42.7% of the sample think that is spread around many regions of Greece. Finally, 7.5% of participants believe that the fame of the SYN.KA Super Markets brand is spread in a very small geographical area, whereas 3.1% of the sample believe that the SYN.KA Super Markets brand is known in nation level. A small percentage (1.3%) that replied that SYN.KA Super Markets brand's fame is widespread internationally.

Table 7.21 Perception of respondents concerning the reputation of SYN.KA Super Markets

SYN.KA reputation is widespread	Percentage
In a very small geographical area	7.5%
Locally	45.3%
In many regions of Greece	42.7%
Nationally	3.1%
Internationally	1.3%

7.1.7 Brand Trust

This part of the discussion concerns the trust that the respondents have developed with the SYN.KA Super Markets brand during their customer-vendor relationship.

Concerning the trust of respondents to SYN.KA Super Markets, the majority of the respondents (56.7%) mentioned that they agree with the statement that "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases". 64.6% of the participants concur with the statement that "the SYN.KA Super Markets brand meets my expectations". 64.3% of the sample support the following statement "I feel confident with the SYN.KA Super

128

Markets brand" and 49.2% of the sample agree with the statement that "SYN.KA Super Markets is a brand that never disappoints me". Consistent with the previous findings, a majority of the respondents (70.4%) disagree with the statement that "the SYN.KA Super Markets brand does not meet my needs in a consistent way" Markets (Table 7.22).

Table 7.22 Trust related statements concerning the SYN.KA Super Markets brand

	Absolutely disagree	Disagree	Neither agree-Nor disagree	Agree	Absolutely Agree
With the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases	5.3%	20.8%	17.2%	49.5%	7.2%
The SYN.KA Super Markets brand meets my expectations	4.4%	18.4%	12.6%	52.9%	11.7%
I feel confident with the SYN.KA Super Markets brand	5.3%	18%	12.5%	49.4%	14.9%
SYN.KA Super Markets is a brand that never disappoints me	4.8%	26.4%	19.6%	38.9%	10.3%
The SYN.KA Super Markets brand does not meet my needs in a consistent way	18.7%	51.7%	12.1%	13.1%	3.9%

Regarding the trust of respondents to SYN.KA Super Markets, about 51% of the sample also agree that SYN.KA Super Markets is honest and addresses their concerns properly. A majority of respondents (63.2%) also believes that SYN.KA Super Markets will make every effort to satisfy them and about 63.9% of the respondents think that they could rely on SYN.KA Super Markets to deal with their complaint relevant to their purchases. Moreover, about 66.5% of the participants considers SYN.KA Super Markets to be interested in their satisfaction and 58.8% of the respondents think that SYN.KA Super Markets will compensate them in a proper way if they encounter a problem with a product. Related to the previous findings, a majority of respondents (69.6%) disagree with the statement that "SYN.KA Super Markets would not be willing to solve the problems I am facing with a product" (Table 7.23).

Table 7.23 Additional trust related statements concerning the SYN.KA Super Markets brand

	Absolutely disagree	Disagree	Neither agree-Nor disagree	Agree	Absolutely Agree
SYN.KA Super Markets is honest with me and addresses my concerns properly	4%	25.3%	19.7%	40.4%	10.6%
SYN.KA Super Markets will	4.2%	19.3%	13.4%	48.9%	14.3%

make every effort to satisfy me					
I could rely on SYN.KA Super Markets to deal with my complaint (related to my purchases)	4.4%	18.4%	13.3%	49.5%	14.4%
SYN.KA Super Markets is interested in my satisfaction	4.4%	16.8%	12.2%	51.7%	14.8%
SYN.KA Super Markets will compensate me in a proper way if I have a problem with a product	4.4%	19.2%	17.6%	43.9%	14.9%
SYN.KA Super Markets would not be willing to solve the problems I am facing with a product	23.8%	45.8%	13.7%	12.9%	3.9%

7.1.8 Brand Loyalty

This part of the thesis concerns the brand loyalty that the respondents have developed with the SYN.KA Super Markets brand during their customer-vendor relationship.

Related to the brand loyalty of respondents to SYN.KA Super Markets as shown from the Table 7.24 below, about 45% of the sample disagree that they are willing to pay more for the same purchases from SYN.KA Super Markets than from other supermarkets. A majority of respondents (42.1%) also believes that they are loyal to SYN.KA Super Markets and about 59.4% of the respondents disagree with the statement "If a SYN.KA Super Markets store is not available near me, I will do the required distance to find another SYN.KA Super Markets shop". Moreover, about 61.5% of the participants recommend purchases from the SYN.KA Super Markets.

Table 7.24 Brand loyalty to SYN.KA Super Markets

	Absolutely disagree	**Disagree**	**Neither agree- Nor disagree**	**Agree**	**Absolutely Agree**
I believe I am loyal to SYN.KA Super Markets	9.5%	30.8%	17.6%	30.6%	11.5%
I am willing to pay more for the same purchases from SYN.KA Super Markets than from other supermarkets	22.4%	45.1%	10.2%	14.7%	7.5%
If a SYN.KA Super Markets store is not available near me, I will do the required distance to find another SYN.KA Super	17.7%	41.7%	13.4%	19.9%	7.4%

Markets shop					
I recommend purchases from the SYN.KA Super Markets.	6.3%	19.1%	13.1%	43.5%	18%

Table 7.25 depicts that the respondents consider coexistence, consistency and contribution as the values embedded in SYN.KA Super Markets operation.

Table 7.25 Values of SYN.KA Super Markets

	Absolutely disagree	**Disagree**	**Neither agree-Nor disagree**	**Agree**	**Absolutely Agree**
Coexistence (cooperative contribution)	3%	18.8%	13.4%	52.1%	12.7%
Consistency (reliability)	2.7%	14.8%	10.8%	56.7%	15%
Contribution (social corporate responsibility)	3.7%	17.6%	15.2%	48.2%	15.3%

The results of this question are given in Table 7.26. It examines the significance of some choice criteria when the consumers purchase their products at the SYN.KA Super Markets. The first criterion was about the price; more than 90% replied that price plays an important role for choosing to do their purchases from SYN.KA Super Markets, while a few people consider price as unimportant. The second criterion was about the expected variety of products offered by SYN.KA Super Markets, which according to the answers of the respondents is very important for choosing to buy from it. The third criterion was about the expected quality of the product, for which they answered that it plays important role when they choose to buy from SYN.KA Super Markets. The fourth criterion was about the store layout of SYN.KA Super Markets which, according to the majority of the respondents, is a criterion that matters during their purchases. As far as the ease of access is concerned, according to the majority of the respondents, it is very important for making their choice to purchase from SYN.KA Super Markets. Moreover, according to the respondents, it is extremely important if special offers are provided by SYN.KA Super Markets in order for them to choose it for their purchases. Furthermore, it is essential for the respondents the fact that SYN.KA Super Markets provide good customer support in order to make their purchase from them. In general, it is observed from table 7.26 that people look for a high-quality product with a good price and a value for money offer when they buy from SYN.KA Super Markets and they expect to be covered by a good customer service.

Table 7.26 Reasons for preferring to purchase from SYN.KA Super Markets

	Not at all important	A Little important	Quite important	Very important	Extremely important
Price	2.6%	5.7%	22.5%	38.9%	30.4%
Variety of products	2.4%	5.1%	24.8%	46.1%	21.6%
Quality of products	2.3%	4.1%	20.5%	39.4%	33.8%
Store Layout	6.6%	23.4%	32.5%	26%	11.5%
Ease of access	3.7%	6.5%	25.7%	39.2%	24.9%
Special Offers	4%	3.5%	17.8%	35.3%	39.3%
Customer service	3.7%	4.6%	23.5%	33.3%	34.9%

7.1.9 Individual Characteristics

This section presents the analysis of the individual characteristics of the respondents.

Regarding their expectations before a visit to SYN.KA Super Markets point of sale, more than half of the participants mention that before their visit in one of SYN.KA Super Markets they expect the store to meet their basic needs of a typical supermarket while a significant percent (29.5%) of the sample expect that it will overcome their basic needs of a typical supermarket. Finally, 15.7% of the respondents feel that the store would leave them absolutely excited, and their experience in the store would be much better than a competitive chain. Only a small percentage (3.9%) of the respondents feel that the store will not meet the basic need of a typical supermarket (Table 7.27).

Table 7.27 Expectations prior to a visit to a SYN.KA Super Markets store

Before you visit one of SYN.KA Super Markets stores you expect that	Percentage
It will not meet the basic needs of a typical supermarket	3.9%
It will meet the basic needs of a typical supermarket	50.9%
It will overcome the basic needs of a typical supermarket	29.5%
You will be absolutely excited, and it will be much better than a competitive chain	15.7%

From the Figure 7.8 below we can observe that more than three quarters of the sample are not members of SYN.KA Super Markets community on FACEBOOK while the rest of the sample represent members.

Figure 7.8 Percentage of members participating on Facebook community of SYN.KA Super Markets
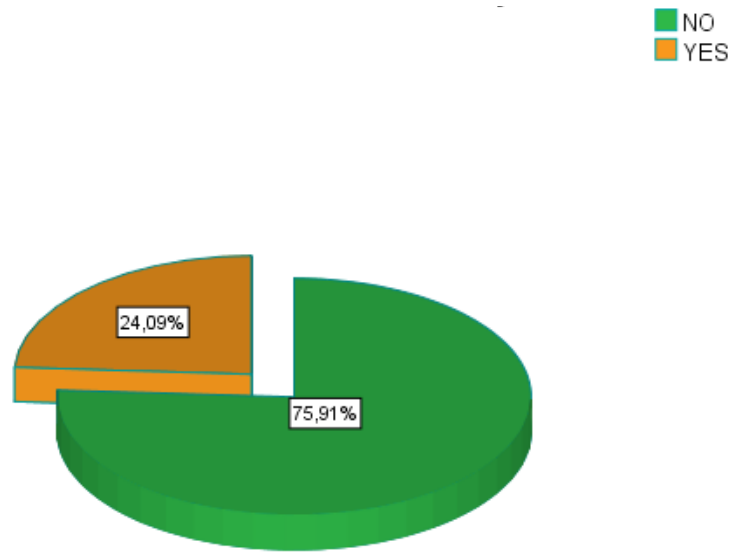
From those respondents who answered that they are members on SYN.KA Super Markets community on FACEBOOK, around 50% of them have never communicate online with their community friends. Almost 30% of them communicate rarely, while only 10.21% of them communicate often with their community friends. Finally, 6.81% of the member – respondents communicate regularly with their community friends, while 3.4% of the member - respondents always communicate with their community friends (Figure 7.9).

Figure 7.9 Contacting online members of Facebook community of SYN.KA Super Markets
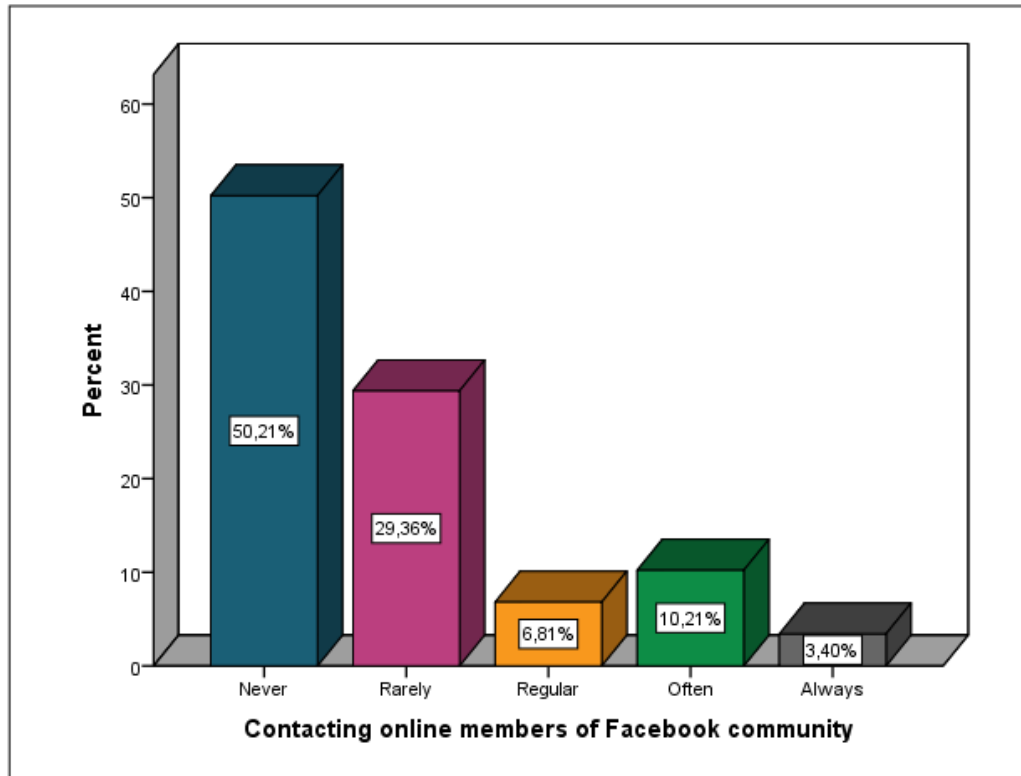
The main reason for a respondent in order to join SYN.KA Super Markets on FACEBOOK is to learn about discounts and coupons for specific products. 14% of the respondents join the community in order to learn about a particular product, while around 10% do it to learn news about the company. 5% of the respondents are fans of SYN.KA Super Markets and join the community to live the experience and share your passion for the company with other fans. The rest of the sample is joining the community in order to share information and views with other community members and receive / advise on favorite products (Table 7.28).

Table 7.28 Main reason to join SYN.KA Super Markets on FACEBOOK

Main reason in order to join SYN.KA Super Markets on FACEBOOK	Percentage
Learn about a particular product	14%
Learn about discounts and coupons for specific products	65.1%
Learn news about the company	10.1%
Sharing information and views with other community members and receive / advise on favorite products.	5.8%
Live the experience and share your passion for the company with other fans	5%

The pie chart below (Figure 7.10) illustrates that around 16% of the respondents who participate in the Facebook community make posts on Facebook page of SYN.KA Super Markets.

Figure 7.10 Posting on Facebook page of SYN.KA Super Markets
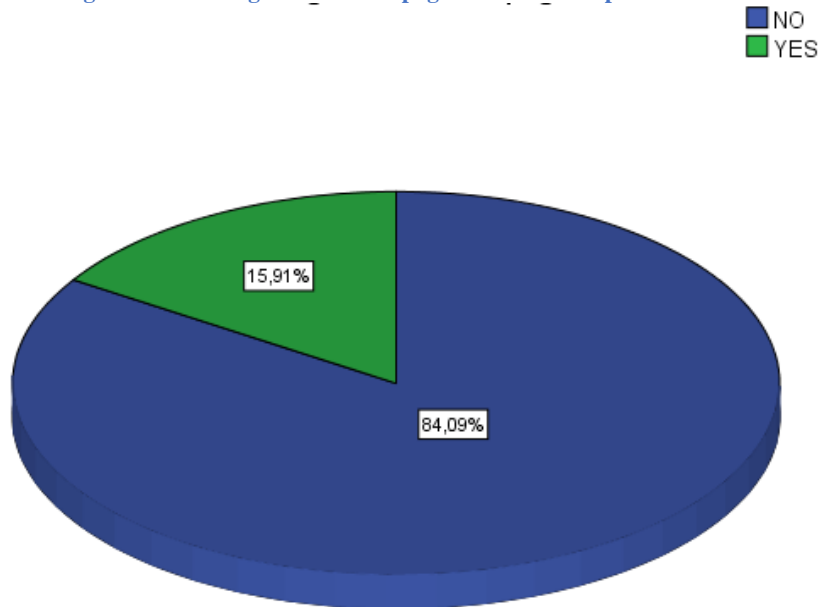
The majority of them, around 64% of the respondents rarely do such an activity of sharing information or/and communicating with unknown community members to promote its aims. 15.63% of the respondents do such an activity once a month and 15.63% of the respondents do such an activity every 2 to 3 days. Only 3.13% of the respondents post every day on the Facebook page of SYN.KA Super Markets (Figure 7.11).

Figure 7.11 Frequency of posting on Facebook page of SYN.KA Super Markets
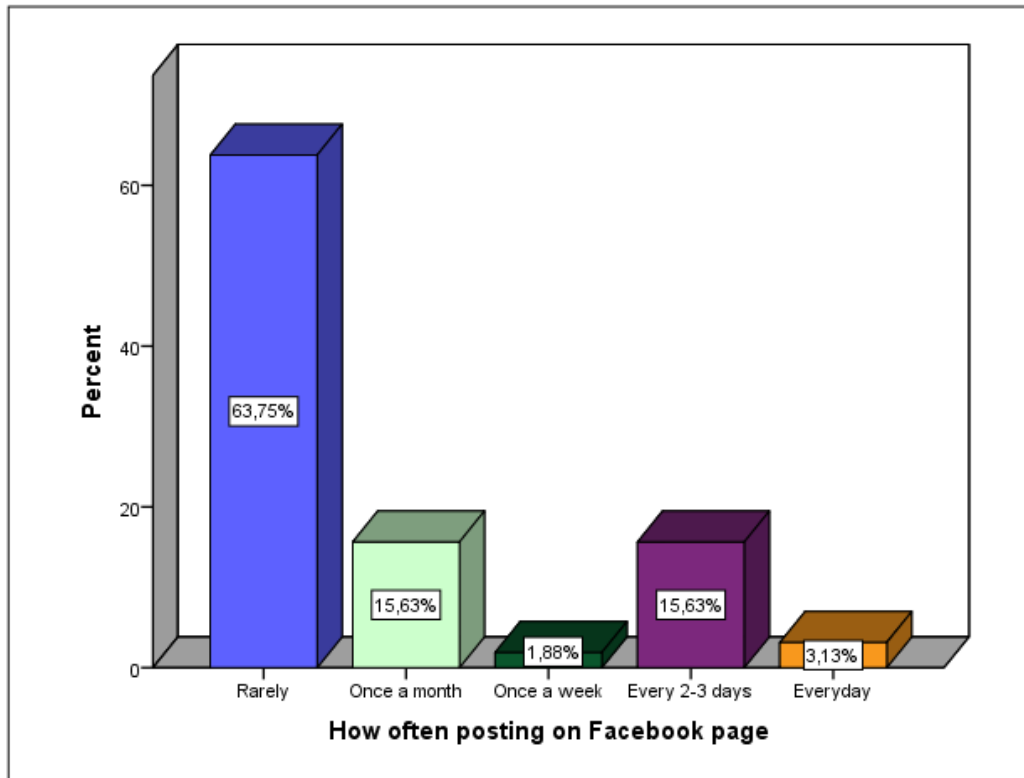
As far as the belief of personal income is concerned, it is observed that 53.1% of the sample replied that they have an average income. 25.6% of the sample answered that they have a low income while 16.2% of the sample said that they have very low income. Finally, around 5% of the sample responded that they have a high personal income (Table 7.29). The results, here, show a negative self-perception about the earned income which could derive from both actual events taking place in Greece and behavioral biases observed globally among individuals. More particularly, Greece in the last years faced the most severe economic crisis in its history (and the worst economic crisis in Europe since the Second World War), which affected the income of millions of its residents. These actual events lead to increased unhappiness among the population about their perceived income, a feeling which pervades other aspects of their lives and was well documented in recent relative surveys (European Commission, 2019; Helliwell, Layard, & Sachs, 2018). This feeling was further reinforced by the proven behavioral pattern of individuals to exhibit loss aversion, that is a loss of a certain amount (of money, in this case) to be perceived as having greater significance than an equal gain of the same amount (Kahneman & Tversky,

1979; Tversky & Kahneman, 1992). Thus, despite the recent betterment of the financial situation in Greece and the recent gains in income due to the reversal of the economic crisis, the feeling of unhappiness still seems to prevail.

Table 7.29 Belief of personal income of respondents

Belief of personal income	Percentage
Very low	16.2%
Low	25.6%
Average	53.1%
High	4.7%
Very high	0.5%

7.2 Cross-tabulation analysis of potentially associated questions

This part of the empirical analysis shows how respondents' answers on two distinct questions (or their level of agreements with two distinct statements) relate. We use tables that comprise all the useful data for our analysis in order to be easier to explain and analyze the results. Most of the observations (answers) are given through a Likert scale. In our analysis, we first present the cross-tabulation tables and then, we conduct a χ^2 test of association to examine whether there is a statistically significant association between the crosstabs (different questions trying to catch similar underlying factors).

7.2.1 Comparison between purchase value and monthly family income

The following crosstab in Table 7.30 presents two ordinal variables (questions). The first one is "How much money do you spend every time at the supermarket?" and the second one is the "Monthly family income". In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H_0:   There is no association between the money that you spend every time at the supermarket and the monthly family income.

H_1:   There is a statistically significant association between the money that you spend every time at the supermarket and the monthly family income.

Table 7.30 clearly illustrates that, the majority of the sample (151 people) spend '51€-100€' every time that they go to the supermarket; from them 77 have a monthly family income between

501€ to 1500€. 32 people have a monthly family income smaller than 500€ while 27 people have an income between 1501€ and 2500€. Only 6 people have between 2501€ and 4000€ and 9 people have a monthly family income bigger or equal to 4001€. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.30.

Table 7.30 Crosstab between purchase value and monthly family income

		Monthly family income					
		<500€	501-1500€	1501-2500€	2501-4000€	>4001€	Total
How much money do you spend	up to 50€	7	20	8	4	0	39
	51-100€	32	77	27	6	9	151
	101-150€	17	75	45	8	2	147
	151-200€	13	70	44	10	3	140
	more than 200€	5	42	18	4	0	69
	Total	74	284	142	32	14	546

The χ^2 test shows that there is a significant relationship between "How much money do you spend every time at the supermarket?" and the "Monthly family income" (p = 0.008). Thus, we rejected the null hypothesis (H_0) in favor of the alternative hypothesis (H_1) and we conclude that there is statistically significant association between the observations of "How much money do you spend every time at the supermarket?" and "Monthly family income".

7.2.2 Comparison between the purchase value and monthly personal income

The following crosstab in Table 7.31 portrays two ordinal variables. The first variable is the answers on the question "How much money do you spend every time at the supermarket?" and the second one is the answers given to the question "Monthly personal income". In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H_0:   There is no association between the money that you spend every time at the supermarket and the monthly personal income.

H_1:   There is a statistically significant association between the money that you spend every time at the supermarket and the monthly personal income.

Table 7.32 clearly illustrates that, the majority of the sample (151 people) spend ''51€-100€'' every time that they go to the supermarket; from them 71 have a monthly personal income between 501€ to 1200€. 60 people have a monthly personal income smaller than 500€ while 12 people have an income between 1201€ and 2000€. Only 4 people have between 2001€ and 3000€ and 4 people have a monthly personal income bigger or equal to 3001€. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.31.

Table 7.31 Crosstab between the purchase value and monthly personal income

		Monthly personal income					
		<500€	501-1200€	1201-2000€	2001-3000€	>3001€	Total
How much money do you spend	up to 50€	16	18	5	1	1	41
	51-100€	60	71	12	4	4	151
	101-150€	42	87	15	1	1	146
	151-200€	31	94	12	2	1	140
	more than 200€	21	41	4	0	1	67
	Total	170	311	48	8	8	545

The χ^2 test shows that there is no significant relationship between the answers given to the two questions: "How much money do you spend every time at the supermarket?" and the "Monthly personal income" (p = 0.118). Thus, we accept the null hypothesis (H_0) that there is no correlation between the answers in questions "How much money do you spend every time at the supermarket?" and "Monthly personal income".

7.2.3 Comparison between different statements concerning trust to the SYN.KA Super Markets brand (statements i and ii of question 22)

The following crosstab in Table 7.32 depicts two categorical (ordinal) variables (two different statements concerning the satisfaction of SYN.KA potential customers). The first statement is "With the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and the second statement is the "The SYN.KA Super Markets brand meets my expectations" which represent the two categorical variables respectively. In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H_0:   There is no association between the statements "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "the SYN.KA Super Markets brand meets my expectations".

H_1:   There is a statistically significant association between the statements "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "the SYN.KA Super Markets brand meets my expectations".

The majority of the sample (270 people) agree "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases". From them, 217 agree that the SYN.KA Super Markets brand meet their expectations. 30 people either disagree or "neither agree/nor disagree" that the SYN.KA Super Markets brand meet their expectations, divided equally the two categories, while 23 people absolutely agree with this statement. There is no one who absolutely disagree that the SYN.KA Super Markets brand meet its expectations. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.32.

Table 7.32 Crosstab between different statements concerning trust to the SYN.KA Super Markets brand(statements i and ii of question 22)

		The SYN.KA Super Markets brand meets my expectations					
		Absolutely disagree	Disagree	Neither agree-nor disagree	Agree	Absolutely agree	Total
With the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases	Absolutely disagree	15	8	1	1	1	26
	Disagree	6	73	4	27	3	113

Neither agree-nor disagree	1	3	48	40	1	93
Agree	0	15	15	217	23	270
Absolutely agree	0	0	0	3	36	39
Total	22	99	68	288	64	541

The χ^2 test shows that there is a significant relationship between the answers given concerning the two statements, "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "the SYN.KA Super Markets brand meets my expectations" (p = 0.000). Thus, we rejected the null hypothesis (H$_0$) in favor of the alternative (H$_1$), something that shows that there is an association between the answers to the two statements, "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "the SYN.KA Super Markets brand meets my expectations".

7.2.4 Comparison between different statements concerning trust to the SYN.KA Super Markets brand (statements i and iii of question 22)

The following crosstab in Table 7.33 illustrates two categorical (ordinal) variables, shaped in the form of two statements. The first statement is "With the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and the second one is the "I feel confident with the SYN.KA Super Markets brand". The observations concerning the statements are taken through a Likert scale. In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H$_0$:   There is no association between the observations concerning "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "I feel confident with the SYN.KA Super Markets brand".

H$_1$:   There is a statistically significant association between the observations concerning "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "I feel confident with the SYN.KA Super Markets brand".

The majority of the sample (267 people) agrees with the statement: "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases". From them 207 also agree that they feel confident with the SYN.KA Super Markets brand. 30 people answered that "disagree" or "neither agree/nor disagree" that the SYN.KA Super Markets brand meet their expectations, divided equally in the two categories while 29 people absolutely agree with the above-mentioned statement. There is no one who absolutely disagree with the statement that they feel confident with the SYN.KA Super Markets brand. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.33.

Table 7.33 Crosstab between different statements concerning trust to the SYN.KA Super Markets brand (statements i and iii of question 22)

		I feel confident with the SYN.KA Super Markets brand					
		Absolutely disagree	Disagree	Neither agree-nor disagree	Agree	Absolutely agree	Total
With the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases	Absolutely disagree	15	5	3	3	0	26
	Disagree	8	73	3	25	5	114
	Neither agree-nor disagree	2	5	48	33	6	94
	Agree	0	15	15	207	29	267
	Absolutely agree	0	0	0	2	38	40
Total		26	98	69	270	78	541

The χ² test shows that there is a significant relationship between the answers given concerning "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my

purchases" and "I feel confident with the SYN.KA Super Markets brand" (p = 0.000). Thus, the null hypothesis (H₀) is rejected in favor of the alternative hypothesis (H₁) that there is association between the observations regarding the two statements, "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "I feel confident with the SYN.KA Super Markets brand".

7.2.5 Comparison between different statements concerning trust to the SYN.KA Super Markets brand (statements i and iv of question 22)

The following crosstab in Table 7.34 presents two categorical (ordinal) variables in the form of observations concerning two statements. The first statement is "With the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and the second one is "SYN.KA Super Markets is a brand that never disappoints me". In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H₀: There is no association between "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "SYN.KA Super Markets is a brand that never disappoints me".

H₁: There is a statistically significant association between "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "SYN.KA Super Markets is a brand that never disappoints me".

The majority of the sample (269 people) agrees with the statement that "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases". From them, 159 agree that SYN.KA Super Markets is a brand that never disappoint them as well. 45 people neither agree/nor disagree with the second statement, while 44 people disagree that the second statement, that is SYN.KA Super Markets is a brand that never disappoint them. 18 people absolutely agree with that statement while only 3 absolutely disagree that the SYN.KA Super Markets is a brand that never disappoint them. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.34.

Table 7.34 Crosstab between different statements concerning trust to the SYN.KA Super Markets brand (statements i and iv of question 22)

		SYN.KA Super Markets is a brand that never disappoints me					
		Absolutely disagree	Disagree	Neither agree-nor disagree	Agree	Absolutely agree	Total
With the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases	Absolutely disagree	13	8	3	2	0	26
	Disagree	6	81	5	20	2	114
	Neither agree-nor disagree	3	10	54	24	1	92
	Agree	3	44	45	159	18	269
	Absolutely agree	0	0	0	6	34	40
	Total	25	143	107	211	55	541

The χ^2 test shows that there is a significant relationship between the answers concerning the two statements, "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "SYN.KA Super Markets is a brand that never disappoints me" (p = 0.000). Thus, the null hypothesis (H_0) is rejected in favor of the alternative (H_1) that there is association between the answers regarding the two statements, "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "SYN.KA Super Markets is a brand that never disappoints me".

7.2.6 Comparison between different statements concerning trust to the SYN.KA Super Markets brand (statements i and v of question 22)

The following crosstab in Table 7.35 depicts two categorical (ordinal) variables taking the form of agreement with two statements. The first statement is "With the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and the second one is the "The

SYN.KA Super Markets brand does not meet my needs in a consistent way". In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H_0: There is no association between the answers concerning "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "The SYN.KA Super Markets brand does not meet my needs in a consistent way".

H_1: There is a statistically significant association between the answers concerning "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "The SYN.KA Super Markets brand does not meet my needs in a consistent way".

The majority of the sample (263 people) agrees with the first statement, that is "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases". From them, 148 disagree with the second statement that the SYN.KA Super Markets brand do not meet their needs in a consistent way. 61 people feel that they absolutely disagree with the second statement, while 31 agree. 19 people neither agree/nor disagree, while only 4 persons absolutely agree that the SYN.KA Super Markets brand do not meet their needs in a consistent way. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.35.

Table 7.35 Crosstab between different statements concerning trust to the SYN.KA Super Markets brand (statements i and v of question 22)

			The SYN.KA Super Markets brand does not meet my needs in a consistent way					
			Absolutely disagree	Disagree	Neither agree-nor disagree	Agree	Absolutely agree	Total
With the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases	Absolutely disagree	Count	11	7	4	2	0	24
	Disagree	Count	4	77	4	23	5	113
	Neither agree-nor disagree	Count	4	36	40	12	1	93
	Agree	Count	61	148	19	31	4	263
	Absolutely agree	Count	18	8	1	1	11	39

	Total Count	98	276	68	69	21	532

The χ^2 test shows that there is a significant relationship between the answers given regarding the two statements, "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "The SYN.KA Super Markets brand does not meet my needs in a consistent way" (p = 0.000). Thus, the null hypothesis (H_0) is rejected in favor of the alternative hypothesis (H_1) that there is association between the answers given related to "with the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases" and "The SYN.KA Super Markets brand does not meet my needs in a consistent way".

7.2.7 Comparison between different statements concerning trust to the SYN.KA Super Markets brand (statements i and ii of question 23).

The following crosstab in Table 7.36 reports the observations concerning two categorical (ordinal) variables. The first variable is related to the statement "SYN.KA Super Markets is honest with me and addresses my concerns properly" and the second one to the statement "SYN.KA Super Markets will make every effort to satisfy me". In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H_0:   There is no association between the answers given concerning the statements, "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets will make every effort to satisfy me".

H_1:   There is a statistically significant association between the answers given concerning the statements, "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets will make every effort to satisfy me".

The majority of the sample (223 people) agrees with the statement, "SYN.KA Super Markets is honest with me and addresses my concerns properly". From this majority, 176 persons also agree that "SYN.KA Super Markets will make every effort to satisfy them", while 24 people absolutely agree with this second statement. 13 people disagree and 10 neither agree nor disagree that SYN.KA Super Markets will make every effort to satisfy them. There is no one who absolutely

146

disagree with the statement that "SYN.KA Super Markets will make every effort to satisfy them". For brevity, we don't analyze the other answers, which are presented analytically in Table 7.36.

Table 7.36 Crosstab between different statements concerning trust to the SYN.KA Super Markets brand (statements i and ii of question 23).

		SYN.KA Super Markets will make every effort to satisfy me					
		Absolutely disagree	Disagree	Neither agree-nor disagree	Agree	Absolutely agree	Total
SYN.KA Super Markets is honest with me and addresses my concerns properly	Absolutely disagree	14	5	0	1	0	20
	Disagree	5	88	5	39	1	138
	Neither agree-nor disagree	0	4	56	48	0	108
	Agree	0	10	13	176	24	223
	Absolutely agree	0	0	0	4	52	56
Total		19	107	74	268	77	545

The χ^2 test shows that there is a significant relationship between the observations regarding the statements, "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "the SYN.KA Super Markets brand meets my expectations" (p = 0.000). Thus, the null hypothesis (H_0) is rejected in favor of the alternative one (H_1) that there is association between the answers collected concerning the statements, "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "the SYN.KA Super Markets brand meets my expectations".

7.2.8 Comparison between different statements concerning trust to the SYN.KA Super Markets brand (statements i and iii of question 23)

The following crosstab in Table 7.37 outlines the answers, which we collected, related to two categorical (ordinal) variables in the form of the level of agreement with two statements. The first statement is "SYN.KA Super Markets is honest with me and addresses my concerns properly" and the second one is the "I could rely on SYN.KA Super Markets to deal with my complaint". In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H_0:   There is no association between the answers collected regarding the statements "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "I could rely on SYN.KA Super Markets to deal with my complaint".

H_1:   There is a statistically significant association between the answers collected regarding the statements "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "I could rely on SYN.KA Super Markets to deal with my complaint".

The majority of the sample (222 people) agrees with the first statement, that is "SYN.KA Super Markets is honest with me and addresses my concerns properly". From those respondents, 172 persons also agree with the second statement, that is they could rely on SYN.KA Super Markets to deal with their complaint, while 30 people absolutely agree with that statement. 11 people disagree and 9 persons neither agree nor disagree that they could rely on SYN.KA Super Markets to deal with their complaint. There is no one who absolutely disagree that they could rely on SYN.KA Super Markets to deal with their complaint. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.37.

Table 7.37 Crosstab between different statements concerning trust to the SYN.KA Super Markets brand (statements i and iii of question 23)

		I could rely on SYN.KA Super Markets to deal with my complaint					
		Absolutely disagree	Disagree	Neither agree-nor disagree	Agree	Absolutely agree	Total
SYN.KA Super Markets is honest with	Absolutely disagree	16	3	0	1	0	20

me and addresses my concerns properly							
	Disagree	5	84	4	42	2	137
	Neither agree-nor disagree	1	2	59	44	2	108
	Agree	0	11	9	172	30	222
	Absolutely agree	0	1	1	10	44	56
	Total	22	101	73	269	78	543

The χ^2 test shows that there is a significant relationship between the answers collected regarding the statements "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "I could rely on SYN.KA Super Markets to deal with my complaint" (p = 0.000). Thus, we reject the null hypothesis (H_0) is rejected in favor of the alternative one (H_1) that there is association between the answers to the statements "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "I could rely on SYN.KA Super Markets to deal with my complaint".

7.2.9 Comparison between different statements concerning trust to the SYN.KA Super Markets brand (statements i and iv of question 23)

The following crosstab in Table 7.38 portrays the association between two categorical (ordinal) variables in the form of two distinct statements. The first statement is "SYN.KA Super Markets is honest with me and addresses my concerns properly" and the second one is the "SYN.KA Super Markets is interested in my satisfaction". In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H_0:   There is no association between the observations concerning the statements "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets is interested in my satisfaction".

H_1:   There is a statistically significant association between the observations concerning the statements "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets is interested in my satisfaction".

The majority of the sample (222 people) agrees with the statement that "SYN.KA Super Markets is honest with me and addresses my concerns properly". From those people, 180 also agree that SYN.KA Super Markets is interested in their satisfaction and 27 people absolutely agree with this second statement. 5 people disagree and 9 neither agree nor disagree with the statement that SYN.KA Super Markets is interested in their satisfaction. There is only one person who absolutely disagree with the statement that SYN.KA Super Markets is interested in their satisfaction. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.38.

Table 7.38 Crosstab between different statements concerning trust to the SYN.KA Super Markets brand (statements i and iv of question 23)

		SYN.KA Super Markets is interested in my satisfaction.					
		Absolutely disagree	Disagree	Neither agree-nor disagree	Agree	Absolutely agree	Total
SYN.KA Super Markets is honest with me and addresses my concerns properly	Absolutely disagree	14	3	1	1	0	19
	Disagree	6	77	4	46	4	137
	Neither agree-nor disagree	1	4	53	48	2	108
	Agree	1	5	9	180	27	222
	Absolutely agree	1	2	0	6	46	55
	Total	23	91	67	281	79	541

The χ^2 test shows that there is a significant relationship between the responses regarding the statements "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets is interested in my satisfaction" (p = 0.000). Thus, the null hypothesis (H_0) is rejected in favor of the alternative one (H_1) that there is association between the responses

regarding "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets is interested in my satisfaction".

7.2.10 Comparison between different statements concerning trust to the SYN.KA Super Markets brand (statements i and v of question 23)

The following crosstab in Table 7.39 depicts two categorical (ordinal) variables in the form of two statements. The first statement is "SYN.KA Super Markets is honest with me and addresses my concerns properly" corresponding to the first variable and the second one is the "SYN.KA Super Markets will compensate me in a proper way if I have a problem with a product" corresponding to the second variable. In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H_0: There is no association between the responses concerning the statements "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets will compensate me in a proper way if I have a problem with a product".

H_1: There is a statistically significant association between the responses concerning the statements "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets will compensate me in a proper way if I have a problem with a product".

The majority of the sample (223 people) agrees with the first statement, that is "SYN.KA Super Markets is honest with me and addresses my concerns properly". From those people, 157 also agree with the second statement that SYN.KA Super Markets will compensate them in a proper way if they have a problem with a product and 27 people absolutely agree with the latter statement. 17 people disagree and 22 neither agree nor disagree with the latter statement that SYN.KA Super Markets will compensate them in a proper way if they have a problem with a product. There is no one who absolutely disagree that SYN.KA Super Markets will compensate them in a proper way if they have a problem with a product. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.39.

Table 7.39 Crosstab between different statements concerning trust to the SYN.KA Super Markets brand (statements i and v of question 23)

		SYN.KA Super Markets will compensate me in a proper way if I have a problem with a product					
		Absolutely disagree	Disagree	Neither agree-nor disagree	Agree	Absolutely agree	Total
SYN.KA Super Markets is honest with me and addresses my concerns properly	Absolutely disagree	15	3	0	1	1	20
	Disagree	7	79	3	41	9	139
	Neither agree-nor disagree	1	2	71	32	2	108
	Agree	0	17	22	157	27	223
	Absolutely agree	0	4	0	9	42	55
	Total	23	105	96	240	81	545

The χ^2 test shows that there is a significant relationship between the responses collected referring to "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets will compensate me in a proper way if I have a problem with a product" (p = 0.000). Thus, the null hypothesis (H_0) is rejected in favor of the alternative hypothesis (H_1) that there is association between the responses collected concerning "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets will compensate me in a proper way if I have a problem with a product".

7.2.11 Comparison between different statements concerning trust to the SYN.KA Super Markets brand (statements i and vi of question 23).

The following crosstab in Table 7.40 portrays two categorical (ordinal) variables taking the form of the level of agreement to two statements respectively. The first statement is "SYN.KA Super Markets is honest with me and addresses my concerns properly" and the second one is the "SYN.KA Super Markets would not be willing to solve the problems I am facing with a product". In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H_0:   There is no association between the answers concerning "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets would not be willing to solve the problems I am facing with a product".

H_1:   There is a statistically significant association between the answers concerning "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets would not be willing to solve the problems I am facing with a product".

The majority of the sample (220 people) agrees with the statement that "SYN.KA Super Markets is honest with me and addresses my concerns properly". From those respondents, 101 disagree with the second statement that SYN.KA Super Markets would not be willing to solve the problems they are facing with a product and 62 people absolutely disagree with this latter statement. 40 people agree, while 12 persons neither agree nor disagree that SYN.KA Super Markets would not be willing to solve the problems they are facing with a product. From the same respondents, there are also 5 people who absolutely agree that SYN.KA Super Markets would not be willing to solve the problems they are facing with a product. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.40.

Table 7.40 Crosstab between different statements concerning trust to the SYN.KA Super Markets brand (statements i and vi of question 23)

		SYN.KA Super Markets would not be willing to solve the problems I am facing with a product					
		Absolutely disagree	Disagree	Neither agree-nor disagree	Agree	Absolutely agree	Total
SYN.KA Super Markets is honest with me and addresses my concerns properly	Absolutely disagree	9	3	1	3	2	18
	Disagree	16	93	4	23	1	137
	Neither agree-nor disagree	9	38	57	3	1	108
	Agree	62	101	12	40	5	220
	Absolutely agree	32	11	0	1	11	55
	Total	128	246	74	70	20	538

153

The χ^2 test shows that there is a significant relationship between the answers given for "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets would not be willing to solve the problems I am facing with a product" (p = 0.000). Thus, we reject the null hypothesis (H$_0$) in favor of the alternative hypothesis (H$_1$) showing that there is association between the answers given for "SYN.KA Super Markets is honest with me and addresses my concerns properly" and "SYN.KA Super Markets would not be willing to solve the problems I am facing with a product".

7.2.12 Comparison between different statements concerning bond formation with SYN.KA Super Markets (question 15 and question 16)

The following crosstab in Table 7.41 presents two categorical (ordinal) variables structured as observations concerning two statements. The first statement is "Do you believe that you share a common goal with the company" and the second one is the "When considering your relationship with SYN.KA Super Markets, do you think SYN.KA Super Markets is". In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H$_0$:   There is no association between the responses collected for "Do you believe that you share a common goal with the company" and "When considering your relationship with SYN.KA Super Markets, do you think SYN.KA Super Markets is".

H$_1$:   There is a statistically significant association between the responses collected for "Do you believe that you share a common goal with the company" and "When considering your relationship with SYN.KA Super Markets, do you think SYN.KA Super Markets is".

The majority of the sample (330 people) don't believe that they share a common goal with the company. From them, 140 respondents, when considering their relationship with SYN.KA Super Markets, think that SYN.KA Super Markets is a business that takes care of their satisfaction, while 87 people think that SYN.KA Super Markets is a business that takes only care of the customer-buyer relationship with you. 94 people characterized SYN.KA Super Markets as a

vendor while 3 persons consider it a partner and 6 persons a friend. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.41.

Table 7.41 Crosstab between different statements concerning bond formation with SYN.KA Super Markets (question 15 and question 16)

		When considering your relationship with SYN.KA Super Markets, do you think SYN.KA Super Markets is					
		A vendor	A business that takes care of the customer-buyer relationship with you	A business that takes care of your satisfaction	A partner	A friend	Total
Do you believe that you share a common goal with the company	No	94	87	140	3	6	330
	Yes	13	26	129	24	20	212
	Total	107	113	269	27	26	542

The χ^2 test shows that there is a significant relationship between the responses collected for "Do you believe that you share a common goal with the company" and "When considering your relationship with SYN.KA Super Markets, do you think SYN.KA Super Markets is" (p = 0.000). Thus, the null hypothesis (H_0) is rejected in favor of the alternative one (H_1) that there is association between the responses collected for "Do you believe that you share a common goal with the company" and "When considering your relationship with SYN.KA Super Markets, do you think SYN.KA Super Markets is".

7.2.13 Comparison between different statements concerning bond formation with SYN.KA Super Markets (question 15 and question 17)

The following crosstab in Table 7.42 depicts two categorical (ordinal) variables created from two questions. The first question is "Do you believe that you share a common goal with the company" and the second one is the "How would you describe your interaction with SYN.KA Super Markets?". In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H_0: There is no association between the answers to the questions "Do you believe that you share a common goal with the company" and "How would you describe your interaction with SYN.KA Super Markets?".

H_1: There is a statistically significant association between the answers to the questions "Do you believe that you share a common goal with the company" and "How would you describe your interaction with SYN.KA Super Markets?".

Most of the sample (328 people) don't believe that they share a common goal with the company. From them, 204 respondents buy only products that they consider to be good deals, while 72 people supply their household from SYN.KA Super Markets. 40 people think that SYN.KA Super Markets is interested in their satisfaction and it will make an effort to keep them as customers and 11 people love SYN.KA Super Markets. Only one person considers SYN.KA Super Markets as a partner. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.42.

Table 7.42 Crosstab between different statements concerning bond formation with SYN.KA Super Markets (question 15 and question 17)

		How would you describe your interaction with SYN.KA Super Markets?					
		I buy products that I consider to be good deals	I supply my household from SYN.KA Super Markets	I think SYN.KA Super Markets is interested in my satisfaction and it will make an effort to keep me as a customer	I consider SYN.KA Super Markets as a partner.	I love SYN.KA Super Markets	Total
Do you believe that you share a common goal with the company	No	204	72	40	1	11	328
	Yes	66	52	55	15	23	211
	Total	270	124	95	16	34	539

The χ^2 test shows that there is a significant relationship between the responses to questions "Do you believe that you share a common goal with the company" and "How would you describe your interaction with SYN.KA Super Markets?" (p = 0.000). Thus, the null hypothesis (H_0) is rejected in favor of the alternative hypothesis (H_1) showing that there is association between the

answers to questions "Do you believe that you share a common goal with the company" and "How would you describe your interaction with SYN.KA Super Markets?".

7.2.14 Comparison between different statements concerning bond formation with SYN.KA Super Markets (question 15 and question 21)

The following crosstab in Table 7.43 portrays two categorical (one binary and one nominal) variables drawn from two questions. The first question is "Do you believe that you share a common goal with the company" and the second one is the "If you think that you are satisfied, do you think this is mainly because of?". In order to run a cross-tabulation analysis, hypotheses must be made. Hence:

H_0:   There is no association between the responses to questions "Do you believe that you share a common goal with the company" and "If you think that you are satisfied, do you think this is mainly because of?".

H_1:   There is a statistically significant association between the responses to questions "Do you believe that you share a common goal with the company" and "If you think that you are satisfied, do you think this is mainly because of?".

Most of the sample (299 people) don't believe that they share a common goal with the company. From them, 155 respondents think that they are satisfied from their relationship with SYN.KA Super Markets mainly because of both their own actions and the actions of SYN.KA Super Markets. 75 people think that they are principally satisfied because of the actions of SYN.KA Super Markets, while 69 people are primarily satisfied due to their own actions. For brevity, we don't analyze the other answers, which are presented analytically in Table 7.43.

Table 7.43 Crosstab between different statements concerning bond formation with SYN.KA Super Markets (question 15 and question 21)

	If you think that you are satisfied, do you think this is mainly because of:			
	Your own actions (e.g. good preparation for your purchases, good mood, right product choices ...)	The actions of SYN.KA Super Markets (e.g. pleasant staff, good customer service, offers, beautiful environment ...)	Both your own actions and the actions of SYN.KA Super Markets	Total

Do you believe that you share a common goal with the company	No	69	75	155	299
	Yes	19	78	108	205
Total		88	153	263	504

The χ^2 test shows that there is a significant relationship between the answers related to questions "Do you believe that you share a common goal with the company" and "If you think that you are satisfied, do you think this is mainly because of?" ($p = 0.000$). Thus, the null hypothesis (H_0) is rejected in favor of the alternative one (H_1) that there is association between the answers given to questions "Do you believe that you share a common goal with the company" and "If you think that you are satisfied, do you think this is mainly because of?".

7.3 PLS Regression Analysis

Based on our methodology, we first use the Partial Least Squares (PLS) regression to understand the effect of individual characteristics on a set of questions measuring trust (in contrast to ordinal regression which monitors the effect on a given question). As far as the individual characteristics of participants are concerned, we see their relative link with trust in the following tables.

In the PLS model, we included three individual characteristics, individual orientation, participation and personal outcome/goal. So, in this instance, we use three questions, each for a characteristic mentioned above, in our PLS regression. More specifically, these questions are questions 27,28,36 from our questionnaire.

- 27. Before you visit one of SYN.KA Super Markets stores you expect that:
- 28. Are you a member of SYN.KA Super Markets community on FACEBOOK?
- 36. Do you perceive the level of your individual income as?

Our dependent (latent) variable is trust as expressed through question 23i from our questionnaire.

- 23i. SYN.KA Super Markets is honest with me and addresses my concerns properly.

Table 7.44 PLS Model Quality

Statistic	Value

158

Q^2cum	0.108
R^2Ycum	0.116
R^2Xcum	0.425

The Q^2cum is at 0.11 showing that about 11% of our latent variable can be explained by our independent variables. This finding shows that our independent variables have an effect on our latent one. The score is not too high, but this fact is something expected as only three individual characteristics are included in the regression (from a total of 6) and we also know that there is a number of other factors affecting trust (size, fame etc.). Now, if we want to see the contribution of each individual factor to the collective effect which the independent variables have on the latent one, we have to examine the Variable Importance in the Projection (VIP) in Table 7.45. We observe that question 27 has the biggest impact with a VIP of 1.56. This result shows that personal goals (monitored by question 27) are playing an important role in the creation of trust.

Table 7.45 Variable importance in the projection (VIP)

Independent variable	VIP
Before visiting SYN.KA Super Markets (question 27)	1.581
Member of SYN.KA Super Markets community on FACEBOOK (question 28)	0.685
Perceive the level of your individual income (question 36)	0.172

7.4 Ordinal regressions concerning trust

We conduct six different ordinal regressions (one for each of the four most significant questions monitoring trust based on cross tabulations and two with the use of a sample of only social media-based brand community (SMB) members for testing hypothesis 2) in order to identify a potentially statistically significant link between the individual characteristics of a participant and its level of trust to the brand. We discuss the results of the regressions next.

7.4.1 Results of the first ordinal regression concerning the relationship between trust and the individual characteristics for the whole sample.

In this part, we analyze the results of the first ordinal regression. As independent variables for our ordinal regression model, we take the individual characteristics of the participants and as the dependent variable we use trust. More specifically the regression has

- questions 27, 28, 28.1, 29, 30, 30.1 and 36 as independent variables, from our questionnaire corresponding to proxies for personal outcome/goals, participation, involvement, and individual orientation respectively (Table 7.46).

Table 7.46 Table of Individual Characteristics questions as independent variables

Independent variables
27. Before you visit one of SYN.KA Super Markets stores you expect that
28. Are you a member of SYN.KA Super Markets community on FACEBOOK?
28.1. If yes, do you communicate online with your community friends regularly?
29. Which is the main reason in order to join SYN.KA Super Markets on FACEBOOK?
30. Have you ever made a post on the SYN.KA Super Markets page in the social media on a topic of general interest (a topic of general interest is an issue that is not very important to you and your friends on the internet and the publication is accessible to all members of the community)?
30.1. If so, how often do you undertake such an activity or any other relevant action (sharing information, communicating with unknown community members to promote its aims, etc.)?
36. Do you perceive the level of your individual income as?

- Question 22i expressing trust as our dependent variable (Table 7.47).

Table 7.47 Dependent variable of first ordinal regression (trust)

Dependent variables
22.i: With the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases.).

As a first step in our analysis, we consider the fit of the model by employing a χ^2 statistic test. We see that at least one of the predictor's coefficients is not equal to zero. We also infer this fact from the p-value of the statistic as p-value = 0.045 < 0.05 (Table 7.48) lead us to reject the null hypothesis (Ho): all coefficients are equal to zero. Moreover, we observe that both the Pearson χ^2 and the deviance χ^2 tests have a p-value (Pearson p-value = 0.639 and deviance p-value = 1.000) higher than our statistical significance level (a = 0.05), indicating a sufficient goodness-of-fit for our model (Table 7.49).

Table 7.48 Model fit test-1st ord. regression (trust)

Model	-2 Log Likelihood	Chi-square	Df	Sig.

Intercept Only	292.945			
Final	259.818	33.127	21	.045
Link Function: Logit				

Table 7.49 Goodness of fit tests-1st ord. regression (trust)

	Chi-Square	df	Sig.
Pearson	380.443	391	.639
Deviance	243.359	391	1.000
Link Function: Logit			

Moving along, we can discuss the explanatory power of our model. In contrast to Ordinary Least squares (OLS) regression, ordinal logistic regression does not have an equivalent to the R-squared. For this reason, many researchers have tried to find some equivalent measures. These pseudo-Rs range from 0.106 to 0.259 in our example indicating that a substantial part of the dependent variable (trust) is explained by the independent variables of our model (individual characteristics) (Table 7.50). This finding confirms our first hypothesis which states that the individual characteristics of a participant in a social media-based brand community affect the level of trust to the brand.

Table 7.50 Pseudo R square -1st ord. regression (trust)

Cox and Snell	.239
Nagelkerke	.259
McFadden	.106
Link Function: Logit	

If we want to analyze our results deeper, we have to look on the particular contribution each characteristic has on the collective effect which they exhibit on trust. In order to check this contribution, we need to examine the coefficient of each proxy question and its statistical significance[27].

We observe that the results for question 36 are all statistically significant even at a 1% significance level. Thus, we can argue that individual orientation of the participants, which this question proxies, has the bigger impact on the creation of trust. This finding further confirms the

---

[27] For brevity, we do not present the full result table here, but we attach the respective table 8.1 in our appendix.

results of our experimental game in which we found that the natural predisposition of an individual affected his/her subsequent level of trust.

From the p-value of the results, we also see that question 27 has some statistically significant results (p-value for option 2 is 0.02). This fact indicates that personal goals as you enter an interaction also play a role in creating trust. This result is quite reasonable as personal goals are indirectly linked to the individual orientation of a participant.

Unfortunately, we see that participation, participation in the community, posting on Facebook page, the frequency of posting on Facebook page (questions 28, 30, 30.1) and involvement, frequency of contacting Facebook friends, and the main reason of participation on Facebook community (questions 28.1, 29) do not have a significant role in the shaping of trust.

Finally, in order to complete our analysis of the ordinal regression results, we have to check the results of the test of parallel lines. Ordinal regression assumes that there are proportional odds in our regression model. As we have stated in our methodology, this assumption essentially means that each independent variable has an identical effect at each cumulative split of the ordinal dependent variable. Therefore, to test this assumption the test of parallel lines compares the fitted location model to a model with varying location parameters. It is a quite conservative test which sometimes can disqualify statistically valid models. In our results, our model (Table 7.51) is shown to abide by the proportional odds assumption as the p-value of the test is $0.223 > a = 0.05$, leading us to conclude that our model has proportional odds in its independent variables.

Table 7.51 Test of parallel lines -1st ord. regression (trust)

Model	-2 Log Likelihood	Chi-square	Df	Sig.
Null Hypothesis	259.818			
General	188.574[b]	71.244	63	.223

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

To sum up, we find that individual orientation, personal outcomes/goals and participation in the Facebook community play a significant role in the creation of trust for an individual, confirming the validity of our first hypothesis.

7.4.2 Results of the second ordinal regression concerning the relationship between trust and the individual characteristics for the whole sample.

Here, we discuss the results of the second ordinal regression. As independent variables, we take the individual characteristics of the participants and we consider trust as our dependent variable (with the use of a different proxy statement from previous regressions). More specifically, the regression has

- as in the first ordinal regression, questions 27, 28, 28.1, 29, 30, 30.1 and 36 from our questionnaire as independent variables, corresponding to proxies for personal outcome/goals, participation, involvement, and individual orientation respectively (Table 7.46).

- Question 22iii expressing trust as our dependent variable (Table 7.52).

Table 7.52 Dependent variable of second ordinal regression (trust)

Dependent variables
22.iii: I feel confident with the SYN.KA Super Markets brand

Again, we start with an examination of the fit of the model by calculating a χ^2 statistic test. We conclude that at least one of the predictor's coefficients is not equal to zero. We infer this fact from the p-value of the statistic, as p-value = $0.035 < 0.05$ lead us to reject the null hypothesis (Ho) of the test that all coefficients are equal to zero (Table 7.53). We also investigate whether our proposed model has a better fit than a generic model. The results of the goodness-of-fit tests point to such a direction. Both the Pearson χ^2 and the deviance χ^2 tests have a p-value (Pearson p-value=0.996 and deviance p-value=1.000) higher than our statistical significance level (a = 0.05), indicating a sufficient goodness-of-fit for our model (Table 7.54).

Table 7.53 Model fit test-2nd ord. regression (trust)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Intercept Only	282.299			
Final	248.192	34.107	21	.035
Link Function: Logit				

Table 7.54 Goodness of fit tests-2nd ord. regression (trust)

	Chi-Square	df	Sig.
Pearson	328.823	399	.996
Deviance	230.347	399	1.000
Link Function: Logit			

As far as the explanatory power of our model is concerned, the pseudo-Rs (Table 7.55) range from 0.112 to 0.263 in our example indicating that a substantial part of the dependent variable (trust) is explained by the independent variables of our model (individual characteristics). This finding further validates our first hypothesis which states that the individual characteristics of a participant in a social media-based brand community affect the level of trust to the brand.

Table 7.55 Pseudo R square -2nd ord. regression (trust)

Cox and Snell	.240
Nagelkerke	.263
McFadden	.112
Link Function: Logit	

From an analysis of the coefficient of each proxy question and its statistical significance[28], we observe that the results for question 36 are all statistically significant at the 1% significance level. Thus, we can argue that individual orientation of the participants, which this question proxies, has the bigger impact on the creation of trust. This finding further confirms the results of our experimental game in which we found that the natural predisposition of an individual affected his/her subsequent level of trust.

From the same figures, question 27 seems to have some statistically significant results (p-value for option 1 is 0.032 and for option 2 is 0.01). This fact indicates that personal goals as you enter

---

[28] For brevity, we do not present the full result table 8.2 here, but we attach the respective table in our appendix.

an interaction also play a role in creating trust. This result is quite logical as personal goals are indirectly related to the individual orientation of a participant.

Finally, we see that the posting on the Facebook page also plays a role in the shaping of trust as the results of this question (question 30) indicate that at a significance level a=10%, posting in the Facebook community affects the creation of trust.

Unfortunately, we see that the participation on the community, the frequency of posting on it (questions 28, 30.1) and the frequency of contacting Facebook friends and the main reason of participation on the Facebook community (question 28.1, 29) are shown not to have a significant effect on the creation of trust.

Finally, the results of the test of parallel lines indicate that our model abides by the proportional odds assumption as the p-value (Table 7.56) of the test is 0.156> a = 0.05, leading us to conclude that our model has proportional odds in its independent variables.

Table 7.56 Test of parallel lines -2nd ord. regression (trust)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Null Hypothesis	248.192			
General	173.903	74.289	63	.156

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

In conclusion, we find that individual orientation, personal outcomes/goals and participation in the Facebook community (by posting) play a significant role in the creation of trust for an individual, further verifying the validity of our first hypothesis.

7.4.3 Results of the third ordinal regression concerning the relationship between trust and the individual characteristics for the whole sample.

165

In this section, we present the results of the third ordinal regression. As independent variables we take the individual characteristics of the participants and as the dependent variable we put trust (with a use of a different proxy statement from previous regressions). More particularly, the regression has

- as in the first two ordinal regressions, questions 27, 28, 28.1, 29, 30, 30.1 and 36 from our questionnaire as independent variables, corresponding to proxies for personal outcome/goals, participation, involvement, and individual orientation respectively (Table 7.46).

- Question 22iv expressing trust as our dependent variable (Table 7.57).

Table 7.57 Dependent variable of third ordinal regression (trust)

Dependent variables
22. iv: SYN.KA Super Markets is a brand that never disappoints me

Initially, we investigate the fit of the model by presenting the results of a χ^2 statistic test. We observe that at least one of the predictor's coefficients is not equal to zero. We draw this fact from the p-value of the statistic as p-value = 0.021 < 0.05 (Table 7.58) lead us to reject the null hypothesis (Ho): all coefficients are equal to zero. As a next step, it is examined whether our proposed model has a better fit than a generic model. The results give such an indication. We present these results in the goodness-of-fit table. We observe (Table 7.59) that both the Pearson χ^2 and the deviance χ^2 tests have a p-value (Pearson p-value=0.617 and deviance p-value=1.000) higher than our statistical significance level (a = 0.05), indicating that our data fits well to our proposed model.

Table 7.58 Model fit test - 3rd ord. regression (trust)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Intercept Only	303.861			
Final	267.629	36.232	21	0.21
Link Function: Logit				

Table 7.59 Goodness of fit tests - 3ʳᵈ ord. regression (trust)

	Chi-Square	df	Sig.
Pearson	378.130	387	.617
Deviance	248.397	387	1.000
Link Function: Logit			

Concerning the explanatory power of our model (Table 7.60), the pseudo-Rs of the ordinal regression range from 0.111 to 0.277 in this case indicating that a substantial part of the dependent variable (trust) is explained by the independent variables of our model (individual characteristics). This finding further verifies our first hypothesis which states that the individual characteristics of a participant in a social media-based brand community affect the level of trust to the brand.

Table 7.60 Pseudo R square - 3ʳᵈ ord. regression (trust)

Cox and Snell	.259
Nagelkerke	.277
McFadden	.111
Link Function: Logit	

Regarding the explanatory power of the independent variables[29], from their coefficients and their respective p-values, we observe that the results for question 36 are all statistically significant even at a significance level a = 0.01. Therefore, we can argue that individual orientation of the participants, which this question proxies, has the bigger impact on the creation of trust. This finding further confirms the results of our experimental game in which we found that the natural predisposition of an individual affected his/her subsequent level of trust.

Additionally, we observe that question 27 has some statistically significant results (p-value for option 2 is 0.00). This fact implies that personal goals as you enter an interaction also play a role in creating trust. This result is quite logical as personal goals are indirectly linked to the individual orientation of a participant.

Last but not least, we see that the frequency on contacting Facebook friends also plays a role in the shaping of trust as the results of this question (question 28.1) indicate that at a significance level a=12%, contacting friends in the Facebook community affects the creation of trust.

---

[29] For brevity, we do not present the full result table 8.3 here, but we attach the respective table in our appendix.

Unfortunately, we see that the participation on the community, the posting on Facebook page, the frequency of posting on it (questions 28,30, 30.1) and the main reason of participation on the Facebook community (question 29) are shown not to have a significant effect on the creation of trust.

Finally, through the use of the test of parallel lines (Table 7.61), our model seems to follow the proportional odds assumption as the p-value of the test is $0.334 > a = 0.05$, leading us to conclude that our model has proportional odds in its independent variables.

Table 7.61 Test of parallel lines - 3rd ord. regression (trust)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Null Hypothesis	267.629			
General	200.384	67.245	63	.334

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

All in all, we find that individual orientation, personal outcomes/goals and involvement in the Facebook community play a significant role in the creation of trust for an individual, further affirming the validity of our first hypothesis.

7.4.4 Results of the fourth ordinal regression concerning the relationship between trust and the individual characteristics for the whole sample.

Below, we find the results of the fourth ordinal regression. As independent variables, we again take the individual characteristics of the participants and as the dependent variable we consider trust (with a use of a different proxy statement from previous regressions). More particularly, the regression has

- as in the first three ordinal regressions, questions 27, 28, 28.1, 29, 30, 30.1 and 36 from our questionnaire as independent variables, corresponding to proxies for personal outcome/goals, participation, involvement, and individual orientation respectively (Table 7.46).

- Question 23.iv expressing trust as our dependent variable (Table 7.62).

Table 7.62 Dependent variable of fourth ordinal regression (trust)

Dependent variables
23. iv: SYN.KA Super Markets is interested in my satisfaction

In the Table 7.63, the fit of the model χ^2 statistic test shows that at least one of the predictor's coefficients is not equal to zero. This fact is evident by considering the p-value of the statistic, as p-value = 0.004 < 0.05, a finding that lead us to reject the null hypothesis (Ho) that all coefficients are equal to zero. We also examine whether our proposed model has a better fit than a generic model with the use of specific χ^2 statistic tests. We can argue in such a direction by examining the results of the goodness-of-fit table. We observe (Table 7.64) that both the Pearson χ^2 and the deviance χ^2 tests have a p-value (Pearson p-value=0.676 and deviance p-value=1.000) higher than our statistical significance level (a = 0.05), indicating a sufficient goodness-of-fit for our model.

Table 7.63 Model fit test -4th ord. regression (trust)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Intercept Only	274.212			
Final	232.134	42.078	21	.004
Link Function: Logit				

Table 7.64 Goodness of fit tests -4th ord. regression (trust)

	Chi-Square	df	Sig.
Pearson	369.846	383	.676
Deviance	215.440	383	1.000
Link Function: Logit			

The pseudo-Rs of this ordinal regression range from 0.143 to 0.323 indicating that a substantial part of the dependent variable (trust) is explained by the independent variables of our model (individual characteristics). This finding further validates our first hypothesis which states that the individual characteristics of a participant in a social media-based brand community affect the level of trust to the brand.

Table 7.65 Pseudo R square -4th ord. regression (trust)

Cox and Snell	.296
Nagelkerke	.323
McFadden	.143
Link Function: Logit	

We also look on the particular contribution each characteristic has on the collective effect which they exhibit on trust by examining the coefficients of the independent variables and their p-values[30]. We observe that the results for question 36 are all statistically significant even at a significance level a=0.01. Thus, we confirm one more time that individual orientation of the participants, which this question proxies, has the bigger impact on the creation of trust. This finding further affirms the results of our experimental game, in which we found that the natural predisposition of an individual affected his/her subsequent level of trust.

From the results, we additionally find that question 27 has some statistically significance results (p-value for option 1 is 0.05). This fact indicates that personal goals as you enter an interaction also play a role in creating trust. This result is quite logical as personal goals have an indirect relationship with the individual orientation of a participant.

Moreover, we observe that question 28.1 has some statistically significant results (p-value for option 1 is 0.033) indicating that contacting friends in the Facebook community affects the creation of trust.

On the contrary, we see that the participation on the community, the posting on Facebook page, the frequency of posting on it (questions 28,30, 30.1) and the main reason of participation on the Facebook community (question 29) are shown not to have a significant effect on the creation of trust.

Closing, an examination of the test of parallel lines (Table 7.66) results indicates that our model is compliant to the proportional odds assumption as the p-value of the test is $0.072 > a = 0.05$, indicating that our model has proportional odds in its independent variables.

---

[30] For brevity, we do not present the full result table 8.4 here, but we attach the respective table in our appendix.

Table 7.66 Test of parallel lines -4th ord. regression (trust)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Null Hypothesis	232.134			
General	152.028	80.107	63	.072

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

To sum up, we find that individual orientation, personal outcomes/goals and involvement in the Facebook community play a significant role in the creation of trust for an individual, confirming the validity of our first hypothesis.

7.4.5 Results of the fifth ordinal regression concerning the relationship between trust and the individual characteristics for the SMB sample.

In the fifth group of tables, we find the results of the fifth ordinal regression, which is conducted with a sample of only members in the social media-based brand community of the vendor. As independent variables, we take the individual characteristics of the participants and as the dependent variable we put trust. More particularly, the regression model has

- questions 27, 28.1, 29, 30, 30.1 and 36 from our questionnaire as independent variables, corresponding to proxies for personal outcome/goals, participation, involvement, and individual orientation respectively (Table 7.67).

Table 7.67 Table of Individual Characteristics questions as independent variables SMB sample

Independent variables
27. Before you visit one of SYN.KA Super Markets stores you expect that
28.1. If yes, do you communicate online with your community friends regularly?
29. Which is the main reason in order to join SYN.KA Super Markets on FACEBOOK?
30. Have you ever made a post on the SYN.KA Super Markets page in the social media on a topic of general interest (a topic of general interest is an issue that is not very important to you and your friends on the internet and the publication is accessible to all members of the community)?
30.1. If so, how often do you undertake such an activity or any other relevant action (sharing information, communicating with unknown community members to promote its aims, etc.)?
36. Do you perceive the level of your individual income as?

- Question 23.ii expressing trust as our dependent variable (Table 7.68).

Table 7.68 Dependent variable of fifth ordinal regression (trust)

Dependent variables
23.ii: SYN.KA Super Markets will make every effort to satisfy me

In the Table 7.69, through the Model fit test, we find that at least one of the predictor's coefficients is not equal to zero. We draw this fact from the p-value of the statistic as p-value = 0.015 < 0.05 lead us to reject the null hypothesis (Ho): all coefficients are equal to zero. As a next step, we present the results of the goodness-of-fit tests in Table 7.70. We observe that both the Pearson χ^2 and the deviance χ^2 tests have a p-value (Pearson p-value=1.000 and deviance p-value=1.000) higher than our statistical significance level (a = 0.05), indicating that our data fits well to our proposed model.

Table 7.69 Model fit test- 5th ord. regression (trust)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Intercept Only	187.152			
Final	152.312	34.840	19	0.15
Link Function: Logit				

Table 7.70 Goodness of fit tests -5th ord. regression (trust)

	Chi-Square	df	Sig.
Pearson	205.720	281	1.000
Deviance	144.910	281	1.000
Link Function: Logit			

Focusing on the explanatory power of the regression model, the pseudo-Rs (Table 7.71) range from 0.178 to 0.379 in this case indicating that our independent variables have significant explanatory power. This finding verifies our second hypothesis which states that the individual characteristics of a participant in a social media-based brand community affect the level of trust to the brand.

Table 7.71 Pseudo R square - 5th ord. regression (trust)

Cox and Snell	.343
Nagelkerke	.379
McFadden	.178
Link Function: Logit	

Analyzing the coefficients and their respective p-values for each independent variable (corresponding to a proxy question)[31], we observe that the results for question 36 are all statistically significant even at a significance level a = 0.01. Therefore, we can argue that individual orientation of the participants, which this question proxies, has the bigger impact on the creation of trust. This finding further confirms the results of our experimental game in which we found that the natural predisposition of an individual affected his/her subsequent level of trust.

In addition, we find that question 28.1 has some statistically significant results (p-value for option 1 is 0.03 and p-value for option 2 is 0.021) indicating that contacting friends in the Facebook community affects the creation of trust.

Last but not least, we observe that the posting on Facebook page also plays a role in the shaping of trust as the results of this question (question 30) indicate that at a significance level a=10%, contacting friends in the Facebook community affects the creation of trust.

Unfortunately, participation, the frequency of posting on it (question 30.1), involvement, contacting friends in the Facebook community (question 28.1) the main reason of participation on the Facebook community (question, 29) and personal goals as you enter an interaction (question 27) are shown not to have a significant effect on the creation of trust.

Finalizing our analysis, we find the results of the test of parallel lines (Table.7.72) to point to the fact that our model is abiding by the proportional odds assumption as the p-value of the test is 0.993 > a = 0.05, leading us to conclude that our model has proportional odds in its independent variables.

Table 7.72 Test of parallel lines - 5th ord. regression (trust)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Null Hypothesis	152.312			
General	118.001	34.311	57	.993

---

[31] For brevity, we do not present the full result table 8.5 here, but we attach the respective table in our appendix.

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

To conclude, we find that individual orientation and participation in the Facebook community play a significant role in the creation of trust for an individual, confirming the validity of our second hypothesis.

7.4.6 Results of the sixth ordinal regression concerning the relationship between trust and the individual characteristics for the SMB sample.

In this section, we find the results of the sixth ordinal regression, which is conducted with a sample of only members in the social media-based brand community of the vendor. As independent variables, we again take the individual characteristics of the participants and as the dependent variable, we consider trust. More particularly, the regression model has

- as in the fifth ordinal regression, questions 27, 28.1, 29, 30, 30.1 and 36 from our questionnaire as independent variables, corresponding to proxies for personal outcome/goals, participation, involvement, and individual orientation respectively (Table 7.67).

- Question 23.iv expressing trust as our dependent variable (Table 7.73).

Table 7.73 Dependent variable of sixth ordinal regression (trust)

Dependent variables
23. iv: SYN.KA Super Markets is interested in my satisfaction.

In the Table 7.74, we determine that at least one of the predictor's coefficients is not equal to zero by employing a χ^2 statistic test. This finding is confirmed by considering the p-value of the statistic, as p-value $= 0.026 < 0.05$, a point that leads us to reject the null hypothesis (Ho) that all coefficients are equal to zero. Concerning the goodness-of-fit of the model, we observe based on the results presented in Table 7.75 that both the Pearson χ^2 and the deviance χ^2 tests have a p-value (Pearson p-value=0.835 and deviance p-value=1.000) higher than our statistical significance level (a $= 0.05$), indicating a sufficient goodness-of-fit for our model.

Table 7.74 Model fit test -6th ord. regression (trust)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Intercept Only	188.182			
Final	155.445	32.737	19	0.26
Link Function: Logit				

Table 7.75 Goodness of fit tests -6th ord. regression (trust)

	Chi-Square	df	Sig.
Pearson	250.207	273	.835
Deviance	148.042	273	1.000
Link Function: Logit			

Proceeding in the next part of our analysis, the pseudo-Rs (Table 7.76) of the regression range from 0.166 to 0.365 in our example indicating that a substantial part of the dependent variable (trust) is explained by the independent variables of our model (individual characteristics). This finding further validates our second hypothesis which states that the individual characteristics of a participant in a social media-based brand community affect the level of trust to the brand.

Table 7.76 Pseudo R square -6th ord. regression (trust)

Cox and Snell	.332
Nagelkerke	.365
McFadden	.166
Link Function: Logit	

From the individual coefficients of the independent variables and their p-value[32], we can infer that the results for question 36 are all statistically significant even at a significance level a = 0.01. Therefore, we observe that individual orientation of the participants, which this question proxies, has the bigger impact on the creation of trust. This finding further confirms the results of our experimental game in which we found that the natural predisposition of an individual affected his/her subsequent level of trust.

Furthermore, we observe that question 28.1 has some statistically significant results (p-value for option 1 is 0.03 and p-value for option 2 is 0.021) indicating that contacting friends in the Facebook community affects the creation of trust.

---

[32] For brevity, we do not present the full result table 8.6 here, but we attach the respective table in our appendix.

Last but not least, we see the posting on Facebook page also plays a role in the shaping of trust as the results of this question (question 30) indicate that at a significance level a=10.6%, contacting friends in the Facebook community affects the creation of trust.

Unfortunately, the participation, frequency of posting on Facebook page (question 30.1), the involvement, the main reason of participation on the Facebook community (question 29) and personal goals as you enter an interaction (question 27) are shown not to have a significant effect on the creation of trust.

Finally, our model seems to abide by the proportional odds assumption based on the results of the est of parallel lines (Table 7.77) as the p-value of the test is 0.880 > a = 0.05, leading us to conclude that our model has proportional odds in its independent variables.

Table 7.77 Test of parallel lines -6th ord. regression (trust)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Null Hypothesis	155.445			
General	110.665	44.870	57	.880

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

In conclusion, we find that individual orientation, involvement and participation in the Facebook community play a significant role in the creation of trust for an individual, further affirming the validity of our second hypothesis.

7.5 Ordinal regression concerning brand loyalty

We conduct an ordinal regression for examining the influence of the level of brand trust of an individual to his/her level of brand loyalty. The results of the ordinal regression and relative discussion follow.

7.5.1 Results of the ordinal regression concerning the relationship between brand loyalty and trust for the whole sample.

In this part, we present the results of the ordinal regression. As independent variables for our ordinal regression model, we take "trust" and as the dependent variable, we place "loyalty". More specifically, the regression model has

- questions 22 and 23 from our questionnaire as independent variables which express trust (Table 7.78).

Table 7.78 Table of Trust questions as independent variables

Independent variables
22.i: With the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases
22.ii: The SYN.KA Super Markets brand meets my expectations
22.iii: I feel confident with the SYN.KA Super Markets brand
22.iv: SYN.KA Super Markets is a brand that never disappoints me
22.v: The SYN.KA Super Markets brand does not meet my needs in a consistent way
23.i: SYN.KA Super Markets is honest with me and addresses my concerns properly
23.ii: SYN.KA Super Markets will make every effort to satisfy me
23.iii: I could rely on SYN.KA Super Markets to deal with my complaint (related to my purchases)
23.iv: SYN.KA Super Markets is interested in my satisfaction
23.v: SYN.KA Super Markets will compensate me in a proper way if I have a problem with a product
23.vi: SYN.KA Super Markets would not be willing to solve the problems I am facing with a product

- Question 24.i expressing loyalty as our dependent variable (Table 7.79).

Table 7.79 Dependent variable of ordinal regression (Loyalty)

Dependent variables
24. i: I believe I am loyal to SYN.KA Super Markets

In Table 7.80, the model fit test indicates that at least one of the predictor's coefficients is not equal to zero. We can infer this fact from the p-value of the statistic, as p-value = 0.000 < 0.05, a finding leading us to reject the null hypothesis (Ho): all coefficients are equal to zero. In the goodness-of-fit tests (Table 7.81), we observe that both the Pearson χ^2 and the deviance χ^2 tests have a p-value (Pearson p-value = 0.619 and deviance p-value = 1.000) higher than our statistical significance level (a = 0.05), pointing to a sufficient goodness-of-fit for our model.

Table 7.80 Model fit test- ord. regression (brand loyalty)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Intercept Only	1352.074			
Final	883.104	468.970	44	.000
Link Function: Logit				

Table 7.81 Goodness of fit tests - ord. regression (brand loyalty)

	Chi-Square	df	Sig.
Pearson	1331.671	1348	.619
Deviance	830.523	1348	1.000
Link Function: Logit			

Examining the explanatory power of our model, the pseudo-Rs range from 0.315 to 0.640 in this case (Table 7.82), pointing to a strong link between the dependent variable (loyalty) and the independent variables of our model (trust). This finding validates the correctness of our fourth hypothesis, which states that a higher trust to the brand can lead to an increased brand loyalty.

Table 7.82 Pseudo R square - ord. regression (brand loyalty)

Cox and Snell	.607
Nagelkerke	.640
McFadden	.315
Link Function: Logit	

Concerning each individual variable (corresponding to a specific question) and its statistical significance[33], we see that question 22.i has some statistically significant results (p-value for option 2 is 0.023 and for option 3 is 0.002). Thus, we can conclude that the elements captured by this question has an impact in brand loyalty.

We also observe that the results for question 22.iii are all statistically significant at a significance level a=0.05. Thus, we can argue that this question has the bigger impact in brand loyalty.

---

[33] For brevity, we do not present the full result table 8.7 here, but we attach the respective table in our appendix.

Furthermore, we find that question 22.iv has some statistically significant results (p-value for option 2 is 0.042). Therefore, it seems that this question contributes to the formation of brand loyalty.

Moreover, it is shown that question 22.v has some statistically significant results (p-value for option 2 is 0.035). So, we can propose that the elements depicted by this question influence brand loyalty.

In addition, it seems that question 23.ii has some statistically significant results (p-value for option 2 is 0.022) as well. As a result, we can support that the answers given to this question are linked to the level of brand loyalty for a respondent.

We also find that question 23.vi has some statistically significant results (p-value for option 3 is 0.043 and p-value for option 4 is 0.009). Thus, we can argue that this question has an impact in brand loyalty.

Finally, we conclude that question 23.iv plays a role in the shaping of brand loyalty, as the results for option 4 of this question indicate that at a significance level a=10%, the perception expressed in this question (SYN.KA Super Markets is interested in its customers satisfaction) affect the brand loyalty

On the contrary, we observe that questions 22.ii, 23.i, 23.iii, 23.v are shown not to play a significant role in the shaping of brand loyalty.

Lastly, in order to complete our analysis of the ordinal regression results, our model is shown to abide by the proportional odds assumption as the p-value of the test of parallel lines (Table 7.83) is 1.000> a = 0.05, leading us to conclude that our model has proportional odds in its independent variables.

Table 7.83 Test of parallel lines - ord. regression (brand loyalty)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Null Hypothesis	883.104			
General	848.410	34.694	132	1.000

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

To sum up, we find that a higher trust to the brand influences positively the level of brand loyalty, confirming the validity of our fourth hypothesis.

7.6 Ordinal regressions concerning the creation of bonds and its implications

We conduct two ordinal regressions (one with the whole sample and one with a sample only members in the social media-based brand community of the vendor) in order to examine whether the individual characteristics of a participant are linked to the creation of bonds with the brand and their strength. In addition, we perform two new ordinal regressions (one concerning the influence of bonds to the level of trust and one regarding the impact of bonds on the possibility of the individual to churn. We present the results of the analysis below.

7.6.1 Results of the first ordinal regression concerning the relationship between the creation of bonds with the brand and their strength and the individual characteristics for the whole sample.

Here, we analyze the results of the first ordinal regression. As independent variables, we take the individual characteristics of the participants and as the dependent variable we consider the creation of bonds. More specifically,

- questions 27, 28, 28.1, 29, 30, 30.1 and 36 from our questionnaire as independent variables, corresponding to proxies for personal outcome/goals, participation, involvement, and individual orientation respectively (Table 7.46).

- Question 16 expressing the creation of bonds as our dependent variable (Table 7.84).

Table 7.84 Dependent variable of first ordinal regression (creation of bonds)

Dependent variables
16: When considering your relationship with SYN.KA Super Markets, do you think SYN.KA Super Markets is

In Table 7.85, we find the results of a χ^2 statistic test for examining model fit. The results indicate that at least one of the predictor's coefficient is not equal to zero. Specifically, we draw this fact from the p-value of the statistic as p-value=0.001 < 0.05, which lead us to reject the null

hypothesis (Ho): all coefficients are equal to zero. The results presented in Table 7.86 point to a good fit of the proposed model. More particularly, we observe that both the Pearson χ^2 and the deviance χ^2 tests have a p-value (Pearson p-value=0.541 and deviance p-value=1.000) higher than our statistical significance level (a = 0.01), indicating an appropriate goodness-of-fit for our model.

Table 7.85 Model fit test - 1st ord. regression (creation of bonds)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Intercept Only	291.607			
Final	244.318	47.289	21	.001
Link Function: Logit				

Table 7.86 Goodness of fit tests - 1st ord. regression (creation of bonds)

	Chi-Square	df	Sig.
Pearson	407.379	411	.541
Deviance	226.001	411	1.000
Link Function: Logit			

To continue, we can discuss the explanatory power of our model. The pseudo-Rs range from 0.150 to 0.338 (Table 7.87) indicating that independent variables of our model (individual characteristics) have a significant explanatory role to the dependent variable (bonds). This finding confirms our sixth hypothesis which states that the individual characteristics of a participant in a social media-based brand community play a significant role in the bonds formed between the said customer and the brand.

Table 7.87 Pseudo R square - 1st ord. regression (creation of bonds)

Cox and Snell	.309
Nagelkerke	.338
McFadden	.150
Link Function: Logit	

Analyzing the coefficients of the independent variables and their statistical significance[34], we observe that the results for question 36 are all statistically significant even at a significance level a = 0.01. Thus, we can suggest that individual orientation of the participants, which this question proxies, plays the most important role in the formation of bonds between the said customer and the brand.

We also find that the results for question 27 are all statistically significant at a significance level a = 0.05 (p-value for option 1 is 0.011, option 2 is 0.001 and option 3 is 0.002). Therefore, we can suggest that personal goals as you enter an interaction also play a role in the bonds formed between the said customer and the brand.

On the contrary, we conclude that participation, participation in the community, posting on Facebook page, the frequency of posting on Facebook page (question 28,30,30.1) and involvement, frequency of contacting Facebook friends, and the main reason of participation on Facebook community (question 28.1,29) does not exhibit a significant role in the shaping of bonds.

Finally, the results of test of parallel lines (Table 7.88) show our model to follow the proportional odds assumption, as the p-value of the test is 0.949> a = 0.01, leading us to conclude that our model has proportional odds in its independent variables.

Table 7.88 Test of parallel lines - 1st ord. regression (creation of bonds)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Null Hypothesis	244.318			
General	198.476	45.842	63	.949

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

To conclude, we find that individual orientation and personal outcomes/goals in the Facebook community play a significant role in the bond formation for an individual, confirming the validity of our sixth hypothesis.

---

[34] For brevity, we do not present the full result table 8.8 here, but we attach the respective table in our appendix.

7.6.2 Results of the second ordinal regression concerning the relationship between the creation of bonds with the brand and their strength and the individual characteristics for the SMB sample.

In this part of the thesis, we find the results of the second ordinal regression which is conducted with a sample of only members in the social media-based brand community of the vendor. As independent variables, we take the individual characteristics of the participants and as the dependent variable, we consider the creation of bonds. More particularly, the regression model has

- questions 27, 28.1, 29, 30, 30.1 and 36 from our questionnaire as independent variables, corresponding to proxies for personal outcome/goals, participation, involvement, and individual orientation respectively (Table 7.67).

- Question 17 expressing the creation of bonds as our dependent variable (Table 7.89).

Table 7.89 Dependent variable of second ordinal regression (creation of bonds)

Dependent variables
17: How would you describe your interaction with SYN.KA Super Markets?

In Table 7.90, we present the results of a χ^2 statistic test for model fit. From these results, we conclude that at least one of the predictor's coefficients is not equal to zero. Specifically, we draw this fact from the p-value of the statistic as p-value=0.000 < 0.05, which lead us to reject the null hypothesis (Ho): all coefficients are equal to zero. Concerning the goodness-of-fit for the model, we observe that both the Pearson χ^2 and the deviance χ^2 tests have a p-value (Pearson p-value=0.968 and deviance p-value=1.000) higher than our statistical significance level (a = 0.01), indicating an appropriate goodness-of-fit for our model (Table 7.91).

Table 7.90 Model fit test- 2nd ord. regression (creation of bonds)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Intercept Only	246.123			
Final	192.935	53.188	19	.000
Link Function: Logit				

Table 7.91 Goodness of fit tests - 2nd ord. regression (creation of bonds)

	Chi-Square	df	Sig.
Pearson	260.890	305	.968
Deviance	186.918	305	1.000

Link Function: Logit

Moving forward in our analysis of the results, the pseudo-Rs range from 0.210 to 0.478 (Table 7.92) pointing to the fact that a significant part of the dependent variable (bonds) is explained by the independent variables of our model (individual characteristics). This finding confirms our seventh hypothesis which states that the individual characteristics of a participant in a social media-based brand community play a significant role in the bonds formed between the said customer and the brand.

<p style="text-align:center">Table 7.92 Pseudo R square - 2 ord. regression (creation of bonds)</p>

Cox and Snell	.450
Nagelkerke	.478
McFadden	.210
Link Function: Logit	

Analyzing each independent variable and its impact to the dependent variable[35], we observe that the results for question 36 are all statistically significant even at a significance level a = 0.01. Thus, we can argue that individual orientation of the participants, which this question proxies, has the bigger impact in the bonds formed between the said customer and the brand.

Additionally, we find that the results for question 27 (p-value for option 2 is 0.000, option 3 is 0.002) has some statistically significant results. Therefore, we can suggest that personal goals as you enter an interaction also play a role in the bonds formed between the said customer and the brand.

Moreover, we observe that the results for question 28.1 (p-value for option 2 is 0.048) has some statistically significant results while the result of this question for option 3 indicate that at a significance level a=5.3%, the frequency of contacting Facebook friends also play a role in the bonds formed between the said customer and the brand.

---

[35] For brevity, we do not present the full result table 8.9 here, but we attach the respective table in our appendix.

On the contrary, it seems that participation, posting on Facebook page, the frequency of posting on Facebook page (questions 30,30.1) and involvement, the main reason of participation on Facebook community (question 29) does not exhibit a significant role in the shaping of trust.

Lastly, in order to conclude our analysis of the ordinal regression results, we state that our model is shown to be compliant to the proportional odds assumption, as the p-value of the test of parallel lines is 1.000> a = 0.01 (Table 7.93), leading us to conclude that our model has proportional odds in its independent variables.

Table 7.93 Test of parallel lines - 2nd ord. regression (creation of bonds)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Null Hypothesis	192.935			
General	185.550	7.384	57	1.000

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

To sum up, we find that individual orientation, personal outcomes/goals and involvement in the Facebook community play a significant role in the creation of trust for an individual, confirming the validity of our seventh hypothesis.

7.6.3 Results of the ordinal regression concerning the relationship between trust and bonds with the brand for the whole sample.

In this part, we find the results of the third ordinal regression, which examines the relation of bonds to the level of trust. As independent variables for our ordinal regression model, we take "bonds" and as the dependent variable we place "trust". More specifically,

- questions 16 and 17 from our questionnaire expressing bonds as our independent variables (Table 7.94).

Table 7.94 Bond questions as independent variables

Independent variables

16: When considering your relationship with SYN.KA Super Markets, do you think SYN.KA Super Markets is:

17.: How would you describe your interaction with SYN.KA Super Markets?

- Question 23.ii expressing "trust" as our dependent variable (Table 7.95).

Table 7.95 Dependent variable of third ordinal regression (creation of bonds to level of trust)

Dependent variables
23.ii: SYN.KA Super Markets will make every effort to satisfy me

In the Table 7.96, the results point to the fact that at least one of the predictor's coefficients is not equal to zero. More specifically, we can infer this fact from the p-value of the statistic, as p-value = 0.000 < 0.05, leading us to reject the null hypothesis (Ho): all coefficients are equal to zero. After we find that our model has statistically significant coefficients, it is proper to examine whether our proposed model has a better fit than a generic model. We try an ordinal regression model which uses a logit distribution (as in every other ordinal regression in our results) and we observe that it does not fit our data well (Pearson p-value = 0.000). Based on the nature of our data, we try a new ordinal regression model employing a Cauchy distribution. This time the model seems to fit well our data as the results of the goodness-of-fit table are statistically significant. We observe that both the Pearson χ^2 and the deviance χ^2 tests have a p-value (Pearson p-value = 0.055 and deviance p-value = 0.077) higher than our statistical significance level (a = 0.05), indicating a sufficient goodness-of-fit for our model (Table 7.97).

Table 7.96 Model fit test- ord. regression (trust to bond)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Intercept Only	395.800			
Final	233.652	162.148	8	.000

Link Function: Cauchit

Table 7.97 Goodness of fit tests - ord. regression (trust to bond)

	Chi-Square	df	Sig.
Pearson	96.698	76	.055

Deviance	94.164	76	.077
Link Function: Cauchit			

Regarding the explanatory power of our model, the pseudo-Rs range from 0.113 to 0.279 (Table 7.98), implying that the independent variables of our model (trust) contribute to the explanation of a significant part of the dependent variable (loyalty). This finding confirms our eighth hypothesis which states that the stronger and the more emotional the bond of the customer to the brand, the higher the level of trust of the said customer for the brand.

Table 7.98 Pseudo R square - ord. regression (trust to bond)

Cox and Snell	.259
Nagelkerke	.279
McFadden	.113
Link Function: Cauchit	

Analyzing each independent variable and its influence separately[36], we observe that question 16 has some statistically significant results (p-value for option 1 is 0.000 and p-value for option 2 is 0.035). Therefore, we can argue that the element (bonds) measured in this question influence the level of trust in the brand.

In addition, we see that question 17 has some statistically significant results (p-value for option 1 is 0.000, p-value for option 2 is 0.000 and p-value for option 3 is 0.000). So, these results show that this question has an impact in the level of trust in the brand.

Lastly, based on the results of the test of parallel lines (Table 7.99), our model seems to respect the proportional odds assumption, as the p-value of the test is $0.858 > a = 0.05$, leading us to conclude that our model has proportional odds in its independent variables.

---

[36] For brevity, we do not present the full result table 8.10 here, but we attach the respective table in our appendix.

Table 7.99 Test of parallel lines - ord. regression (trust to bond)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Null Hypothesis	233.652			
General	216.876	16.777	24	.858

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

In conclusion, we find that stronger and more emotional bonds of the customers to the brand lead to a higher level of trust to the brand, further affirming the validity of our eighth hypothesis.

7.6.4 Results of the ordinal regression concerning the relationship between churn and bonds with the brand for the whole sample.

In this part, we present the results of the fourth ordinal regression. As independent variables for our ordinal regression model, we take "bonds" and as the dependent variable we place "churn". More specifically, the regression model has

- questions 15, 16 and 21 from our questionnaire expressing bonds as our independent variables (Table 7.100).

Table 7.100 Bond questions as independent variables for churn

Independent variables
15. Do you believe that you share a common goal with the company?
16: When considering your relationship with SYN.KA Super Markets, do you think SYN.KA Super Markets is:
21. If you think that you are satisfied, do you think this is mainly because of?

- Question 2 expressing the churn as our dependent variable (Table 7.101).

Table 7.101 Dependent variable of fourth ordinal regression (creation of bonds to churn)

Dependent variables
2: When was the last time that you purchased from SYN.KA Super Markets?

From the results of Table 7.102, we conclude that at least one of the predictor's coefficients is not equal to zero. This finding is confirmed by considering the p-value of the statistic, as p-value = 0.000 < 0.05, a point that leads us to reject the null hypothesis (Ho) that all coefficients are equal to zero. Moreover, by examining the results of the goodness-of-fit table (Table 7.103), we observe that both the Pearson χ^2 and the deviance χ^2 tests have a p-value (Pearson p-value=0.182 and deviance p-value=0.401) higher than our statistical significance level (a = 0.05), pointing to an acceptable goodness-of-fit for our model.

Table 7.102 Model fit test- ord. regression (churn)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Intercept Only	388.447			
Final	321.464	66.983	7	.000
Link Function: Logit				

Table 7.103 Goodness of fit tests - ord. regression (churn)

	Chi-Square	df	Sig.
Pearson	131.776	118	.182
Deviance	121.221	118	.401
Link Function: Logit			

Proceeding in the next part of our analysis, the pseudo-Rs range from 0.042 to 0.131 (Table 7.104), showing that a substantial part of the dependent variable (churn) is explained by the independent variables of our model (bonds). This finding further validates our ninth hypothesis which states that the stronger and the more emotional the attachment of the customer (attachment, here, is monitored by the creation of bonds) to the brand, the lower the possibility of the said customer to churn.

Table 7.104 Pseudo R square - ord. regression (churn)

Cox and Snell	.125
Nagelkerke	.131
McFadden	.042
Link Function: Logit	

Analyzing the impact of each independent variable separately[37], we observe that the results for question 15 are statistically significant, even at a significance level a = 0.01.

Moreover, we find that question 16 has some statistically significant results (p-value for option 1 is 0.006 and for option 2 is 0.004), while option 3, at a significance level a=10%, is also shown to affect churn. Thus, we can argue that this question has an impact in the possibility of a customer to churn.

Last but not least, we see that the question 21 also plays a role in the possibility of a customer to churn, as the results for option 1 of this question indicate that at a significance level a=10%, the level of bond creation associated with this question affects the possibility to churn.

Finally, taking into account the results of the test of parallel lines, our model is shown to abide by the proportional odds assumption, as the p-value of the test is 0.504 > a = 0.05 (Table 7.105), leading us to conclude that our model has proportional odds in its independent variables.

Table 7.105 Test of parallel lines - ord. regression (churn)

Model	-2 Log Likelihood	Chi-square	df	Sig.
Null Hypothesis	321.464			
General	294.210	27.254	28	.504

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

In conclusion, we find that the strength and quality of the customers' bonds for the brand play a significant role in the decrease of the churn possibility of the said customers, further affirming the validity of our ninth hypothesis.

7.7 Experimental game results

Here, we present the results of the t-tests, explained in the methodology section, concerning the level of reciprocity and the effect of a first successful (trusting) interaction in subsequent interactions. We employ data from our experimental game for this purpose.

Based on our description in the methodology section, we estimate a first t-test between the means of the reciprocal amount (calculated as a percent) by the members of two subgroups HIGH/LOW

---

[37] For brevity, we do not present the full result table 8.11 here, but we attach the respective table in our appendix.

(experiment participants with the highest and the lowest initial amount given, calculated as a percent) received. We estimate Welch t-test as we have mentioned in the methodology section.

So, the hypotheses for the two groups are that

$$H_0: \mu_{high} > \text{to } \mu_{low} \Rightarrow H_0: \mu_{high} - \mu_{low} > 0$$

$$H_1: \mu_{high} \leq \text{to } \mu_{low} \Rightarrow H_1: \mu_{high} - \mu_{low} \leq 0$$

The test will be conducted on a significance level a= 1% (confidence level 99%). The results of the table are presented in the following table.

Table 7.106 t-Test hypothesis 3b

	HIGH group	LOW Group
Mean	0.621	0.333
Variance	0.109	0.086
Observations	36	15
Df	29	
Hypothesized Mean Difference	0	
t Stat	3.073	
P(T<=t) one-tail	0.002	
T Critical one-tail	1.699	
P(T<=t) two-tail	0.004	
T Critical two-tail	2.045	

We see that the p-value=0.002 and the t-statistic=3.073. the p-value is lower than a=1% and t-statistic is higher than t-criterion (1.699) and therefore, we have to reject the null hypothesis (H_0). As a result, we see that the high subgroup receives a higher level of reciprocal amounts and therefore, the second part of our third hypothesis stating that a first trusting interaction leads to an increased trust from the counterpart and a higher level of reciprocity is confirmed.

Based on our description in the methodology section, we perform a second t-test between the means of the amount given in the second iteration (calculated as a percent) by the members of two subgroups HIGH/LOW (experiment participants with the highest and the lowest reciprocal amounts received, calculated as a percent) received. We will conduct a t-test to check the mean

difference. Again, we will assume that the two samples have unequal variances and we will use a Welch t-test[38]. So, our hypothesis could be

$$H_0: \mu_{high} > \text{ to } \mu_{low} => H_0: \mu_{high} - \mu_{low} > 0$$

$$H_1: \mu_{high} \leq \text{ to } \mu_{low} => H_1: \mu_{high} - \mu_{low} \leq 0$$

The test will be conducted at a significance level a=1% (confidence level 99%). The following table presents the results of the Welch t-test.

Table 7.107 Test hypothesis 3a

	HIGH group	LOW Group
Mean	55.586	48.684
Variance	1220.745	2030.967
Observations	26	13
Df	19	
Hypothesized Mean Difference	0	
t Stat	0.484	
P(T<=t) one-tail	0.316	
T Critical one-tail	1.729	
P(T<=t) two-tail	0.633	
T Critical two-tail	2.093	

We observe that the p-value=0.316 and the t-statistic=0.484. Thus, the p-value is higher than a=1% and the t-statistic is lower than t-criterion=1.729. As a result, we have to accept the null hypothesis (H_0) that the difference between the means of the two groups is statistically insignificant. Unfortunately, these findings show that the first part of our third hypothesis cannot be confirmed, especially when we consider subsequent transactions with different unrelated members than the original counterpart, and as a consequence, the natural level of trust of an individual has a higher impact in the decision-making of a subsequent transaction with a different unrelated member than the actual level of trust from the previous interaction.

---

[38] We have already referred that such a test is also consistent in the case of equal variances between the samples.

7.8 Churn Prediction

The training models were evaluating using a k-fold approach (k=4) over a validation (test) set. So, in this part, we depict the results from our analysis for the creation of a universal predictor for the possibility to churn for individuals of our target population. We discuss different predictive model and with the use of a number of metrics we end up to the best predictive model for our target population.

Table 7.108 Average F$_1$ and Accuracy scores

Churn case (Week) Methods	Average F$_1$-score	Average Accuracy
Decision Trees (Ctree)	0.973	0.973
Discriminant Analysis (Discr)	0.951	0.951
Discriminant Ensemble (DiscrEnc)	0.971	0.970
K nearest neighbors (KNN)	0.970	0.969
Naïve Bayes (NV)	0.951	0.951
Support Vector Machines (SVM)	0.970	0.969
TreeEnsemble (TreeEns)	0.975	0.975

We observe from tables 7.108 and 7.109, with the average of F$_1$ and accuracy scores over the validation sets for the proposed models that the TreeEnsemble (TreeEns) model has the highest Recall measure, which is extremely high (more than 0.99). By examining the Precision measure, we observe that the Discriminant Analysis (Discr) classifier and the Naïve Bayes (NB) classifier have the best performance. Still, the Tree Ensemble model which has the highest value in Accuracy and F$_1$-score measures has the second highest value in the Precision measure, which is very close to the top value for this measure.

Table 7.109 Average Recall and Precision

Churn case (Week) Methods	Average Recall	Average Precision
Decision Trees (Ctree)	0.989	0.958
Discriminant Analysis (Discr)	0.940	0.962
Discriminant Ensemble (DiscrEnc)	0.984	0.959

K nearest neighbors (KNN)	0.985	0.954
Naïve Bayes (NV)	0.940	0.962
Support Vector Machines (SVM)	0.984	0.956
TreeEnsemble (TreeEns)	0.991	0.960

In this table 7.110, we see the results from the ROCAUC measure. We observe that the K nearest neighbors' (KNN) model has the best performance in terms of this measure. However, the TreeEnsemble model has the second best value and given the high (best) values in Accuracy, F_1-score and Recall, we can infer that the Tree Ensemble model is the most appropriate for the data of our research and therefore, for the estimation of customer churn (in our research thesis, customer churn is equivalent to a customer abstaining from purchasing from any point of sale of our subject brand).

Table 7.110 Average ROCAUC

Methods	Average ROCAUC
Decision Trees (Ctree)	0.972
Discriminant Analysis (Discr)	0.983
Discriminant Ensemble (DiscrEnc)	0.979
K nearest neighbors (knn)	0.987
Naïve Bayes (NV)	0.983
Support Vector Machines (SVM)	0.981
TreeEnsemble (TreeEns)	0.984

7.9 Trust developed in the SMB community and churn

After we find that the most appropriate predictor is created through the TreeEnsmble model, we run this predictor to our new sample (randomly selected people, who participated in our experimental game in the social media-based brand community). The results about churn prediction from the universal predictor calculated with the TreeEnsemble model are estimated, showing that 32.35% of the sample is expected to churn. Using a sample from the same population, we check their answers in their questionnaires and we estimated their churn based on their actual answers on Question 2 (When was the last time that you purchased from SYN.KA

Super Markets?) (a value in our Linkert scale of 1,2 or 3). This value is estimated that 17.4% of the sample would churn. So, from our results, we see that the percent of customers who is expected to churn from this new population (randomly selected people, who participate in our experimental game in the social media-based brand community) is lower than the one predicted from the universal predictor found in the first stage. These results highlight that trust which develops from participation in the social media-based brand community and the interaction with other members plays a significant role in lowering the possibility of a customer to churn.

In order to further confirm our hypothesis, we run the predictor calculated in the first stage to a second new sample with individuals who did not participate in the social media-based brand community of the company, as stated in our methodology section. The churn prediction for this sample stands on 26.73%. Then, we estimated the possibility of the same sample to churn based on their real answers on the questionnaire at 42.34%. Therefore, we observe that the possibility of this new group to churn estimated after taking into account their common characteristic (no participation in the social media-based brand community of the company) is significantly higher than the same possibility calculated through the universal predictor found in the first stage which does not account for this common characteristic of the group. This finding further confirms our hypothesis 5 that trust developed through the interrelations and dynamics of the social media-based brand community lowers the possibility of a customer to churn.

Given the sufficient size of our sample, the randomness of its selection process and the Central Limit Theorem, we can infer that our results can be generalized to the whole examined population, which corresponds to the customers of SYN.KA Super Markets and other vendors with similar characteristics in our case.

Chapter 8: Conclusion

The present thesis examined the creation and transfer of trust in the context of a customer vendor relationship under the prism of the novel construct of a social media-based brand community and the implications for the retention of customers by the vendor. We mainly focused on two concepts, trust to the brand and the bonds that have been formed between a customer and a vendor. In other words, we investigated whether the interrelations developed among members of a social media-based brand community have affected the level of trust of the individual to the brand and the creation of bonds between a customer and a vendor.

As a first step in our conceptual framework, we examined whether individual characteristics, which previous research had identified as contributing factors to the development of trust, had an impact on trust creation and trust transfer in a custom vendor relationship in our examination. We added another parameter, that is the participation in the social media-based brand community and tried to identify any effect that it has had on trust. Note that the setting which we investigated not only covered the unique case of a social media-based brand community, but also it referred in a non-contractual relationship between the customer and the vendor, such as the one developed between a buyer and a supermarket. Due to the novelty of the social media-based brand community setting, we investigated the generation of trust and the level of reciprocity exhibited in the interrelations (relational exchanges) between the members of the community. After analyzing the dynamics inside the social media-based brand community, which have led to a higher level of trust, we examined the impact of this elevated trust to the brand on brand loyalty and the possibility of a customer to churn. In this strand of our research, we found that some individual characteristics have played a role in the creation of trust towards the brand. We observed that participation in the social media-based brand community and the active involvement of the individual to community-related activities further amplified the level of trust in the brand through trust creation and trust transfer. As previous research has implicated (Laroche et al., 2013), increased brand trust have been translated to brand loyalty, something that we verified in the novel setting of trust created due to the participation in the social media-based brand community. Finally, we showed that the higher trust developed among the members of the

social media-based brand community not only reinforced their brand loyalty but also lowered their actual possibility to churn.

In this thesis, we investigated whether the individual characteristics of a customer have affected the bonds that he/she has created with a particular vendor. Moreover, we examined further whether his/her participation in the social media-based brand community of a vendor has influenced the intensity and the emotional content of the created bonds. In addition, we studied whether the stronger and more emotional bonds that can develop with the brand have had an effect on the customer's trust to the brand and his/her possibility to churn. In this second strand of our research, we found that some characteristics of an individual impacted the formation of bonds in his/her relationship with a vendor. According to our research findings, one amplifying factor in the formation of such bonds is the participation of the individual and his/her active involvement to the social media-based brand community of the vendor. Moreover, it was shown that the existence of stronger and more emotional bonds between the customer and the vendor (potentially, due to the community participation) can increase brand trust for the vendor and can lower the possibility of the customer to churn.

In more detail below, we presented a summary of our results and we reevaluated their implications concerning our stated hypotheses.

Regarding the first hypothesis, which stated that the individual characteristics of a person have affected the trust creation and trust transfer, and in turn, his/her trust to the brand, we used a number of methods to test its validity. We found a significant link between the personal goals of an individual before the relational exchange (visit to the vendor) and the trust to the brand. This link was verified by both the PLS regression results (which examined the individual characteristics' effect on trust collectively) and the ordinal regression results (which examined the individual characteristics' effect on each different proxy question for trust). Moreover, we observed that the individual orientation of an individual has influenced the level of trust to the brand. In other words, the individual predisposition towards the brand was presented to have an impact on the level of trust the individual has had for the brand. This finding was derived from the results of ordinal regression concerning the relative questions asked through our questionnaire. Last but not least, participation itself and different aspects of participation such as

198

posting activity, posting about general issues affected the level of trust of the individual to the brand. More particularly, participation to the social media-based brand community seemed to lead the member to an increased level of trust towards the brand. Posting activity and other related to participation activities undertaken by the member resulted in an even greater level of trust to the brand. Finally, involvement was shown to elicit a positive effect on trust to the brand. These last findings verified the validity of our second hypothesis.

The other individual characteristics examined in our research were shown to be unrelated to the level of trust of an individual to the brand. In general, the above-mentioned findings confirmed our first two hypotheses as they demonstrated that individual characteristics played a role in trust increase to the brand and that participation and involvement with the social media-based brand community could lead to a higher level of trust to the brand.

Concerning, the first part of third hypothesis, we observed from the outcomes of the experimental game that a first successful interaction was not so significant for the level of trust developed during a second similar interaction with another member. On the contrary, the results pointed to the fact that the natural level of trust of an individual has played a more significant role in the trust that has evolved in a second interaction.

However, based on the same outcomes, we concluded that the level of reciprocity has depended on the first successful interaction. Thus, the higher the level of trust developed during the first exchange, the higher the reciprocity exhibiting by the counterpart individual would be. These results showed that the level of reciprocity has not been equal to the initial amount offered as it has been implied by the traditional literature approach on this subject, but it depended on the trust developed in the first part of the relational exchange and the natural level of trust of the participants in the relational exchange.

The fourth hypothesis concerned the effect of trust on brand loyalty. Previous research (Laroche et al., 2013) have shown that brand trust impacts positively the brand loyalty of an individual. In our research, we searched for the influence of trust in an individual's brand loyalty in a very unique and totally different setting than the one examined by Laroche et al. (2013). The very nature of the social media made our setting distinct from a simple online relational exchange and

even more, from a traditional in person communication. There has also been considerable research (Hajli, 2014; Morgan & Hunt, 1994) showing that both the existence of brand community and the online setting can influence the level of trust of an individual towards the brand. We added that the unique characteristics of a social media-based brand community and its dynamics in conjunction with the above-mentioned elements have further influenced brand loyalty. Our results pointed to such a conclusion as we observed that in the respective ordinal regression, the questions corresponding to the level of trust were shown to be related to the level of brand loyalty (monitored by the relevant questions in our questionnaire). This finding demonstrated that an increase in trust has led to an increased brand loyalty. Thus, the unique dynamics of a social media-based brand community have fostered increased trust (as it was shown by the findings regarding hypothesis 1 and hypothesis 2) which have translated to increased loyalty to the brand.

Concerning our fifth hypothesis, it described that an elevated level of trust deriving from the community participation can lower the possibility of a member to churn by use of a comparative analysis. We have concluded that members of the social media-based brand community exhibit a higher level of trust and consequently, a lower possibility to churn. More particularly, we estimated a universal predictor of churn for our target population. For creating this universal predictor, we used almost 10.000 individuals for our random sample. All the individuals were randomly selected customers of SYN.KA Super Markets. By using this universal predictor and by taking another sample of participants who were members of the social media-based brand community, we forecasted an expectation for the possibility to churn. We did the same for a second sample of non-member customers of the company. As a next step, we compared these expected possibilities with the actual observation about their churn based on their responses in the questionnaire. We found that the actual observations for the sample, which contained the members of the social media-based brand community, had a possibility to churn of only 17.4%. The estimated value for the possibility on the same sample with the use of the universal predictor is 32.5%. Moreover, we estimated through the actual observations that there was a possibility of 42.34% to churn for the sample of non-member customers. The estimation through the universal predictor for this latter sample was 26.73%. Thus, based on these estimations, we concluded that

trust which has been created through the participation of an individual in the social media-based brand community has lowered its possibility to churn as we observed that the sample with the members had a significantly lower possibility to churn than the one estimated with the universal predictor, whereas a sample of non-members had a higher possibility to churn than the one which was calculated with the universal predictor. The only non-random difference between the two samples lay to the participation of the members of the sample to the social media-based brand community and it was the only difference that has not be taken into account by the universal predictor. From this discussion, we can infer that participation in the social media-based brand community created an elevated level of trust to the brand (either through trust transfer or trust creation) (this finding also links to the findings concerning hypothesis 1 and hypothesis 2) and this elevated level of trust, in turn, have resulted in a lower possibility for the member to churn.

Concerning to the sixth and seven hypotheses, which referred to bond formation, we had some interesting findings. Hypothesis six assumed that the individual characteristics of a respondent influenced the creation of bonds between the said individual and the brand. Hypothesis seven added that being a member in the social media-based brand community of the company led to even stronger bond formation and made the relationship more emotional. We checked this hypothesis with the use of an ordinal regression. In this regression, we employed as independent variables the individual characteristics, as they were monitored by questions in our questionnaire, and we placed as a dependent variable bond formation, as it was quantified by question 16 of the questionnaire. We estimated the ordinal regression two times, one for the whole sample which included members and non-members, and one time for the smaller sample of members only. From the different metrics of the regression, we concluded initially that the individual orientation of a person, the personal goals which drived him/her, entering the relational exchange with the vendor and the level of communication in the social media-based brand community had an impact on the creation of bonds. The link of the individual orientation of a person with the creation of bonds further validated our findings from the experimental game that the natural level of trust of an individual and his/her predisposition have played a role on the formation of trust. This increasing trust could transform a generalized exchange between the individual and the brand to a productive exchange (Lawler, 2001), which in turn can lead to the creation of a strong

and emotional bond (Lawler, 2001). The personal aspirations an individual had before entering the relationship with the brand were shown to affect the creation of bonds. This finding showed an additional factor which has enhanced bond formation. Finally, we saw that participation in the social media-based brand community, as expressed through the level of activity with community friends, was related to bond formation. This finding have showed not only a contributing factor to bond formation but also have confirmed the validity of hypothesis seven, pointing to the fact that community members developed a stronger and more emotional bond with the brand.

Last but not least, we expected the stronger and more emotional a bond of a customer is to the brand, the more trust to exist between the said customer and the vendor. We have discussed that long-term customers can develop either transactional relationship or an emotional relationship with the brand (Sashi, 2012). Customers who were actively involved in the social media-based brand community have tended to create stronger and more emotional bonds (see findings for hypotheses 6 and 7). Our findings here showed that as a result of the stronger and more emotional bonds, they exhibited an increased level of trust to the brand. This finding was validated by the results of the respective ordinal regression which showed that the creation of bonds as it has been depicted by the relative questions in our questionnaire influenced the level of trust each individual exhibit to the brand (monitored by respective questions in our questionnaire).

Closing, concerning the ninth and last hypothesis, stating that the creation of strong and emotional bonds led to a lower possibility of a customer to churn, we affirmed its validity. From previous findings, we have concluded that participation in the brand community led to the formation of stronger and more emotional bonds. The more active the involvement of the individual to the social media-based brand community, the stronger and more emotional the bonds that were created. Given the positive relationship between a strong and emotional bond with the brand and the level of trust found in the previous hypothesis and the positive relation between trust and brand loyalty found in our investigation of hypothesis 4, we expected stronger and more emotional bonds to lower the possibility of an individual to churn. The results of our ordinal regression showed that the responses of the questions measuring bond formation had an inverse relationship with the possibility of a respondent to churn (as monitored by question 2 of

our questionnaire). Therefore, we confirmed that a customer exhibiting a strong and emotional bond with the brand have had a lower possibility to churn.

Our research findings had some significant managerial and professional implications. Our thesis showed that a vendor can increase its customer retention by fostering, firstly, the existence of a social media-based brand community and secondly, by encouraging the active participation of its customer in it. Moreover, based on our results about the trust creation and the level of reciprocity in a relational exchange, a vendor could potentially boost the spending of its customer by making small discount offers to them. Finally, we observed that by encouraging the participation of its customers to its social media-based brand community, a vendor can increase the trust of its customer to the brand and consequently, improve the word of mouth communication of those customers for the brand. In other words, active participation of the customers to the social media-based brand community is the most assured way for the vendor to create fans of the brand, who will spread positive words.

Our research also provided us with new insights and new stimuli for future research. In our work, we briefly touched the impact of culture to the building of trust and the operation of a social media-based brand community. Given recent research (Pick & Eisend, 2016), which showed that the culture of a society can impact the switching costs and the buying habits of individuals, it will be an interest option for future research to investigate the role of different cultural elements on the dynamics that developed in a social media-based brand community and consequently, their effect on brand trust, brand loyalty and the possibility of an individual to churn. Our research has provided evidence that the dynamics of a social media-based brand community can influence the level of brand trust and brand loyalty and can lower the possibility of a customer to churn. An examination of the cultural elements can provide the future researcher with a possible pattern showing that individuals of a certain culture are more or less resilient to the influence of the brand community dynamics and at a second stage, this cultural aspect may alter the very nature of these dynamics itself. Additionally, a future researcher can make new inroads in the research of the social media marketing field by focusing more on new platforms that are based on new means of communication, such as allowing only visual content (Tinder) or restricting the length of the actual communication context, such as Twitter, which uses only a limited number

of character in messages or restrict community activities, such as not providing community posting. These new characteristics could have a unique influence that is not captured by our study, as in these cases, the relational exchanges differ greatly from the traditional social media-based brand community communication and it is possible not to be mirrored by a traditional social media platform such as Facebook, which we examine.

Appendix

Scientific Experiment Instructions

Good evening,

You have been asked to participate in a scientific experiment in the form of a game. Through this game, you will be able to win gifts in the form of a discount. The instructions that follow are detailed. No question will be answered during the game. For this reason, please read carefully the following instructions.

In the game, each participant will be matched with another unknown member of the SYN.KA Super Markets Facebook community. The other person will not belong to your contacts, he will not be one of your online friends and you will not learn his real name at any stage of the game. All participants have been divided into 2 groups.

Before you start the game, you will be asked to answer a short questionnaire. After completing the filling of the questionnaire, you must answer the chat (window in which the link was sent to you) with the word YES to start the main phase of the game.

Group A

You have been selected to belong to team A. The participants in group A will receive a 10€ discount from the SYN.KA Super Markets at the start of the game. This deduction can be used for the purchase of any product. As soon as this event is announced to you, you will be asked if you want to share a piece of this discount with another unknown person who will remain anonymous (the name that will be used for this person in the chat will not be real). You have the option to choose to share it or not. In the case you choose not to share it, you can keep this discount and the game for you ends here. However, in the case you choose to share the discount, the amount you decided to share will be initially deducted from the amount of the discount and transferred to the other person. The other person, when he/she receives your gift, will be given the opportunity to return a corresponding gift of value from 0 to twice the discount you offered him. Any amount of discount offered by the person from Group B will be transferred and added to the discount you have kept at that time and therefore, the total discount that you will have earned at this point will be equal to the amount you have kept plus the gift of the person from team B, which is up to an amount double the discount you have offered. Once the process is complete, you will be prompted to choose whether to repeat the same procedure a second time. If you choose not to repeat it, you will keep the amount of the discount as it is formed at that time and the game ends for you. But if you choose to continue, you can get in the same way and by following the same steps a smaller or even greater discount. In any case, after completing all the stages of the second round, the game ends and you retain the discount, as it is formed until then.

Group B

You have been selected to belong to group B. For group B participants, an unknown, anonymous (the name to be used in the conversation is not the real one) member of the community of SYN.KA Super Markets belonging to group A will send you a discount amount. Once you receive it, you will be given the opportunity to return a discount amount of 0 to twice the amount you received to the person who made the original gift. In the case you choose not to send anything back to the person who made the original gift, you keep that discount and the game ends for you. In the case you choose to send a discount amount to the person who made the original gift of up to twice the gift he offered, then 50% of that amount will be deducted from the discount you have earned until then. The discount you offered will be given to the Group A individual, who in turn, will be able to refund you a discount amount of 0 to twice the discount you offered. In this case, any gift of the person in Group A will be added in full to your discount as it has been formed until then and the sum of the two amounts (the initial discount which you kept + gift of the Group A person) will be the final discount you have earned. In any case, once you know about the Group A gift and calculate your total discount, the game ends for you.

Common rules and conditions for participation.

You are prohibited from coming into contact with other members of the community with the purpose of finding information about the specific scientific experiment or details about its conduct. Any reference (public or private, such as, for example, posting, conversation, briefing to other members) related to the particular scientific experiment which is not described in the above terms, renders your participation in it void and cancels the payment to you of any gifts you have earned. The person responsible for identifying such an action and notifying the participant for the cancellation of his/her participation is the coordinator and his/her decision in such a case is final and binding for the participant.

In order to facilitate the communication between the two groups and to maintain their anonymity, there will be a coordinator whose main task will be the smooth transfer of the messages between the participants and the preservation of their anonymity. Thus, the direct communication of each participant will be limited to the person of the coordinator. Two participants will never come in direct contact for the purposes of this experiment. Any message transferred by the coordinator is considered accurate and its content final and no participant has the right to ask to see the exact messages exchanged, apart from its own, or any other detail about its communication with another participant for any reason. The coordinator is a person selected by the company and he/she acts under its supervision to carry out the scientific experiment. In the event of any dispute, the coordinator's decision is final and binding on all participants.

Each participant expressly and unreservedly accepts all of the above terms and conditions and commits to their faithful adherence with his/her participation in this scientific experiment. Each

participant expressly and unconditionally accepts by participating in the scientific experiment that any gifts in the form of discounts are determined by the messages communicated to him by the coordinator and has no right to dispute their amount for any reason. Participation in this particular scientific experiment is voluntary and in no way can give rise to any claim (monetary or otherwise) against the company or any member of the group that organized the experiment. All data in this survey is collected and categorized anonymously and every effort has been made to preserve the anonymity of the participants. All data gathered from the scientific experiment will be used exclusively and anonymously for academic purposes and will not be made available to any third party other than the company and the Financial Engineering Laboratory of the Technical University of Crete that has undertaken this experiment. Any personal information that might be requested during this scientific experiment (name and surname) will only be used to identify you when you receive the gifts you may win through this scientific experiment and will only be retained until you obtain the gifts from the company. After the receipt of the gifts, these data will be deleted immediately. In any case, you retain the right to access and update, correct, restrict and oppose the processing and deletion of your personal data in accordance with the law. For the exercise of any from the above rights, you should apply in writing to the Financial Engineering Laboratory of the Technical University of Crete. However, in case your request concerning the above-mentioned rights is not satisfied, you retain the possibility to appeal to the Data Protection Authority.

Dialogue of Experimental game on Facebook

Hello,
Would you like to join a short game and win discounts and gifts from the SYN.KA. Super Markets? **Answer, with a YES or NO**.

1. **No**
Thank you for your time. The Marketing Team of SYN.KA. Super Markets
2. **Yes**
Please, read the following brief instructions carefully.

Have you carefully read the terms and instructions, agree with them and are ready to start the game?
Answer, with a YES or NO
> **Yes**:
> **Player Christine**
> - *1ˢᵗ round of amount response*
>
> What amount of discount would you like to offer to Nikos, another member of the SYN.KA Super Markets community on Facebook? Answer with any amount from 0 to 10

euros.

User Response: (amount)€

- *2nd round of amount response*

Nikos offered you a discount equal to X(amount)€, your total discount so far is X '. New Member "Aphrodrite". Would you like to offer a discount amount to her?

User Response: (amount)€

End of Game

Player Nikos

The member Christine offered you X(amount)€ as a discount. Would you like to offer to Christine an amount of discount from 0 to 2X.

User Response: (amount)€

Please confirm your exact name as indicated on your ID and the SYN.KA Super Markets shop that you want to receive your discount coupon. By demonstrating your ID card, you can receive the discount coupon that can be used to purchase any product from SYN.KA Super Markets.

Questionnaire Dialogue

Hello,

Would you like to participate in our survey?

Answer with a YES or NO.

1. No

Thank you for your time. The marketing team of SYN.KA Super Markets.

2. Yes

Please, answer the following questionnaire

Thank you for your time. The marketing team of SYN.KA Super Markets

Questionnaire

Please answer the following questions:

1. Do you own a bonus card?
__ Yes __No
    1.1 If yes, which is your bonus card number?
    1.2 How many points have you accumulated?
    1.3 When did you obtain the bonus card?

2. When was the last time that you purchased from SYN.KA Super Markets?
__Today __Yesterday __A week ago __A month ago __More than a month ago __Never

3. How often do you realize a purchase from SYN.KA Super Markets:
__Almost everyday __2 to 4 times per week __Once every week __Once every fortnight
__Once a month or less frequently

4. How many times have you visited a SYN.KA Super Markets during the last month?
    __ 0-2 __ 3-6 __ 7-15 __> 15

5. How long are you a SYN.KA Super Markets customer?
    __ Last week __ Last month __ Last year __2-5 years __ More than 5 years

6. How much money in average you spend on each visit to SYN.KA Super Markets:
    __ ≤10 € __11 €-20 € __21 €-30 € __31 €-50 € __> 50 €

7. What day period do you usually make your purchases?
    __ Morning: 8.30-12__ Noon: 12-16 __ Afternoon: 16-19__ Evening: 19-21

8. Choose the most representative for you:
    __ I have spoken favorably about SYN.KA Super Markets to others.
    __ I say mostly positive things to others about SYN.KA Super Markets.
    __ I usually say negative things about SYN.KA Super Markets to others.
    __ I have spoken with no flattering words about SYN.KA Super Markets to others.

9. Choose the most representative for you:
    __ I speak about SYN.KA Super Markets more often than any other similar company.
    __ I speak about SYN.KA Super Markets more often than for companies of any other type.
    __ I speak about SYN.KA Super Markets to many people.
    __ I'm not speaking about SYN.KA Super Markets to many people

10. Choose the most representative for you, (may be more than one):
    __ I discuss the user friendliness of the SYN.KA Super Markets web site.
    __ I discuss the prices of the products offered.
    __ I discuss the variety of products offered.
    __ I discuss the quality of the products offered.
    __ I discuss the convenience of trading on my purchases.
    __ I am talking about the quick customer service.
    __ I am talking about the reputation of SYN.KA Super Markets.

11. Have you been forced to stop purchasing from SYN.KA Super Markets for some time due to lack of payment options?
    __ Never__ Once__ Twice__ Three times__ More than three times

12. Have you ever visited SYN.KA Super Markets for making a purchase but eventually, due to a problem (technical problem, lack of employees, long queues, etc.) have not managed to make your purchases?
    __ Yes __ No

13. Have you ever returned a product that you bought from SYN.KA Super Markets?
    __ Never__ Once__ Rarely__ Sometimes__ Several times

14. Have you ever had a complaint that you have never been able to report to a SYN.KA Super Markets store or have you reported it but you were not satisfied with its handling?
    __ a) I had no complaints
    __ b) I had a complaint and I did not express it in a store.
    __ c) I had a complaint, I expressed it in the store and I was satisfied with the treatment.
    __ d) I had a complaint, I expressed it in the store and I was not satisfied with the treatment.
    14.1 If you chose b or d, did this happen more than once?
    __ Yes __No

15. Do you believe that you share a common goal with the company?
    __ Yes __No

16. When considering your relationship with SYN.KA Super Markets, do you think SYN.KA Super Markets is:
    ___A vendor
    __A business that takes care of the customer-buyer relationship with you
    __ A business that takes care of your satisfaction
    __ A partner
    __ A friend

17. How would you describe your interaction with SYN.KA Super Markets?
    __ I buy products that I consider to be good deals (or discounts).
    __ I supply my household from SYN.KA Super Markets.
    __ I think SYN.KA Super Markets is interested in my satisfaction and it will make an effort to keep me as a customer.
    __ I consider SYN.KA Super Markets as a partner.
    __ I love SYN.KA Super Markets.

18. Do you think SYN.KA Super Markets is:
    __ A small local vendor.
    __ A local vendor.
    __ A vendor operating in many regions of Greece.
    __ A vendor operating throughout Greece.
    __ A national vendor with an international presence.

19. Do you think SYN.KA Super Markets's reputation is widespread:
    __ In a very small geographical area
    __ Locally
    __ In many regions of Greece
    __ Nationally
    __ Internationally

20. Are you satisfied with your purchases at SYN.KA Super Markets?
    __ Not at all__ A little__ Enough__ Very__ Absolutely

21. If you think that you are satisfied, do you think this is mainly because of?
    __ Your own actions (e.g. good preparation for your purchases, good mood, right product choices ..)
    __ The actions of SYN.KA Super Markets (e.g. pleasant staff, good customer service, offers, beautiful environment ...)
    __ Both your own actions and the actions of SYN.KA Super Markets.

22. How much do you agree or disagree with the following suggestions?

	Absolutely disagree	Disagree	Neither agree-Nor disagree	Agree	Absolutely Agree
With the SYN.KA Super Markets brand, I get what I'm looking for in a product on my purchases.					
The SYN.KA Super Markets brand meets my expectations.					
I feel confident with the SYN.KA Super Markets brand.					
SYN.KA Super Markets is a brand that never disappoints me.					
The SYN.KA Super Markets brand does not meet my needs in a consistent way.					

23. How much do you agree or disagree with the following suggestions?

	Absolutely disagree	Disagree	Neither agree-Nor disagree	Agree	Absolutely Agree
SYN.KA Super Markets is honest with me and addresses my concerns properly.					
SYN.KA Super Markets will make every effort to satisfy me.					
I could rely on SYN.KA Super Markets to deal with my complaint (related to my purchases).					
SYN.KA Super Markets is interested in my satisfaction.					
SYN.KA Super Markets will compensate me in a proper way if I have a problem with a product.					
SYN.KA Super Markets would not be willing to solve the problems I am facing with a product.					

24. How much do you agree or disagree with the following suggestions?

	Absolutely disagree	Disagree	Neither agree-Nor disagree	Agree	Absolutely Agree
I believe I am loyal to SYN.KA Super Markets.					
I am willing to pay more for the same purchases from SYN.KA Super Markets than from other supermarkets.					
If a SYN.KA Super Markets store is not available near me, I will do the required distance to find another SYN.KA Super Markets shop.					
I recommend purchases from the					

SYN.KA Super Markets.					

25. Do you think that the following words represent the values expressed by SYN.KA Super Markets?

	Absolutely disagree	Disagree	Neither agree-Nor disagree	Agree	Absolutely Agree
Coexistence (cooperative contribution)					
Consistency (reliability)					
Contribution (social corporate responsibility)					

26. When shopping on SYN.KA Super Markets, which are the main reasons you choose it:

	Not at all important	A Little important	Quite important	Very important	Extremely important
Price					
Variety of products					
Quality of products					
Store Layout					
Ease of access					
Special Offers					
Customer service					

27. Before you visit one of SYN.KA Super Markets stores you expect that:
    __ It will not meet the basic needs of a typical supermarket.
    __ It will meet the basic needs of a typical supermarket.
    __ It will overcome the basic needs of a typical supermarket.
    __ You will be absolutely excited and it will be much better than a competitive chain.
28. Are you a member of SYN.KA Super Markets community on FACEBOOK?
    __ Yes __No
    28.1 If yes, do you communicate online with your community friends regularly?
    __ Never __ Rarely __ Regular __ Often __ Always
29. Which is the main reason in order to join SYN.KA Super Markets on FACEBOOK?
    __ Learn about a particular product.
    __ Learn about discounts and coupons for specific products.
    __ Learn news about the company.
    __ Sharing information and views with other community members and receive / advise on favorite products.
    __ Live the experience and share your passion for the company with other fans.
30. Have you ever made a post on the SYN.KA Super Markets page in the social media on a topic of general interest (a topic of general interest is an issue that is not very important to you and your friends on the internet and the publication is accessible to all members of the community)?
    __ Yes __No
    30.1 If so, how often do you undertake such an activity or any other relevant action (sharing information, communicating with unknown community members to promote its aims, etc.)?
    __ Rarely __ once a month __ once a week __ Every 2-3 days __ Everyday
31. Sex?
    __ Male __ Female

32. Age?
   __From 20 __21-30 __31-40 __41-50 __> 50
33. Number of household members: _____
34. Monthly household income:
   __ Up to 500 __501-1500 __1501-2500 __2501-4000 __> 4000
35. Monthly personal income:
   __ Up to 500 __501-1200 __1201-2000 __2001-3000 __> 3000
36. Do you perceive the level of your individual income as?
   __ Very low __ Low __ Medium __ High __ Very high
37. Education
   __ Primary-Gymnasium __ High School__ Post-high school education (IEK, College)
   __ University or TEI (tertiary)__ Postgraduate studies
38. Employment
   __ Employed __ Unemployed __ Retired __ House chores __ Student

Ordinal regression Results

Table 8.0.1 Results of the first ordinal regression concerning the relationship between trust and the individual characteristics for the whole sample.

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Synkagivesmewhatiwant = 1]	18,147	1,776	104,391	1	,000	14,666	21,628
	[Synkagivesmewhatiwant = 2]	20,168	1,772	129,523	1	,000	16,695	23,641
	[Synkagivesmewhatiwant = 3]	20,562	1,774	134,371	1	,000	17,085	24,038
	[Synkagivesmewhatiwant = 4]	23,511	1,786	173,331	1	,000	20,011	27,011
Location	[BeforevisitingSynkawaiting=1]	-1,577	1,223	1,662	1	,197	-3,974	,820
	[BeforevisitingSynkawaiting=2]	-1,157	,497	5,418	1	,020	-2,132	-,183
	[BeforevisitingSynkawaiting=3]	-,407	,500	,662	1	,416	-1,387	,573
	[BeforevisitingSynkawaiting=4]	0ᵃ	.	.	0	.	.	.
	[MemberofFBcommunity=0]	-,726	,501	2,097	1	,148	-1,709	,257
	[MemberofFBcommunity=1]	0ᵃ	.	.	0	.	.	.
	[ContactingonlinemembersofFBcommunity=1]	,730	,976	,559	1	,455	-1,183	2,642
	[ContactingonlinemembersofFBcommunity=2]	,752	,956	,618	1	,432	-1,122	2,626
	[ContactingonlinemembersofFBcommunity=3]	,128	1,007	,016	1	,899	-1,847	2,102
	[ContactingonlinemembersofFBcommunity=4]	1,342	,995	1,818	1	,178	-,609	3,292

	Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
[Contactingonlinememb ersofFBcommunity=5]	0ᵃ	.	.	0	.	.	.
[ReasonjoiningFBcomm unity=1]	-,113	1,073	,011	1	,916	-2,216	1,991
[ReasonjoiningFBcomm unity=2]	-,508	,984	,267	1	,605	-2,437	1,420
[ReasonjoiningFBcomm unity=3]	-,034	1,121	,001	1	,976	-2,232	2,164
[ReasonjoiningFBcomm unity=4]	,261	1,105	,056	1	,813	-1,904	2,426
[ReasonjoiningFBcomm unity=5]	0ᵃ	.	.	0	.	.	.
[PostingonFBpage=0]	-,384	,486	,626	1	,429	-1,337	,568
[PostingonFBpage=1]	0ᵃ	.	.	0	.	.	.
[HowoftenpostingonFBp age=1]	,269	1,198	,050	1	,822	-2,079	2,617
[HowoftenpostingonFBp age=2]	-,625	1,178	,281	1	,596	-2,933	1,684
[HowoftenpostingonFBp age=3]	2,266	2,047	1,226	1	,268	-1,745	6,278
[HowoftenpostingonFBp age=4]	,449	1,201	,140	1	,708	-1,905	2,804
[HowoftenpostingonFBp age=5]	0ᵃ	.	.	0	.	.	.
[Beliefofpersonalincome =1]	21,590	1,065	410,792	1	,000	19,502	23,678
[Beliefofpersonalincome =2]	21,923	1,072	418,213	1	,000	19,822	24,025
[Beliefofpersonalincome =3]	21,909	1,037	446,141	1	,000	19,876	23,942
[Beliefofpersonalincome =4]	20,113	,000	.	1	.	20,113	20,113
[Beliefofpersonalincome =5]	0ᵃ	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Table 8.0.2 Results of the second ordinal regression concerning the relationship between trust and the individual characteristics for the whole sample.

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ItrustSynka = 1]	18,322	1,775	106,500	1	,000	14,842	21,802
	[ItrustSynka = 2]	19,943	1,769	127,081	1	,000	16,475	23,410
	[ItrustSynka = 3]	20,056	1,770	128,451	1	,000	16,588	23,525
	[ItrustSynka = 4]	22,713	1,797	159,680	1	,000	19,190	26,236
Location	[BeforevisitingSynka waiting=1]	-2,656	1,235	4,624	1	,032	-5,077	-,235
	[BeforevisitingSynka waiting=2]	-1,257	,489	6,605	1	,010	-2,216	-,298

[BeforevisitingSynkawaiting=3]	-,105	,488	,046	1	,829	-1,063	,852
[BeforevisitingSynkawaiting=4]	0[a]	.	.	0	.	.	.
[MemberofFBcommunity=0]	-,446	,500	,795	1	,373	-1,427	,535
[MemberofFBcommunity=1]	0[a]	.	.	0	.	.	.
[ContactingonlinemembersofFBcommunity=1]	,382	,956	,160	1	,689	-1,491	2,256
[ContactingonlinemembersofFBcommunity=2]	-,013	,926	,000	1	,989	-1,827	1,802
[ContactingonlinemembersofFBcommunity=3]	-,131	,976	,018	1	,894	-2,044	1,783
[ContactingonlinemembersofFBcommunity=4]	1,620	,993	2,665	1	,103	-,325	3,566
[ContactingonlinemembersofFBcommunity=5]	0[a]	.	.	0	.	.	.
[ReasonjoiningFBcommunity=1]	,821	1,078	,581	1	,446	-1,291	2,934
[ReasonjoiningFBcommunity=2]	,662	,991	,446	1	,504	-1,281	2,604
[ReasonjoiningFBcommunity=3]	1,207	1,119	1,164	1	,281	-,986	3,400
[ReasonjoiningFBcommunity=4]	,743	1,100	,456	1	,500	-1,414	2,899
[ReasonjoiningFBcommunity=5]	0[a]	.	.	0	.	.	.
[PostingonFBpage=0]	-,825	,486	2,883	1	,089	-1,778	,127
[PostingonFBpage=1]	0[a]	.	.	0	.	.	.
[HowoftenpostingonFBpage=1]	,687	1,198	,329	1	,566	-1,661	3,035
[HowoftenpostingonFBpage=2]	-,095	1,168	,007	1	,935	-2,385	2,194
[HowoftenpostingonFBpage=3]	1,498	1,832	,669	1	,413	-2,092	5,088
[HowoftenpostingonFBpage=4]	,383	1,204	,101	1	,751	-1,977	2,743
[HowoftenpostingonFBpage=5]	0[a]	.	.	0	.	.	.
[Beliefofpersonalincome=1]	20,821	1,063	383,392	1	,000	18,737	22,905
[Beliefofpersonalincome=2]	20,894	1,067	383,297	1	,000	18,802	22,986
[Beliefofpersonalincome=3]	21,311	1,040	419,971	1	,000	19,272	23,349
[Beliefofpersonalincome=4]	18,979	,000	.	1	.	18,979	18,979
[Beliefofpersonalincome=5]	0[a]	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Table 8.0.3 Results of the third ordinal regression concerning the relationship between trust and the individual characteristics for the whole sample.

		Parameter Estimates					95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
Threshold	[Synkadoesnotdissapointme = 1]	20,400	1,752	135,634	1	,000	16,967	23,833
	[Synkadoesnotdissapointme = 2]	22,212	1,751	160,917	1	,000	18,780	25,644
	[Synkadoesnotdissapointme = 3]	22,513	1,752	165,043	1	,000	19,078	25,948
	[Synkadoesnotdissapointme = 4]	25,023	1,760	202,106	1	,000	21,573	28,472
Location	[BeforevisitingSynkawaiting=1]	,454	1,275	,127	1	,722	-2,045	2,953
	[BeforevisitingSynkawaiting=2]	-1,774	,499	12,670	1	,000	-2,751	-,797
	[BeforevisitingSynkawaiting=3]	-,556	,499	1,239	1	,266	-1,534	,423
	[BeforevisitingSynkawaiting=4]	0[a]	.	.	0	.	.	.
	[MemberofFBcommunity=0]	,337	,491	,471	1	,493	-,625	1,299
	[MemberofFBcommunity=1]	0[a]	.	.	0	.	.	.
	[ContactingonlinemembersofFBcommunity=1]	,774	,937	,683	1	,409	-1,062	2,610
	[ContactingonlinemembersofFBcommunity=2]	,337	,913	,136	1	,712	-1,452	2,125
	[ContactingonlinemembersofFBcommunity=3]	,124	,952	,017	1	,896	-1,742	1,990
	[ContactingonlinemembersofFBcommunity=4]	1,467	,965	2,310	1	,129	-,425	3,359
	[ContactingonlinemembersofFBcommunity=5]	0[a]	.	.	0	.	.	.
	[ReasonjoiningFBcommunity=1]	-,572	1,093	,274	1	,601	-2,714	1,571
	[ReasonjoiningFBcommunity=2]	-,588	1,007	,341	1	,559	-2,562	1,386
	[ReasonjoiningFBcommunity=3]	,747	1,146	,426	1	,514	-1,498	2,993
	[ReasonjoiningFBcommunity=4]	,075	1,130	,004	1	,947	-2,139	2,289
	[ReasonjoiningFBcommunity=5]	0[a]	.	.	0	.	.	.
	[PostingonFBpage=0]	-,464	,473	,961	1	,327	-1,391	,464

	Estimate	Std. Error	Wald	df	Sig.	Lower	Upper
[PostingonFBpage=1]	0ᵃ	.	.	0	.	.	.
[HowoftenpostingonFBpage=1]	,504	1,202	,176	1	,675	-1,852	2,861
[HowoftenpostingonFBpage=2]	-,856	1,188	,518	1	,472	-3,185	1,474
[HowoftenpostingonFBpage=3]	,800	1,798	,198	1	,656	-2,724	4,324
[HowoftenpostingonFBpage=4]	,024	1,200	,000	1	,984	-2,327	2,375
[HowoftenpostingonFBpage=5]	0ᵃ	.	.	0	.	.	.
[Beliefofpersonalincome=1]	23,856	1,043	523,403	1	,000	21,813	25,900
[Beliefofpersonalincome=2]	24,075	1,047	528,277	1	,000	22,022	26,128
[Beliefofpersonalincome=3]	23,833	1,013	553,748	1	,000	21,848	25,818
[Beliefofpersonalincome=4]	22,483	,000	.	1	.	22,483	22,483
[Beliefofpersonalincome=5]	0ᵃ	.	.	0	.	.	.

Link function: Logit.
a. This parameter is set to zero because it is redundant.

Table 8.0.4 Results of the fourth ordinal regression concerning the relationship between trust and the individual characteristics for the whole sample.

		Parameter Estimates						
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Synkaisinterestedinmysatisfaction = 1]	13,409	1,816	54,500	1	,000	9,849	16,969
	[Synkaisinterestedinmysatisfaction = 2]	15,452	1,797	73,951	1	,000	11,930	18,974
	[Synkaisinterestedinmysatisfaction = 3]	15,574	1,797	75,124	1	,000	12,053	19,096
	[Synkaisinterestedinmysatisfaction = 4]	18,172	1,788	103,331	1	,000	14,668	21,676
Location	[BeforevisitingSynkawaiting=1]	-2,472	1,264	3,826	1	,050	-4,949	,005
	[BeforevisitingSynkawaiting=2]	-,564	,509	1,230	1	,267	-1,562	,433
	[BeforevisitingSynkawaiting=3]	-,033	,500	,004	1	,947	-1,012	,946
	[BeforevisitingSynkawaiting=4]	0ᵃ	.	.	0	.	.	.
	[MemberofFBcommunity=0]	,071	,512	,019	1	,889	-,933	1,075

	B	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
[MemberofFBcommunity=1]	0ᵃ	.	.	0	.	.	.
[ContactingonlinemembersofFBcommunity=1]	-2,234	1,045	4,570	1	,033	-4,282	-,186
[ContactingonlinemembersofFBcommunity=2]	-1,376	1,013	1,846	1	,174	-3,362	,609
[ContactingonlinemembersofFBcommunity=3]	-,547	1,101	,247	1	,619	-2,705	1,611
[ContactingonlinemembersofFBcommunity=4]	-1,130	1,029	1,207	1	,272	-3,146	,886
[ContactingonlinemembersofFBcommunity=5]	0ᵃ	.	.	0	.	.	.
[ReasonjoiningFBcommunity=1]	-,964	1,093	,778	1	,378	-3,105	1,178
[ReasonjoiningFBcommunity=2]	-,512	,998	,264	1	,608	-2,468	1,443
[ReasonjoiningFBcommunity=3]	,330	1,140	,084	1	,772	-1,904	2,564
[ReasonjoiningFBcommunity=4]	-,029	1,106	,001	1	,979	-2,196	2,139
[ReasonjoiningFBcommunity=5]	0ᵃ	.	.	0	.	.	.
[PostingonFBpage=0]	,337	,488	,479	1	,489	-,618	1,293
[PostingonFBpage=1]	0ᵃ	.	.	0	.	.	.
[HowoftenpostingonFBpage=1]	-,501	1,190	,177	1	,674	-2,833	1,832
[HowoftenpostingonFBpage=2]	-,655	1,170	,313	1	,576	-2,949	1,639
[HowoftenpostingonFBpage=3]	18,773	,000	.	1	.	18,773	18,773
[HowoftenpostingonFBpage=4]	-,855	1,196	,510	1	,475	-3,199	1,490
[HowoftenpostingonFBpage=5]	0ᵃ	.	.	0	.	.	.
[Beliefofpersonalincome=1]	19,751	1,067	342,755	1	,000	17,660	21,842
[Beliefofpersonalincome=2]	19,438	1,066	332,609	1	,000	17,349	21,527
[Beliefofpersonalincome=3]	19,740	1,038	361,709	1	,000	17,706	21,774
[Beliefofpersonalincome=4]	17,229	,000	.	1	.	17,229	17,229
[Beliefofpersonalincome=5]	0ᵃ	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Table 8.0.5 Results of the fifth ordinal regression concerning the relationship between trust and the individual characteristics for the SMB sample.

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval Lower Bound	Upper Bound
		Parameter Estimates						
Threshold	[Synkatriestosatisfyme = 1]	15,448	2,075	55,413	1	,000	11,381	19,515
	[Synkatriestosatisfyme = 2]	18,050	2,140	71,108	1	,000	13,854	22,245
	[Synkatriestosatisfyme = 3]	18,149	2,142	71,825	1	,000	13,952	22,347
	[Synkatriestosatisfyme = 4]	21,162	2,144	97,437	1	,000	16,960	25,364
Location	[BeforevisitingSynkawaiting=1]	-,607	2,200	,076	1	,783	-4,919	3,705
	[BeforevisitingSynkawaiting=2]	-1,025	,620	2,734	1	,098	-2,239	,190
	[BeforevisitingSynkawaiting=3]	-,499	,645	,599	1	,439	-1,762	,764
	[BeforevisitingSynkawaiting=4]	0[a]	.	.	0	.	.	.
	[ContactingonlinemembersofFBcommunity=1]	-,868	1,102	,620	1	,431	-3,029	1,293
	[ContactingonlinemembersofFBcommunity=2]	-1,036	1,103	,882	1	,348	-3,199	1,127
	[ContactingonlinemembersofFBcommunity=3]	-,247	1,173	,044	1	,833	-2,546	2,053
	[ContactingonlinemembersofFBcommunity=4]	-,337	1,101	,094	1	,760	-2,495	1,822
	[ContactingonlinemembersofFBcommunity=5]	0[a]	.	.	0	.	.	.
	[ReasonjoiningFBcommunity=1]	-1,213	1,358	,798	1	,372	-3,875	1,449
	[ReasonjoiningFBcommunity=2]	-1,123	1,183	,901	1	,343	-3,441	1,195
	[ReasonjoiningFBcommunity=3]	-2,092	1,386	2,277	1	,131	-4,809	,625
	[ReasonjoiningFBcommunity=4]	-1,027	1,334	,593	1	,441	-3,642	1,587
	[ReasonjoiningFBcommunity=5]	0[a]	.	.	0	.	.	.
	[PostingonFBpage=0]	1,119	,605	3,418	1	,064	-,067	2,304
	[PostingonFBpage=1]	0[a]	.	.	0	.	.	.
	[HowoftenpostingonFBpage=1]	-1,095	1,309	,700	1	,403	-3,661	1,471
	[HowoftenpostingonFBpage=2]	-,106	1,337	,006	1	,937	-2,726	2,514
	[HowoftenpostingonFBpage=4]	-,509	1,304	,152	1	,696	-3,064	2,046

		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
	[HowoftenpostingonFBpage=5]	0ᵃ	.	.	0	.	.	.
	[Beliefofpersonalincome=1]	22,359	1,460	234,489	1	,000	19,498	25,221
	[Beliefofpersonalincome=2]	22,291	1,462	232,500	1	,000	19,425	25,156
	[Beliefofpersonalincome=3]	22,640	1,445	245,371	1	,000	19,807	25,472
	[Beliefofpersonalincome=4]	18,260	,000	.	1	.	18,260	18,260
	[Beliefofpersonalincome=5]	0ᵃ	.	.	0	.	.	.

Link function: Logit.
a. This parameter is set to zero because it is redundant.

Table 8.0.6 Results of the sixth ordinal regression concerning the relationship between trust and the individual characteristics for the SMB sample.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Synkaisinterestedinmysatisfaction = 1]	16,670	2,046	66,401	1	,000	12,660	20,680
	[Synkaisinterestedinmysatisfaction = 2]	18,716	2,039	84,269	1	,000	14,720	22,713
	[Synkaisinterestedinmysatisfaction = 3]	18,817	2,039	85,146	1	,000	14,820	22,814
	[Synkaisinterestedinmysatisfaction = 4]	21,746	2,046	112,970	1	,000	17,736	25,756
Location	[BeforevisitingSynkawaiting=1]	1,823	2,189	,693	1	,405	-2,468	6,114
	[BeforevisitingSynkawaiting=2]	,088	,630	,020	1	,889	-1,146	1,322
	[BeforevisitingSynkawaiting=3]	,353	,620	,324	1	,569	-,863	1,569
	[BeforevisitingSynkawaiting=4]	0ᵃ	.	.	0	.	.	.
	[ContactingonlinemembersofFBcommunity=1]	-3,524	1,188	8,803	1	,003	-5,852	-1,196
	[ContactingonlinemembersofFBcommunity=2]	-2,612	1,132	5,327	1	,021	-4,830	-,394
	[ContactingonlinemembersofFBcommunity=3]	-1,166	1,184	,970	1	,325	-3,487	1,155

	Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
[Contactingonlinemembersof FBcommunity=4]	-1,006	1,089	,853	1	,356	-3,141	1,129
[Contactingonlinemembersof FBcommunity=5]	0ᵃ	.	.	0	.	.	.
[ReasonjoiningFBcommunity=1]	-,826	1,302	,403	1	,526	-3,377	1,725
[ReasonjoiningFBcommunity=2]	-,476	1,093	,190	1	,663	-2,617	1,665
[ReasonjoiningFBcommunity=3]	1,142	1,513	,570	1	,450	-1,823	4,106
[ReasonjoiningFBcommunity=4]	-,290	1,224	,056	1	,813	-2,689	2,108
[ReasonjoiningFBcommunity=5]	0ᵃ	.	.	0	.	.	.
[PostingonFBpage=0]	,988	,611	2,614	1	,106	-,210	2,185
[PostingonFBpage=1]	0ᵃ	.	.	0	.	.	.
[HowoftenpostingonFBpage=1]	-,369	1,289	,082	1	,775	-2,895	2,158
[HowoftenpostingonFBpage=2]	-,896	1,275	,493	1	,482	-3,395	1,604
[HowoftenpostingonFBpage=4]	-,279	1,273	,048	1	,826	-2,774	2,215
[HowoftenpostingonFBpage=5]	0ᵃ	.	.	0	.	.	.
[Beliefofpersonalincome=1]	23,354	1,376	288,103	1	,000	20,657	26,051
[Beliefofpersonalincome=2]	22,657	1,368	274,486	1	,000	19,977	25,337
[Beliefofpersonalincome=3]	23,205	1,347	296,740	1	,000	20,565	25,845
[Beliefofpersonalincome=4]	19,596	,000	.	1	.	19,596	19,596
[Beliefofpersonalincome=5]	0ᵃ	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Table 8.0.7 Results of the ordinal regression concerning the relationship between brand loyalty and trust for the whole sample.

				Parameter Estimates				
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[LoyaltoSynka = 1]	-10,023	,682	215,978	1	,000	-11,360	-8,686
	[LoyaltoSynka = 2]	-6,654	,626	113,014	1	,000	-7,881	-5,428
	[LoyaltoSynka = 3]	-5,355	,613	76,410	1	,000	-6,555	-4,154
	[LoyaltoSynka = 4]	-1,911	,516	13,72	1	,000	-2,922	-,900

				6				
Locatio n	[Synkagivesmewhatiw ant=1]	-1,431	,927	2,384	1	,123	-3,248	,385
	[Synkagivesmewhatiw ant=2]	-1,535	,674	5,191	1	,023	-2,856	-,215
	[Synkagivesmewhatiw ant=3]	-2,070	,664	9,715	1	,002	-3,372	-,768
	[Synkagivesmewhatiw ant=4]	-1,025	,607	2,853	1	,091	-2,215	,164
	[Synkagivesmewhatiw ant=5]	0ᵃ	.	.	0	.	.	.
	[Synkarespondstomye xpectations=1]	-,617	1,283	,232	1	,630	-3,132	1,897
	[Synkarespondstomye xpectations=2]	-,695	,622	1,251	1	,263	-1,914	,523
	[Synkarespondstomye xpectations=3]	-,655	,617	1,128	1	,288	-1,863	,554
	[Synkarespondstomye xpectations=4]	-,192	,483	,157	1	,692	-1,139	,756
	[Synkarespondstomye xpectations=5]	0ᵃ	.	.	0	.	.	.
	[ItrustSynka=1]	-2,474	1,090	5,158	1	,023	-4,610	-,339
	[ItrustSynka=2]	-1,746	,615	8,057	1	,005	-2,952	-,540
	[ItrustSynka=3]	-1,839	,575	10,23 8	1	,001	-2,965	-,712
	[ItrustSynka=4]	-1,384	,437	10,03 6	1	,002	-2,241	-,528
	[ItrustSynka=5]	0ᵃ	.	.	0	.	.	.
	[Synkadoesnotdissapo intme=1]	-,294	,919	,102	1	,749	-2,096	1,508
	[Synkadoesnotdissapo intme=2]	-1,195	,588	4,137	1	,042	-2,347	-,043
	[Synkadoesnotdissapo intme=3]	-,794	,602	1,739	1	,187	-1,974	,386
	[Synkadoesnotdissapo intme=4]	-,377	,510	,547	1	,459	-1,377	,622
	[Synkadoesnotdissapo intme=5]	0ᵃ	.	.	0	.	.	.
	[Synkadoesnotsatisfy myneeds=1]	,373	,713	,274	1	,601	-1,024	1,770
	[Synkadoesnotsatisfy myneeds=2]	-,095	,413	,053	1	,819	-,905	,715
	[Synkadoesnotsatisfy myneeds=3]	1,021	,484	4,451	1	,035	,072	1,969
	[Synkadoesnotsatisfy myneeds=4]	,436	,336	1,691	1	,193	-,221	1,094
	[Synkadoesnotsatisfy myneeds=5]	0ᵃ	.	.	0	.	.	.
	[Synkaishonest=1]	-1,192	1,260	,895	1	,344	-3,662	1,277
	[Synkaishonest=2]	-,789	,648	1,482	1	,223	-2,060	,481
	[Synkaishonest=3]	-,729	,640	1,297	1	,255	-1,982	,525
	[Synkaishonest=4]	-,207	,549	,142	1	,707	-1,282	,869
	[Synkaishonest=5]	0ᵃ	.	.	0	.	.	.
	[Synkatriestosatisfym e=1]	-1,895	1,295	2,143	1	,143	-4,433	,642
	[Synkatriestosatisfym e=2]	-1,562	,684	5,207	1	,022	-2,903	-,220
	[Synkatriestosatisfym e=3]	-,735	,670	1,203	1	,273	-2,048	,578

	Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
[Synkatriestosatisfyme=4]	-,530	,541	,961	1	,327	-1,589	,530
[Synkatriestosatisfyme=5]	0ª	.	.	0	.	.	.
[IrelyonSynkaforsolvingacomplain=1]	-2,459	1,565	2,468	1	,116	-5,526	,609
[IrelyonSynkaforsolvingacomplain=2]	,213	,595	,128	1	,721	-,953	1,378
[IrelyonSynkaforsolvingacomplain=3]	,957	,592	2,609	1	,106	-,204	2,118
[IrelyonSynkaforsolvingacomplain=4]	,446	,458	,947	1	,330	-,452	1,344
[IrelyonSynkaforsolvingacomplain=5]	0ª	.	.	0	.	.	.
[Synkaisinterestedinmysatisfaction=1]	-1,223	1,163	1,107	1	,293	-3,502	1,056
[Synkaisinterestedinmysatisfaction=2]	-,776	,644	1,452	1	,228	-2,039	,486
[Synkaisinterestedinmysatisfaction=3]	-1,055	,655	2,596	1	,107	-2,339	,228
[Synkaisinterestedinmysatisfaction=4]	-1,005	,533	3,561	1	,059	-2,049	,039
[Synkaisinterestedinmysatisfaction=5]	0ª	.	.	0	.	.	.
[Synkawillcompasatemy=1]	,079	1,206	,004	1	,948	-2,286	2,443
[Synkawillcompasatemy=2]	-,493	,485	1,036	1	,309	-1,443	,457
[Synkawillcompasatemy=3]	-,472	,507	,868	1	,351	-1,465	,521
[Synkawillcompasatemy=4]	-,227	,409	,308	1	,579	-1,028	,574
[Synkawillcompasatemy=5]	0ª	.	.	0	.	.	.
[Synkaisnotwillingtosolve=1]	-,970	,727	1,780	1	,182	-2,395	,455
[Synkaisnotwillingtosolve=2]	-,463	,379	1,492	1	,222	-1,206	,280
[Synkaisnotwillingtosolve=3]	-,950	,469	4,108	1	,043	-1,869	-,031
[Synkaisnotwillingtosolve=4]	-,781	,301	6,747	1	,009	-1,371	-,192
[Synkaisnotwillingtosolve=5]	0ª	.	.	0	.	.	.

Link function: Logit.
a. This parameter is set to zero because it is redundant.

Table 8.0.8 Results of the first ordinal regression concerning the relationship between the creation of bonds with the brand and their strength and the individual characteristics for the whole sample.

		Parameter Estimates						
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Thresh	[ThinkthatSynkais =	13,596	1,818	55,95	1	,000	10,034	17,158

223

old	1]			7				
	[ThinkthatSynkais = 2]	15,085	1,788	71,150	1	,000	11,580	18,590
	[ThinkthatSynkais = 3]	18,540	1,726	115,433	1	,000	15,158	21,922
	[ThinkthatSynkais = 4]	18,998	1,723	121,609	1	,000	15,621	22,374
Location	[BeforevisitingSynkawaiting=1]	-3,226	1,263	6,527	1	,011	-5,701	-,751
	[BeforevisitingSynkawaiting=2]	-1,799	,518	12,045	1	,001	-2,816	-,783
	[BeforevisitingSynkawaiting=3]	-1,697	,538	9,966	1	,002	-2,751	-,643
	[BeforevisitingSynkawaiting=4]	0[a]	.	.	0	.	.	.
	[MemberofFBcommunity=0]	-,581	,496	1,371	1	,242	-1,555	,392
	[MemberofFBcommunity=1]	0[a]	.	.	0	.	.	.
	[ContactingonlinemembersofFBcommunity=1]	-,074	,988	,006	1	,940	-2,010	1,862
	[ContactingonlinemembersofFBcommunity=2]	-,185	,962	,037	1	,848	-2,070	1,700
	[ContactingonlinemembersofFBcommunity=3]	-1,299	1,033	1,580	1	,209	-3,324	,726
	[ContactingonlinemembersofFBcommunity=4]	-1,060	1,000	1,124	1	,289	-3,019	,900
	[ContactingonlinemembersofFBcommunity=5]	0[a]	.	.	0	.	.	.
	[ReasonjoiningFBcommunity=1]	-,220	1,080	,041	1	,839	-2,336	1,897
	[ReasonjoiningFBcommunity=2]	-,773	,988	,612	1	,434	-2,710	1,164
	[ReasonjoiningFBcommunity=3]	-,795	1,098	,524	1	,469	-2,947	1,357
	[ReasonjoiningFBcommunity=4]	,212	1,115	,036	1	,849	-1,974	2,398
	[ReasonjoiningFBcommunity=5]	0[a]	.	.	0	.	.	.
	[PostingonFBpage=0]	-,676	,489	1,906	1	,167	-1,635	,283
	[PostingonFBpage=1]	0[a]	.	.	0	.	.	.
	[HowoftenpostingonFBpage=1]	-,831	1,047	,629	1	,428	-2,883	1,221
	[HowoftenpostingonFBpage=2]	-,916	1,050	,761	1	,383	-2,974	1,142
	[HowoftenpostingonFBpage=3]	1,170	1,982	,349	1	,555	-2,714	5,055
	[HowoftenpostingonFBpage=4]	-1,044	1,078	,937	1	,333	-3,156	1,069
	[HowoftenpostingonFBpage=5]	0[a]	.	.	0	.	.	.

		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
	[Beliefofpersonalincome=1]	20,159	1,095	338,741	1	,000	18,013	22,306
	[Beliefofpersonalincome=2]	19,938	1,102	327,303	1	,000	17,778	22,098
	[Beliefofpersonalincome=3]	19,726	1,065	343,122	1	,000	17,639	21,813
	[Beliefofpersonalincome=4]	20,049	,000	.	1	.	20,049	20,049
	[Beliefofpersonalincome=5]	0ᵃ	.	.	0	.	.	.

Link function: Logit.
a. This parameter is set to zero because it is redundant.

Table 8.0.9 Results of the second ordinal regression concerning the relationship between the creation of bonds with the brand and their strength and the individual characteristics for the SMB sample.

		Parameter Estimates						
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[InteractionwithSynka = 1]	17,804	2,019	77,774	1	,000	13,847	21,761
	[InteractionwithSynka = 2]	19,048	2,025	88,477	1	,000	15,079	23,017
	[InteractionwithSynka = 3]	20,686	2,024	104,432	1	,000	16,719	24,654
	[InteractionwithSynka = 4]	21,287	2,024	110,658	1	,000	17,321	25,254
Location	[BeforevisitingSynka waiting=1]	-,110	1,996	,003	1	,956	-4,022	3,802
	[BeforevisitingSynka waiting=2]	-2,857	,607	22,140	1	,000	-4,048	-1,667
	[BeforevisitingSynka waiting=3]	-1,895	,611	9,608	1	,002	-3,094	-,697
	[BeforevisitingSynka waiting=4]	0ᵃ	.	.	0	.	.	.
	[ContactingonlinemembersofFBcommunity=1]	-2,061	1,067	3,733	1	,053	-4,151	,030
	[ContactingonlinemembersofFBcommunity=2]	-2,081	1,052	3,913	1	,048	-4,143	-,019
	[ContactingonlinemembersofFBcommunity=3]	-,748	1,067	,492	1	,483	-2,839	1,343
	[ContactingonlinemembersofFBcommunity=4]	,764	1,006	,578	1	,447	-1,207	2,735
	[ContactingonlinemembersofFBcommunity=5]	0ᵃ	.	.	0	.	.	.
	[ReasonjoiningFBcommunity=1]	1,137	1,219	,871	1	,351	-1,251	3,526
	[ReasonjoiningFBcommunity=2]	,999	1,068	,875	1	,349	-1,094	3,091

[ReasonjoiningFBcommunity=3]	,465	1,220	,145	1	,703	-1,926	2,856
[ReasonjoiningFBcommunity=4]	,598	1,187	,253	1	,615	-1,729	2,924
[ReasonjoiningFBcommunity=5]	0ª	.	.	0	.	.	.
[PostingonFBpage=0]	-,124	,569	,048	1	,827	-1,239	,990
[PostingonFBpage=1]	0ª	.	.	0	.	.	.
[HowoftenpostingonFBpage=1]	-,871	1,155	,569	1	,451	-3,135	1,393
[HowoftenpostingonFBpage=2]	-2,073	1,237	2,806	1	,094	-4,498	,352
[HowoftenpostingonFBpage=4]	-1,508	1,232	1,499	1	,221	-3,922	,906
[HowoftenpostingonFBpage=5]	0ª	.	.	0	.	.	.
[Beliefofpersonalincome=1]	21,670	1,433	228,542	1	,000	18,861	24,480
[Beliefofpersonalincome=2]	22,022	1,436	235,147	1	,000	19,207	24,836
[Beliefofpersonalincome=3]	21,361	1,403	231,861	1	,000	18,611	24,110
[Beliefofpersonalincome=4]	19,142	,000	.	1	.	19,142	19,142
[Beliefofpersonalincome=5]	0ª	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Table 8.0.10 Results of the ordinal regression concerning the relationship between trust and bonds with the brand for the whole sample.

		Parameter Estimates						
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Synkatriestosatisfyme = 1]	-11,236	1,724	42,456	1	,000	-14,615	-7,856
	[Synkatriestosatisfyme = 2]	-4,751	,552	74,095	1	,000	-5,832	-3,669
	[Synkatriestosatisfyme = 3]	-3,951	,534	54,760	1	,000	-4,997	-2,904
	[Synkatriestosatisfyme = 4]	-,411	,392	1,099	1	,294	-1,180	,358
Location	[ThinkthatSynkais=1]	-1,807	,509	12,572	1	,000	-2,805	-,808
	[ThinkthatSynkais=2]	-1,045	,496	4,440	1	,035	-2,016	-,073
	[ThinkthatSynkais=3]	-,128	,465	,076	1	,783	-1,039	,783
	[ThinkthatSynkais=4]	-,479	,605	,628	1	,428	-1,664	,706
	[ThinkthatSynkais=5]	0ª	.	.	0	.	.	.
	[InteractionwithSynka	-2,931	,494	35,25	1	,000	-3,899	-1,963

		Estimate	Std. Error	Wald	df	Sig.	Lower	Upper
	=1]			0				
	[InteractionwithSynka =2]	-2,502	,504	24,642	1	,000	-3,490	-1,514
	[InteractionwithSynka =3]	-2,050	,506	16,436	1	,000	-3,041	-1,059
	[InteractionwithSynka =4]	,080	,575	,020	1	,889	-1,046	1,207
	[InteractionwithSynka =5]	0ª	.	.	0	.	.	.

Link function: Cauchit.

a. This parameter is set to zero because it is redundant.

Table 8.0.11 Results of the ordinal regression concerning the relationship between churn and bonds with the brand for the whole sample.

		Parameter Estimates						
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Lasttimeofpurchasefr omSynka = 1]	-5,890	,853	47,633	1	,000	-7,563	-4,217
	[Lasttimeofpurchasefr omSynka = 2]	-4,476	,826	29,360	1	,000	-6,095	-2,857
	[Lasttimeofpurchasefr omSynka = 3]	-3,208	,818	15,368	1	,000	-4,812	-1,604
	[Lasttimeofpurchasefr omSynka = 4]	-1,637	,813	4,057	1	,044	-3,230	-,044
	[Lasttimeofpurchasefr omSynka = 5]	-,299	,808	,137	1	,711	-1,883	1,284
Location	[Shareasamegoalwithc ompany=0]	-,592	,173	11,706	1	,001	-,931	-,253
	[Shareasamegoalwithc ompany=1]	0ª	.	.	0	.	.	.
	[Synkais=1]	-2,462	,897	7,539	1	,006	-4,220	-,705
	[Synkais=2]	-2,396	,823	8,469	1	,004	-4,010	-,782
	[Synkais=3]	-1,572	,816	3,713	1	,054	-3,171	,027
	[Synkais=4]	-1,202	,846	2,018	1	,155	-2,861	,457
	[Synkais=5]	0ª	.	.	0	.	.	.
	[Satisfiedbecauseof=1]	-,373	,226	2,730	1	,099	-,816	,070
	[Satisfiedbecauseof=2]	,034	,186	,034	1	,853	-,329	,398
	[Satisfiedbecauseof=3]	0ª	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

References

Aaker, J. L. (1997). Dimensions of brand personality. *Journal of Marketing Research*, *34*(August), 343–373.

Abdi, H. (2010). Partial least squares regression and projection on latent structure regression (PLS-Regression). *Wiley Interdisciplinary Reviews*, *Computational Statistics*(2), 97–106.

Abdi, Hervé. (2007). Discriminant Correspondence Analysis. In *Encyclopedia of Measurement and Statistic.* (N.J. Salkind, pp. 270–275). Sage: Thousand Oaks (CA).

Adjei, M. T., Noble, S. M., & Noble, C. H. (2010). The influence of C2C communications in online brand communities on customer purchase behavior. *Journal of the Academy of Marketing Science*, *38*(5), 634–653. https://doi.org/10.1007/s11747-009-0178-5

Ahn, J.-H., Han, S.-P., & Lee, Y.-S. (2006). Customer churn analysis: Churn determinants and mediation effects of partial defection in the Korean mobile telecommunications service industry. *Telecommunications Policy*, *30*(10–11), 552–568. https://doi.org/10.1016/j.telpol.2006.09.006

Ahuvia, A. C., Batra, R., & Bagozzi, R. (2008). Brand love: Towards an integrative model. *Advances in Consumer Research*, *35*, 177–179.

Ahuvia, Aaron C. (2005). Beyond the extended self: Loved objects and consumers' identity narratives. *Journal of Consumer Research*, *32*(1), 171–184.

Ajzen, I. (1985). *From intentions to actions: A theory of planned behavior. In J. Kuhl and J. Beckmann (Eds), Action control: From cognition to behavior*. New York: Springer Verlag, New York.

Albert, N., Merunka, D., & Valette-Florence, P. (2008). When consumers love their brands: Exploring the concept and its dimensions. *Journal of Business Research*, *61*(10), 1062–1075. https://doi.org/10.1016/j.jbusres.2007.09.014

Alessandra, A., Cathcart, J., & Wexler, P. (1988). *Selling by Objectives*. Englewood Cliffs: NJ: Prentice-Hall.

Algesheimer, R., Dholakia, U. M., & Herrmann, A. (2005). The social influence of brand community: Evidence from European car clubs. *Journal of Marketing*, *69*(3), 19–34.

Andaleeb, S. S. (1998). *The trust concept: Research issues for channels of distribution* (Sheth, J.N., Vol. 11). Greenwich, CT: Research in Marketing.

Anderson, E., & Weitz, B. (1992). The Use of Pledges to Build and Sustain Commitment in Distribution Channels. *Journal of Marketing Research*, *29*(February), 18–34.

Ascarza, E., Iyengar, R., & Schleicher, M. (2016). The Perils of Proactive Churn Prevention Using Plan Recommendations: Evidence from a Field Experiment. *Journal of Marketing Research*, *53*(1), 46–60. https://doi.org/10.1509/jmr.13.0483

Ashley, C., Noble, S. M., Donthu, N., & Lemon, K. N. (2011). Why customers won't relate: Obstacles to relationship marketing engagement. *Journal of Business Research*, *64*(7), 749–756. https://doi.org/10.1016/j.jbusres.2010.07.006

Ater, I., & Landsman, V. (2013). Do customers learn from experience? Evidence from retail banking. *Management Science*, *59*(9), 2019–2035.

Bacharach, M., & Gambetta, D. (2001). *Trust in Signs. In Trust in Society* (K. Cook (Ed.)). New York, NY,: NY, Sage:

Bagozzi, R. P., Bergami, M., Marzocchi, G. L., & Morandin, G. (2012). Customer–organization relationships: Development and test of a theory of extended identities. *Journal of Applied Psychology*, *97*(1), 63–76. https://doi.org/10.1037/a0024533

Bagozzi, R. P., & Dholakia, U. M. (2006a). Antecedents and purchase consequences of customer participation in small group brand communities. *International Journal of Research in Marketing*, *23*(1), 45–61. https://doi.org/10.1016/j.ijresmar.2006.01.005

Bagozzi, R. P., & Dholakia, U. M. (2006b). Open source software user communities: A study of participation in Linux user groups. *Managament Science*, *52*(7), 1099–1115.

Baltas, G. (2014). *Annual Survey of Consumer Trends and Behaviors*. Retrieved from Athens University

   of Economics and Business website:

   http://www.selfservice.gr/default.asp?pid=9&la=1&cID=40&arId=5606&ss=%CC%F0%E1%EB

   %F4%E1%F2

Bandura, A. (1996). *Self-efficacy: The exercise of control*. New York: Freeman.

Batra, R., Ahuvia, A. C., & Bagozzi, R. P. (2012). Brand love. *Journal of Marketing*, *76*(2), 1–16.

Bauer, H. H., Heinrich, D., & Martin, I. (2007). How to create high emotional consumer-brand

   relationships? The causalities of brand passion. *2007 Australian & New Zealand Marketing

   Academy Conference Proceedings*, 2189–2198. Retrieved from

   http://www.anzmac.org/conference_archive/2007/papers/D%20Heinrich_1a.pdf

Bendapudi, N., & Berry, L. L. (1997). Customers' motivations for maintaining relationships with service

   providers. *Journal of Retailing*, *73*(1), 15–37.

Berg, J., Dickhaut, J., & McCabe, K. (1995). Trust, reciprocity, and social history. *Games and Economic

   Behavior, 10*(1), 122–142.

Bergami, M., & Bagozzi, R. P. (2000). Self-categorization, affective commitment and group self-esteem

   as distinct aspects of social identity in the organization. *The British Journal of Social Psychology*,

   39(4), 555–577.

Beugelsdijk, S. (2005). A note on the theory and measurement of trust in explaining differences in

   economic growth. *Cambridge Journal of Economics*, *30*(3), 371–387.

   https://doi.org/10.1093/cje/bei064

Bhatia, N., & Vandana. (2010). Survey of Nearest Neighbor Techniques. *ArXiv:1007.0085 [Cs]*.

   Retrieved from http://arxiv.org/abs/1007.0085

Blackston, M. (1993). Beyond brand personality: Building brand relationships. In *Brand Equity and Advertising: Advertising's Role in Building Strong Brands* (Aaker, D. and Biel, A., pp. 113–124). Hillsdale, NJ: Erlbaum.

Blanchard, A. L., & Markus, M. L. (2004). The experienced sense of a virtual community: Characteristics and processes. *ACM Sigmis Database*, *35*(1), 64–79.

Boero, R., Bravo, G., Castellani, M., & Squazzoni, F. (2009). Reputational cues in repeated trust games. *The Journal of Socio-Economics*, *38*(6), 871–877. https://doi.org/10.1016/j.socec.2009.05.004

Bolton, R. N. (1998). A dynamic model of the duration of the customer's relationship with a continuous service provider: The role of satisfaction. *Marketing Science*, *17*(1), 45–65.

Bolton, R. N., Kannan, P. K., & Bramlett, M. D. (2000). Implications of loyalty program membership and service experiences for customer retention and value. *Journal of the Academy of Marketing Science*, *28*(1), 95–108.

Bolton, R. N., & Lemon, K. N. (1999). A dynamic model of customers' usage of services: Usage as an antecedent and consequence of satisfaction. *Journal of Marketing Research*, 171–186.

Bose, I., & Chen, X. (2009). Quantitative models for direct marketing: A review from systems perspective. *European Journal of Operational Research*, *195*(1), 1–16. https://doi.org/10.1016/j.ejor.2008.04.006

Bowden, J. L.-H. (2009). The Process of Customer Engagement: A Conceptual Framework. *The Journal of Marketing Theory and Practice*, *17*(1), 63–74. https://doi.org/10.2753/MTP1069-6679170105

Boyd, Danah M., & Ellison, N. B. (2007). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*, *13*(1), 210–230. https://doi.org/10.1111/j.1083-6101.2007.00393.x

Brodie R. J., Ilic A., Juric B., & Hollebeek L. (2013). Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research*, *66*(1), 105–114. https://doi.org/10.1016/j.jbusres.2011.07.029

Brown, S., Kozinets, R. V., & Sherry Jr, J. F. (2003). Teaching old brands new tricks: Retro branding and the revival of brand meaning. *Journal of Marketing*, *67*(3), 19–33.

Buckinx, W., & Van den Poel, D. (2005). Customer base analysis: Partial defection of behaviourally loyal clients in a non-contractual FMCG retail setting. *European Journal of Operational Research*, *164*(1), 252–268. https://doi.org/10.1016/j.ejor.2003.12.010

Burez, J., & Van den Poel, D. (2009). Handling class imbalance in customer churn prediction. *Expert Systems with Applications*, *36*(3), 4626–4636. https://doi.org/10.1016/j.eswa.2008.05.027

Burnham, T. A., Frels, J. K., & Mahajan, V. (2003). Consumer Switching Costs: A Typology, Antecedents, and Consequences. *Journal of the Academy of Marketing Science*, *31*(2), 109–126. https://doi.org/10.1177/0092070302250897

Butler, B., Sproull, L., Kiesler, S., & Kraut, R. E. (2007). *Community Effort in Online Groups: Who Does the Work and Why?* (Leadership at a Distance, S. Weisband). Hillsdale, NJ: Lawrence Erlbaum Associates.

Byrne, D. (1997). An Overview (and Underview) of Research and Theory Within the Attraction Paradigm. *Journal of Social and Personal Relationships*, *14*(3), 417–431.

Camerer, C. (2003). *Behavioral game theory: Experiments in strategic interaction.* Princeton, NJ: Princeton University Press.

Carlson, B. D., Suter, T. A., & Brown, T. J. (2008). Social versus psychological brand community: The role of psychological sense of brand community. *Journal of Business Research*, *61*(4), 284–291. https://doi.org/10.1016/j.jbusres.2007.06.022

Carroll, B. A., & Ahuvia, A. C. (2006). Some antecedents and outcomes of brand love. *Marketing Letters*, *17*(2), 79–89. https://doi.org/10.1007/s11002-006-4219-2

Carter, M., Wright, R., Thatcher, J. B., & Klein, R. (2014). Understanding online customers' ties to merchants: The moderating influence of trust on the relationship between switching costs and e-loyalty. *European Journal of Information Systems*, *23*(2), 185–204.

Casaló, L. V., Flavián, C., & Guinalíu, M. (2008). Promoting Consumer's Participation in Virtual Brand Communities: A New Paradigm in Branding Strategy. *Journal of Marketing Communications*, *14*(1), 19–36. https://doi.org/10.1080/13527260701535236

Castelfranchi, C. (2008). Trust and reciprocity: Misunderstandings. *International Review of Economics*, *55*(1–2), 45–63. https://doi.org/10.1007/s12232-008-0041-x

Celsi, R. L., & Olson, J. C. (1988). The role of Involvement in attention and comprehension processes. *Journal of Consumer Research*, *15*(2), 210–224.

Chaffey, D. (2007). Customer engagement interview with Richard Sedley of cScape. Retrieved April 7, 2017, from www.smartinsights.com/blog/customer-engagement/customer-engagement-interviewwith- richard-sedley-of-cscape/

Chaffey, D. (2008). Customer engagement definition. Retrieved April 7, 2017, from www.davechaffey.com/Emarketing- Glossary/Customer-engagement.htm

Chan, K. W., & Li, S. Y. (2010). Understanding consumer-to-consumer interactions in virtual communities: The salience of reciprocity. *Journal of Business Research*, *63*(9–10), 1033–1040. https://doi.org/10.1016/j.jbusres.2008.08.009

Chaudhuri, A., & Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. *Journal of Marketing*, *65*(2), 81–93.

Chen, J., & Shen, X.-L. (2015). Consumers' decisions in social commerce context: An empirical investigation. *Decision Support Systems*, *79*, 55–64. https://doi.org/10.1016/j.dss.2015.07.012

Chen, S.-H. (2016). The gamma CUSUM chart method for online customer churn prediction. *Electronic Commerce Research and Applications*, *17*, 99–111. https://doi.org/10.1016/j.elerap.2016.04.003

Chen, Y.-H., Wu, J.-J., & Chung, Y.-S. (2008). Cultural Impact on Trust: A Comparison of Virtual Communities in China, Hong Kong, and Taiwan. *Journal of Global Information Technology Management*, *11*(1), 28–48. https://doi.org/10.1080/1097198X.2008.10856460

Cheung, C. M. K., & Lee, M. K. O. (2010). A theoretical model of intentional social action in online social networks. *Decision Support Systems*, *49*(1), 24–30. https://doi.org/10.1016/j.dss.2009.12.006

Chien, S.-H., Chen, Y.-H., & Wu, J.-J. (2013). Building Online Transaction Trust through a Two-Step Flow of Information Communication. *Journal of Global Information Technology Management*, *16*(4), 6–20. https://doi.org/10.1080/1097198X.2013.10845646

Chiu, C.-M., Huang, H.-Y., & Yen, C.-H. (2010). Antecedents of trust in online auctions. *Electronic Commerce Research and Applications*, *9*(2), 148–159. https://doi.org/10.1016/j.elerap.2009.04.003

Christy, R., Oliver, G., & Penn, J. (1996). Relationship marketing in consumer markets. *Journal of Marketing Management, 12*(1–3), 175–187.

Chua, C. E. H., Wareham, J., & Robey, D. (2007). The role of online trading communities in managing internet auction fraud. *MIS Quarterly*, 759–781.

Chuang, Y.-F. (2011). Pull-and-suck effects in Taiwan mobile phone subscribers switching intentions. *Telecommunications Policy*, *35*(2), 128–140. https://doi.org/10.1016/j.telpol.2010.12.003

Clore, G. L. (1994). *Why emotions are felt. The nature of emotion: Fundamental questions*. 103–111.

Collins, N. L., & Miller, L. C. (1994). Self-Disclosure and Liking: A Meta-analytic Review. *Psychological Bulletin*, *116*(3), 457–475.

Constant, D., Sproull, L., & Kiesler, S. (1996). The kindness of strangers: The usefulness of electronic weak ties for technical advice. *Organization Science*, *7*(2), 119–135.

Cook, Karen. S., & Whitmeyer, J. (1992). Two Approaches to Social Structure: Exchange Theory and Network Analysis. *Annual Review of Sociology*, *18*, 109–127.

Cooper, W. H. (1981). Ubiquitous Halo. *Psychological Bulletin*, *90*(2), 218–244.

Coussement, K., Lessmann, S., & Verstraeten, G. (2017). A comparative analysis of data preparation algorithms for customer churn prediction: A case study in the telecommunication industry. *Decision Support Systems*, *95*, 27–36. https://doi.org/10.1016/j.dss.2016.11.007

Coussement, K., & Van den Poel, D. (2008). Integrating the voice of customers through call center emails into a decision support system for churn prediction. *Information & Management*, *45*(3), 164–174. https://doi.org/10.1016/j.im.2008.01.005

Culnan, M. J., & Armstrong, P. K. (1999). Information privacy concerns, procedural fairness, and impersonal trust: An empirical investigation. *Organization Science*, *10*(1), 104–115.

Cyr, D., Head, M., Larios, H., & Pan, B. (2009). Exploring human images in website design: A multi-method approach. *MIS Quarterly*, *33*(3), 539–566.

Cyr, Dianne, Hassanein, K., Head, M., & Ivanov, A. (2007). The role of social presence in establishing loyalty in e-Service environments. *Interacting with Computers*, *19*(1), 43–56. https://doi.org/10.1016/j.intcom.2006.07.010

Dailey, L. (2004). Navigational web atmospherics. *Journal of Business Research*, *57*(7), 795–803. https://doi.org/10.1016/S0148-2963(02)00364-8

Damasio, A. R. (1999). *The feeling of what happens: Body and emotion in the making of consciousness* (Harcourt Brace, Vol. 1).

Davis, L., Wang, S., & Lindridge, A. (2008). Culture influences on emotional responses to on-line store atmospheric cues. *Journal of Business Research*, *61*(8), 806–812. https://doi.org/10.1016/j.jbusres.2007.08.005

Day, R. L., & Landon, E. L. (1977). Toward a theory of consumer complaining behavior. *Consumer and Industrial Buying Behavior*, *95*, 425–437.

De Caigny, A., Coussement, K., & De Bock, K. W. (2018). A new hybrid classification algorithm for customer churn prediction based on logistic regression and decision trees. *European Journal of Operational Research*, *269*(2), 760–772. https://doi.org/10.1016/j.ejor.2018.02.009

de Valck, K., van Bruggen, G. H., & Wierenga, B. (2009). Virtual communities: A marketing perspective. *Decision Support Systems*, *47*(3), 185–203. https://doi.org/10.1016/j.dss.2009.02.008

Debra, W.-H. (2011). *Analyzing Quantitative Data: An Introduction for Social Researchers* (1st ed.). Hoboken (N.J.): Wiley.

DeLamater, J. (1974). A Definition of "Group". *Small Group Behavior*, *5*(1), 30–44.

Delgado-Ballester, E., & Luis Munuera-Alemán, J. (2001). Brand trust in the context of consumer loyalty. *European Journal of Marketing*, *35*(11/12), 1238–1258.

Delgado-Ballester, E., Munuera-Aleman, J. L., & Yague-Guillen, M. J. (2003). Development and validation of a brand trust scale. *International Journal of Market Research*, *45*(1), 35–54.

Delgado-Márquez, B. L., Hurtado-Torres, N. E., & Aragón-Correa, J. A. (2012). The dynamic nature of trust transfer: Measurement and the influence of reciprocity. *Decision Support Systems*, *54*(1), 226–234. https://doi.org/10.1016/j.dss.2012.05.008

Delgado-Márquez, B. L., Hurtado-Torres, N. E., & Aragón-Correa, J. A. (2013). On the Measurement of Interpersonal Trust Transfer: Proposal of Indexes. *Social Indicators Research*, *113*(1), 433–449. https://doi.org/10.1007/s11205-012-0103-z

Derrick, B., Toher, D., & White, P. (2016). Why Welchs test is Type I error robust. *The Quantitative Methods for Psychology*, *12*(1), 30–38.

Dholakia, U. M., Bagozzi, R. P., & Pearo, L. K. (2004). A social influence model of consumer participation in network- and small-group-based virtual communities. *International Journal of Research in Marketing*, *21*(3), 241–263. https://doi.org/10.1016/j.ijresmar.2003.12.004

Dinesen, P. T. (2011). A Note on the Measurement of Generalized Trust of Immigrants and Natives. *Social Indicators Research*, *103*(1), 169–177. https://doi.org/10.1007/s11205-010-9704-6

Doney, P. M., & Cannon, J. P. (1997). *An examination of the nature of trust in buyer– seller relationships. 61*, 31–51.

Doyle, S. (2007). The role of social networks in marketing. *Journal of Database Marketing & Customer Strategy Management*, *15*(1), 60–64. https://doi.org/10.1057/palgrave.dbm.3250070

Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing Buyer-Seller Relationships. *Journal of Marketing*, *51*(2), 11. https://doi.org/10.2307/1251126

Ekeh, P. (1974). *Social Exchange Theory.* Harvard University Press: Cambridge

Ellemers, N., Kortekaas, P., & Ouwerkerk, J. W. (1999). Self-categorisation, commitment to the group and group self-esteem as related but distinct aspects of social identity. *European Journal of Social Psychology*, *29*(23), 371–389.

Elliot, S., Li, G., & Choi, C. (2013). Understanding service quality in a virtual travel community environment. *Journal of Business Research*, *66*(8), 1153–1160. https://doi.org/10.1016/j.jbusres.2012.03.011

Emerson, R. M. (1972). Exchange theory, part I: A psychological basis for social exchange. *Sociological Theories in Progress*, *2*, 38–57.

Emerson, R. M. (1981). Social Exchange Theory. *Social Psychology*, 30–65.

Engle-Warnick, J., & Slonim, R. L. (2004). The evolution of strategies in a repeated trust game. *Journal of Economic Behavior & Organization*, *55*(4), 553–573. https://doi.org/10.1016/j.jebo.2003.11.008

Ertell, K. (2010). The missing links in the customer engagement cycle. Retrieved April 7, 2017, from www.retailshakennotstirred.com/retail-shaken-not-stirred/2010/01/the-missing-link-in-thecustomer-engagement-cycle.html

European Commission. (2019). *Eurobarometer 2018*. Retrieved from Directorate-General (DG) Communication - European Commission website: http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/WhatsNew/index

Facebook. (2016). Facebook Report. Retrieved January 11, 2016, from https://newsroom.fb.com/news/2016/11/facebook-reports-third-quarter-2016-results/

Fawcett, T. (2006). An introduction to ROC analysis. *Pattern Recognition Letters*, *27*(8), 861–874. https://doi.org/10.1016/j.patrec.2005.10.010

Festinger, L., Schacter, S., & Back, K. (1950). *Social Pressures in Informal Groups: A Study of Human Factors in Housing*. Palo Alto, CA: Stanford University Press.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research.* Reading MA: Addison-Wesley.

Fisman, R., & Khanna, T. (1999). Is trust a historical residue? Information flows and trust levels. *Journal of Economic Behavior & Organization*, *38*(1), 79–92.

Fornell, C., Johnson, M. D., Anderson, E. W., Cha, J., & Bryant, B. E. (1996). The American customer satisfaction index: Nature, purpose, and findings. *The Journal of Marketing*, 7–18.

Fornell, C., & Wernerfelt, B. (1987). Defensive marketing strategy by customer complaint management: A theoretical analysis. *Journal of Marketing Research*, 337–346.

Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of Consumer Research*, *24*(4), 343–373.

Freund, Y., Iyer, R., Schapire, R. E., & Singer, Y. (2003). An efficient boosting algorithm for combining preferences. *Journal of Machine Learning Research*, *4*(November), 933–969.

Frost, T., Stimpson, D. V., & Maughan, M. (1978). Some correlates of trust. *The Journal of Psychology*, *99*(1), 103–108.

Fullerton, G. (2003). When does commitment lead to loyalty? *Journal of Service Research*, *5*(4), 333–344.

Funkhouser, G. R. (1984). A Practical Theory of Persua sion based on Behavioral Science Approaches. *Journal of Personal Selling and Sales Management*, *November*, 17–25.

Funkhouser, G. R., & Parker, R. (1999). An action-based theory of persuasion in marketing. *Journal of Marketing Theory and Practice*, *7*(3), 27–40.

Gallup Consulting. (2009). Customer engagement: What's your engagement ratio? Retrieved from www.gallup.com/consulting/File/121901/Customer_Engagement_Overview_Brochure. pdf

Gallup Consulting. (2010). Customer engagement: The customer side of the HumanSigma equation. Retrieved from http://eu.gallup.com/Consulting/118180/Customer-Engagement. aspx

Gangadharbatla, H. (2008). Facebook me: Collective self-esteem, need to belong, and internet self-efficacy as predictors of the iGeneration's attitudes toward social networking sites. *Journal of Interactive Advertising*, *8*(2), 5–15.

Ganley, D., & Lampe, C. (2009). The ties that bind: Social network principles in online communities. *Decision Support Systems*, *47*(3), 266–274. https://doi.org/10.1016/j.dss.2009.02.013

Garbarino, E., & Johnson, M. S. (1999). The Different Roles of Satisfaction, Trust, and Commitment in Customer Relationships. *Journal of Marketing*, *63*(April), 70–87.

Gefen, D., & Straub, D. W. (2004). Consumer trust in B2C e-Commerce and the importance of social presence: Experiments in e-Products and e-Services. *Omega*, *32*(6), 407–424. https://doi.org/10.1016/j.omega.2004.01.006

Gelfand, M. J., Higgins, M., Nishii, L. H., Raver, J. L., Dominguez, A., Murakami, F., … Toyama, M. (2002). Culture and egocentric perceptions of fairness in conflict and negotiation. *Journal of Applied Psychology*, *87*(5), 833–845. https://doi.org/10.1037//0021-9010.87.5.833

Gerpott, T. J., Rams, W., & Schindler, A. (2001). Customer retention, loyalty, and satisfaction in the German mobile cellular telecommunications market. *Telecommunications Policy*, *25*(4), 249–269.

Geyskens, I., Steenkamp, J. E. B. M., Sheer, L. K., & Kumar, N. (1996). The effects of trust and interdependence on relationship commitment: A transatlantic study. International. *Journal of Research in Marketing*, *13*, 303–317.

Glaeser, E. L., Laibson, D. I., Scheinkman, J. A., & Soutter, C. L. (2000). Measuring Trust*. *Quarterly Journal of Economics*, *115*(3), 811–846. https://doi.org/10.1162/003355300554926

Gordon, M. E., McKeage, K., & Fox, M. A. (1998). Relationship marketing effectiveness: The role of involvement. *Psychology and Marketing*, *15*(5), 443–459.

Goyette, I., Ricard, L., Bergeron, J., & Marticotte, F. (2010). e-WOM Scale: Word-of-mouth measurement scale for e-services context. *Canadian Journal of Administrative Sciences / Revue Canadienne Des Sciences de l'Administration*, *27*(1), 5–23. https://doi.org/10.1002/cjas.129

Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *The American Journal of Sociology*, *91*(3), 481–510.

Gustafsson, A., Johnson, M. D., & Roos, I. (2005). The effects of customer satisfaction, relationship commitment dimensions, and triggers on customer retention. *Journal of Marketing*, *69*(4), 210–218.

Gutek, B. A., Groth, M., & Cherry, B. (2002). Achieving service success through relationships and enhanced encounters. *Academy of Management Executive*, *16*(4), 132–144. https://doi.org/10.5465/AME.2002.8951340

Gutiérrez, P. A., Pérez-Ortiz, M., Sánchez-Monedero, J., Fernández-Navarro, F., & Hervás-Martínez, C. (2016). Ordinal Regression Methods: Survey and Experimental Study. *IEEE Transactions on Knowledge and Data Engineering*, *28*(1), 127–146.

Habibi, M. R., Laroche, M., & Richard, M.-O. (2014). Brand communities based in social media: How unique are they? Evidence from two exemplary brand communities. *International Journal of Information Management*, *34*(2), 123–132. https://doi.org/10.1016/j.ijinfomgt.2013.11.010

Habibi, M. R., Laroche, M., & Richard, M.-O. (2016). Testing an extended model of consumer behavior in the context of social media-based brand communities. *Computers in Human Behavior*, *62*, 292–302. https://doi.org/10.1016/j.chb.2016.03.079

Hajli, M. (2014). A study of the impact of social media on consumers. *International Journal of Market Research*, *56*(3), 387–404.

Hajli, M. N. (2014). The role of social support on relationship quality and social commerce. *Technological Forecasting and Social Change*, *87*, 17–27. https://doi.org/10.1016/j.techfore.2014.05.012

Halikias, I. (2017). *Statistic: Methods of analysis for business decisions*. Athens: Rosili.

Hamel, G., & Sampler, J. (1998). E-corporation; More than just Web-based, it's building a new industry order. *Fortune*, 52–63.

Hamilton, D. L., Driscoll, D. M., & Worth, L. T. (1989). Cognitive Organization of Impressions:Effects of Incongruency in Complex Representations. *Journal of Personality and Social Psychology*, *57*(6), 925–939.

Hamilton, D. L., Dugan, P. M., & Trolier, T. K. (1985). The formation of stereotypic beliefs: Further

evidence for distinctiveness-based illusory correlations. *Journal of Personality and Social

Psychology*, *48*(1), 5–17.

Hamilton, D. L., & Sherman, S. J. (1996). Perceiving persons and groups. *Psychological Review*, *103*(2),

336–355.

Hanley, J. A., & McNeil, B. J. (1982). The meaning and use of the area under a receiver operating

characteristic (ROC) curve. *Radiology*, *143*(1), 29–36.

https://doi.org/10.1148/radiology.143.1.7063747

Harris, L. C., & Goode, M. M. H. (2004). The four levels of loyalty and the pivotal role of trust: A study

of online service dynamics. *Journal of Retailing*, *80*(2), 139–158.

https://doi.org/10.1016/j.jretai.2004.04.002

Hassanein, K., Head, M., & Ju, C. (2009). A cross-cultural comparison of the impact of social presence

on website trust, usefulness and enjoyment. *International Journal of Electronic Business*, *7*(6),

625–641.

Hastie, R., & Park, B. (1986). The relationship between memory and judgment depends on whether the

judgment task is memory-based or on-line. *Psychological Review*, *93*(3), 258.

Hechter, M. (1987). *Principles of Group Solidarity*.

Heide, J., & John, G. (1992). Do Norms Matter in Marketing Relationships? *Journal of Marketing*,

56(April), 32–44.

Heinrich, D., Albrecht, C.-M., & Bauer, H. H. (2012). Love actually? Measuring and exploring

consumers' brand love. *Consumer-Brand Relationships–Theory and Practice. London:

Routledge*, 137–150.

Helliwell, J., Layard, R., & Sachs, J. (n.d.). *WORLD HAPPINESS REPORT 2018*. 188.

Henslin, J. M. (1968). *Trust and the Cab Driver. In Sociology and Everyday Life* (Truzzi M. (ed.)). Englewood Cliffs: NJ: Prentice Hall.

Hess, T., Fuller, M., & Campbell, D. (2009). Designing Interfaces with Social Presence: Using Vividness and Extraversion to Create Social Recommendation Agents*. *Journal of the Association for Information Systems*, *10*(12), 889.

Hoffman, D. L., Novak, T. P., & Peralta, M. (1999). Building consumer trust online. *Communications of the ACM*, *42*(4), 80–85.

Hofstede, G. H. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nation* (second edition). Beverly Hills, CA: Sage Publications, Inc.

Hogg, M. A., & Turner, J. C. (1985). Interpersonal attraction, social identification and psychological group formation. *European Journal of Social Psychology*, *15*(1), 51–66.

Hollebeek, L. (2011). Exploring customer brand engagement: Definition and themes. *Journal of Strategic Marketing*, *19*(7), 555–573. https://doi.org/10.1080/0965254X.2011.599493

Hollebeek, L. D. (2011). Demystifying customer brand engagement: Exploring the loyalty nexus. *Journal of Marketing Management*, *27*(7–8), 785–807. https://doi.org/10.1080/0267257X.2010.500132

Homans, G. L. (1961). *Social Behavior: Its Elementary Forms.* New York: Harcourt Brace Jovanovich.

Hong, I. B., & Cho, H. (2011). The impact of consumer trust on attitudinal loyalty and purchase intentions in B2C e-marketplaces: Intermediary trust vs. seller trust. *International Journal of Information Management*, *31*(5), 469–479. https://doi.org/10.1016/j.ijinfomgt.2011.02.001

Hsu, M.-H., Ju, T. L., Yen, C.-H., & Chang, C.-M. (2007). Knowledge sharing behavior in virtual communities: The relationship between trust, self-efficacy, and outcome expectations. *International Journal of Human-Computer Studies*, *65*(2), 153–169. https://doi.org/10.1016/j.ijhcs.2006.09.003

Huang, Z., & Benyoucef, M. (2013). From e-commerce to social commerce: A close look at design features. *Electronic Commerce Research and Applications*, *12*(4), 246–259. https://doi.org/10.1016/j.elerap.2012.12.003

ICAP. (2018). *SUPERMARKETS* (No. 21). Greece.

International Monetary Fund. (2018). *Report for Selected Countries and Subjects,*. Retrieved from World Economic Database Outlook Database April 2019 website: https://www.imf.org/external/pubs/ft/weo/2019/01/weodata

Iyengar, R., Ansari, A., & Gupta, S. (2007). A model of consumer learning for service quality and usage. *Journal of Marketing Research*, *44*(4), 529–544.

Izard, C. E. (1977). *Human Emotions* (Plenum Press). New York.

Izard, C. E. (1991). *The psychology of emotions*. Springer Science & Business Media.

Jang, H., Olfman, L., Ko, I., Koh, J., & Kim, K. (2008). The Influence of On-Line Brand Community Characteristics on Community Commitment and Brand Loyalty. *International Journal of Electronic Commerce*, *12*(3), 57–80. https://doi.org/10.2753/JEC1086-4415120304

Jarvenpaa, S. L., & Todd, P. A. (1997). Consumer reactions to electronic shopping on the World Wide Web. *Journal of Electronic Commerce*, *1*(2), 59–88.

Jarvenpaa, S. L., Tractinsky, N., & Saarinen, L. (1999). Consumer trust in an internet store: A cross-cultural validation. *Journal of Computer-Mediated Communication*, *5*(2), 0–0.

Jarvenpaa, S. L., Tractinsky, N., & Vitale, M. (2000). Consumer trust in an Internet store. *Information Technology and Management*, *1*, 45–71.

Jones, E. E., & Davis, E. K. (1965). From Acts to Dispositions: The Attribution Process in Person Perception. *Advances in Experimental Social Psychology*, *2*, 219–266.

Jöreskog, K. G., & Goldberger, A. S. (1975). Estimation of a model with multiple indicators and multiple causes of a single latent variable. *Journal of the American Statistical Association*, *70*(351a), 631–639.

Jöreskog, K. G., Olsson, U. H., & Wallentin, F. Y. (2016). *Multivariate Analysis with LISREL*. Switzerland: Springer International Publishing AG.

Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology*, *83*(3), 693–710. https://doi.org/10.1037/0022-3514.83.3.693

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, *47*(4), 263–291.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, *53*(1), 59–68. https://doi.org/10.1016/j.bushor.2009.09.003

Karnstedt, M., Hennessy, T., Chan, J., Basuchowdhuri, P., Hayes, C., & Strufe, T. (2010). Churn in social networks. In *Handbook of Social Network Technologies and Applications* (pp. 185–220). Retrieved from http://link.springer.com/chapter/10.1007/978-1-4419-7142-5_9

Karnstedt, M., Hennessy, T., Chan, J., & Hayes, C. (2010, August). *Churn in Social Networks: A Discussion Boards Case Study*. 233–240. https://doi.org/10.1109/SocialCom.2010.40

Keaveney, S. M. (1995). Customer switching behavior in service industries: An exploratory study. *Journal of Marketing*, *59*(2), 71–82.

Kelley, H. H. (1967). *Attribution Theory in Social Psychology.* (in Nebraska Symposium on Motivation, Vol. 15). D. Levine. Lincoln, NE: University of Nebraska Press.

Kemper, T. D. (1978). *A social interactional theory of emotions* (Wiley). New York.

Kim, B., Barua, A., & Whinston, A. B. (2002). Virtual field experiments for a digital economy: A new research methodology for exploring an information economy. *Decision Support Systems*, *32*(3), 215–231.

Kim, H. (2000). The churn analysis and determinants of customer loyalty in Korean mobile phone market. *Korean Information Society*, *Review*(2000), 1–18.

Kim, H.-S., & Yoon, C.-H. (2004). Determinants of subscriber churn and customer loyalty in the Korean mobile telephony market. *Telecommunications Policy*, *28*(9–10), 751–765. https://doi.org/10.1016/j.telpol.2004.05.013

Kim, M.-J., Chung, N., & Lee, C.-K. (2011). The effect of perceived trust on electronic commerce: Shopping online for tourism products and services in South Korea. *Tourism Management*, *32*(2), 256–265. https://doi.org/10.1016/j.tourman.2010.01.011

Kim, M.-K., Park, M.-C., & Jeong, D.-H. (2004). The effects of customer satisfaction and switching barrier on customer loyalty in Korean mobile telecommunication services. *Telecommunications Policy*, *28*(2), 145–159. https://doi.org/10.1016/j.telpol.2003.12.003

Kim, S., Chang, Y., Wong, S. F., & Park, M.-C. (2015). *Customer Resistance to Churn in the Mobile Telecommunication Sector: The Relationship between Trust, Commitment, and Perceived Risk*. Retrieved from https://www.researchgate.net/profile/Younghoon_Chang/publication/269997295_Customer_Resistance_to_Churn_in_the_Mobile_Telecommunication_Sector_The_Relationship_between_Trust_Commitment_and_Perceived_Risk/links/549e3f8d0cf202801ea6b62f.pdf

King-Casas, B., Tomlin, D., Anen, C., Camerer, C., Quartz, S. R., & Montague, P. R. (2005). Getting to know you: Reputation and trust in a two-person economic exchange. *Science*, *308*, 78–83. https://doi.org/10.1029/2003PA000992

Kittur, A., Chi, E., Pendleton, B. A., Suh, B., & Mytkowicz, T. (2007). Power of the few vs. wisdom of the crowd: Wikipedia and the rise of the bourgeoisie. *World Wide Web*, *1*(2), 19.

Kollock, P. (1999). *The Economies of Online Cooperation: Gifts and Public Goods in Cyberspace.* (Routledge). London.

Krishnamurthy, S., & Kucuk, S. U. (2009). Anti-branding on the internet. *Journal of Business Research*, *62*(11), 1119–1126. https://doi.org/10.1016/j.jbusres.2008.09.003

Kumar, V., Petersen, J. A., & Leone, R. P. (2007). How valuable is word of mouth? *Harvard Business Review*, *85*(10), 139–149.

La Porta, R., Lopez-de-Salinas, F., Shleifer, A., & Vishny, R. W. (1997). Trust in Large Organizations. *American Economic Review Papers and Proceedings*, *87*, 333–338.

Lambrecht, A., & Skiera, B. (2006). Paying too much and being happy about it: Existence, causes, and consequences of tariff-choice biases. *Journal of Marketing Research*, *43*(2), 212–223.

Laroche, M., Habibi, M. R., & Richard, M.-O. (2013). To be or not to be in social media: How brand loyalty is affected by social media? *International Journal of Information Management*, *33*(1), 76–82. https://doi.org/10.1016/j.ijinfomgt.2012.07.003

Larzelere, R. E., & Huston, T. L. (1980). The Dyadic Trust Scale: Toward Understanding Interpersonal Trust in Close Relationships. *Journal of Marriage and the Family*, *42*(3), 595. https://doi.org/10.2307/351903

Lawler, E. J. (1992). Affective Attachments to Nested Groups: A Choice-Process Theory. *American Sociological Review*, *57*(3), 327. https://doi.org/10.2307/2096239

Lawler, E. J. (2001). An affect theory of social exchange1. *American Journal of Sociology*, *107*(2), 321–352.

Lawler, E. J., & Thye, S. R. (1999). Bringing emotions into social exchange theory. *Annual Review of Sociology*, 217–244.

Lawler, E. J., Thye, S. R., & Yoon, J. (2000). Emotion and Group Cohesion in Productive Exchange1. *American Journal of Sociology*, *106*(3), 616–657.

Lawler, E. J., Thye, S. R., & Yoon, J. (2008). Social exchange and micro social order. *American Sociological Review*, *73*(4), 519–542.

Lawler, E. J., & Yoon, J. (1993). Power and the Emergence of Commitment Behavior in Negotiated Exchange. *American Sociological Review*, *58*(4), 465. https://doi.org/10.2307/2096071

Lazarus, R. S. (1984). On the primacy of cognition. *American Psychologist, 39*(2), 124-129.

Lee, H. G. (1998). Do electronic marketplaces lower the price of goods? *Communications of the ACM*, *41*(1), 73–80.

Lee, J., Lee, J., & Feick, L. (2001). The impact of switching costs on the customer satisfaction-loyalty link: Mobile phone service in France. *Journal of Services Marketing*, *15*(1), 35–48.

Lee, S., Yu, M., Yang, C., & Kim, C. (2011). A model for analyzing churn effect in saturated markets. *Industrial Management & Data Systems*, *111*(7), 1024–1038. https://doi.org/10.1108/02635571111161271

Lemmens, A., & Croux, C. (2006). Bagging and boosting classification trees to predict churn. *Journal of Marketing Research*, *43*(2), 276–286.

Levy, S. J. (1985). Dreams, fairy tales, animals, and cars. *Psychology & Marketing*, *2*(2), 67–81.

Lewicki, R. J., & Bunker, B. B. (1996). *Developing and Maintaining Trust in Work Relationships. In Trust in Organizations: Frontiers of Theory and Research* (Kramer R. M. and Tyler T. (eds.)). Thousand Oaks: CA: Sage.

Lewis, J. D., & Weigert, A. (1985). Trust as a social reality. *Social Forces*, *63*(4), 967–985.

Liang, T.-P., & Turban, E. (2011). Introduction to the Special Issue Social Commerce: A Research Framework for Social Commerce. *International Journal of Electronic Commerce*, *16*(2), 5–14. https://doi.org/10.2753/JEC1086-4415160201

Libaque-Sáenz, C. F., Wong, S. F., Chang, Y., Ha, Y. W., & Park, M.-C. (2016). Understanding

antecedents to perceived information risks: An empirical study of the Korean telecommunications

market. *Information Development*, *32*(1), 91–106. https://doi.org/10.1177/0266666913516884

Lickel, B., Hamilton, D. L., Wieczorkowska, G., Lewis, A., Sherman, S. J., & Uhles, A. N. (2000).

Varieties of groups and the perception of group entitativity. *Journal of Personality and Social

Psychology*, *78*(2), 223–246. https://doi.org/10.1037//0022-3514.78.2.223

Lim, K., Sia, C., Lee, M., & Benbasat, I. (2006). Do I Trust You Online, and If So, Will I Buy? An

Empirical Study of Two Trust-Building Strategies. *Journal of Management Information Systems*,

23(2), 233–266. https://doi.org/10.2753/MIS0742-1222230210

LinkedIn. (2016). LinkedIn Report. Retrieved January 11, 2016, from https://press.linkedin.com/

Liu, C., Marchewka, J. T., Lu, J., & Yu, C.-S. (2005). Beyond concern—A privacy-trust-behavioral

intention model of electronic commerce. *Information & Management*, *42*(2), 289–304.

https://doi.org/10.1016/j.im.2004.01.003

Lu, B., Hirschheim, R., & Schwarz, A. (2015). Examining the antecedent factors of online microsourcing.

Information Systems Frontiers, *17*(3), 601–617. https://doi.org/10.1007/s10796-013-9440-y

Luo, W., & Najdawi, M. (2004). Trust-Building Measures: A Review of Consumer Health Portals.

Communications of the ACM, *47*(1), 109–113.

Lyon, F., Mollering, G., & Saunder, M. N. K. (2012). *Handbook of research methods on trust.* London:

Edward Elgar Publishing.

Macy, M. W. (1993). Backward-looking social control. *American Sociological Review*, 819–836.

Madden, G., Savage, S. J., & Coble-Neal, G. (1999). Subscriber churn in the Australian ISP market.

Information Economics and Policy, *11*(2), 195–207.

Mael, F., & Ashforth, B. E. (1992). Alumni and their alma mater: A partial test of the reformulated model

of organizational identification. *Journal of Organizational Behavior*, *13*(23), 103–123.

Mardsen, P. (2010). *Social Commerce: Monetizing social media.* Hamburg, Germany: Syzygy Deutschland Gmbh.

Maron, M. E. (1961). Automatic Indexing: An Experimental Inquiry. *Journal of the ACM*, *8*(3), 404–417. https://doi.org/10.1145/321075.321084

Martinez, A. M., & Kak, A. C. (2001). PCA versus LDA. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, *23*(2), 228–233.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An Integrative Model of Organizational Trust. *The Academy of Management Review*, *20*(3), 709. https://doi.org/10.2307/258792

Mazaheri, E., Richard, M.-O., & Laroche, M. (2011). Online consumer behavior: Comparing Canadian and Chinese website visitors. *Journal of Business Research*, *64*(9), 958–965. https://doi.org/10.1016/j.jbusres.2010.11.018

McAlexander, J. H., Schouten, J. W., & Koenig, H. F. (2002). Building Brand Community. *Journal of Marketing*, *66*, 38–54.

McConnell, A. R., Sherman, S. J., & Hamilton, D. L. (1997). Target entitativity: Implications for information processing about individual and group targets. *Journal of Personality and Social Psychology*, *72*(4), 750–762.

McCullagh, P. (1980). Regression models for ordinal data. *Journal of the Royal Statistical Society*, *42*(2), 109–142.

McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust measures for e-commerce: An integrative typology. *Information Systems Research*, *13*(3), 334–359.

McKnight, D. H., Cummings, L. L., & Chervany, N. L. (1998). Initial trust formation in new organizational relationships. *Academy of Management Review*, *23*, 473–490.

McLachlan, G. J. (2004). *Discriminant Analysis and Statistical Pattern Recognition.* Wiley.

Messinger, P. R., Stroulia, E., Lyons, K., Bone, M., Niu, R. H., Smirnov, K., & Perelgut, S. (2009).
    Virtual worlds — past, present, and future: New directions in social computing. *Decision Support
    Systems*, *47*(3), 204–228. https://doi.org/10.1016/j.dss.2009.02.014

Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, Continuance, and
    Normative Commitment to the Organization: A Meta-analysis of Antecedents, Correlates, and
    Consequences. *Journal of Vocational Behavior*, *61*(1), 20–52.
    https://doi.org/10.1006/jvbe.2001.1842

Mezulis, A. H., Abramson, L. Y., Hyde, J. S., & Hankin, B. L. (2004). Is There a Universal Positivity
    Bias in Attributions? A Meta-Analytic Review of Individual, Developmental, and Cultural
    Differences in the Self-Serving Attributional Bias. *Psychological Bulletin*, *130*(5), 711–747.
    https://doi.org/10.1037/0033-2909.130.5.711

Milgram, S. (1977). *The Familiar Stranger: An Aspect of Urban Anonymity* (The Individual in a Social
    World: Essays and Experiments, S. Milgram). Reading, MA: Addison-Wesley.

Milliman, R. E., & Fugate, D. L. (1988). Using trust-transference as a persuasion technique: An empirical
    field investigation. *Journal of Personal Selling & Sales Management*, *8*(2), 1–7.

Misztal, B. A. (1996). *Trust in modern societies.* Cambridge: Polity.

Mittal, B. (2010). Consumer Relationships with Brands: Loyalty, Romance, and Brand Tribes. In
    Consumer Behavior: Human Pursuit of Happiness in the World of Goods (Open Mentis, pp. 542–
    548). Cincinnati, OH: MYCBBook.

Mizruchi, M. S., & Galaskiewicz, J. (1993). Networks of interorganizational relations. *Sociological
    Methods & Research*, *22*(1), 46–70.

Mockus, A., Fielding, R. T., & Herbsleb, J. D. (2002). Two case studies of open source software
    development: Apache and Mozilla. *ACM Transactions on Software Engineering and
    Methodology (TOSEM)*, *11*(3), 309–346.

Molm, L. D. (1994). Dependence and risk: Transforming the structure of social exchange. *Social Psychology Quarterly*, 163–176.

Molm, L. D., & Cook, Karen. S. (1995). Social exchange and exchange networks. *Sociological Perspectives on Social Psychology*, *2*, 209–235.

Morgan, R. M., & Hunt, S. D. (1994). *The commitment-trust theory of relationship marketing*. *58*(July), 20–38.

Mozer, M. C., Wolniewicz, R., Grimes, D. B., Johnson, E., & Kaushansky, H. (2000). Predicting subscriber dissatisfaction and improving retention in the wireless telecommunications industry. *IEEE Transactions on Neural Networks*, *11*(3), 690–696.

Muniz, A. M., & O'Guinn, T. C. (2001). Brand Community. *Journal of Consumer Research*, *27*(4), 412–432. https://doi.org/10.1086/319618

Muniz Jr, A. M., & Hamer, L. O. (2001). *Us Versus Them: Oppositional Brand Loyalty and the Cola Wars*. Valdosta, GA: Association for Consumer Research.

Muniz Jr, A. M., & Schau, H. J. (2005). Religiosity in the abandoned Apple Newton brand community. *Journal of Consumer Research*, *31*(4), 737–747.

Myerson, R. B. (1991). *Game theory.* Cambridge: Harvard University Press.

Newcomb, T. (1961). *The Acquaintance Process.* New York: Holt, Rinehart, and Winston.

Ngonmang, B., Viennet, E., & Tchuente, M. (2012, August). *Churn Prediction in a Real Online Social Network Using Local CommunIty Analysis*. 282–288. https://doi.org/10.1109/ASONAM.2012.55

Nielsen, A. C. (2001). *Major study to track store switching* (Retail World No. August).

Nieminen, T., Martelin, T., Koskinen, S., Simpura, J., Alanen, E., Härkänen, T., & Aromaa, A. (2007). Measurement and socio-demographic variation of social capital in a large population-based survey. *Social Indicators Research*, *85*(3), 405–423. https://doi.org/10.1007/s11205-007-9102-x

Odekerken-Schröder, G., De Wulf, K., & Schumacher, P. (2003). Strengthening outcomes of retailer–
consumer relationships: The dual impact of relationship marketing tactics and consumer
personality. *Journal of Business Research*, *56*(3), 177–190.

Oestreicher-Singer, G., & Zalmanson, L. (2009). " Paying for Content or Paying for Community?" The
Effect of Social Involvement on Subscribing to Media Web Sites. *ICIS 2009 Proceedings*, 9.

Okada, E. M. (2005). Justification effects on consumer choice of hedonic and utilitarian goods. *Journal of
Marketing Research*, *42*(1), 43–53.

Olbrich, R., & Holsing, C. (2011). Modeling Consumer Purchasing Behavior in Social Shopping
Communities with Clickstream Data. *International Journal of Electronic Commerce*, *16*(2), 15–
40. https://doi.org/10.2753/JEC1086-4415160202

Oliver, R. L. (1999). Whence Consumer Loyalty? *Journal of Marketing*, *63*, 33.
https://doi.org/10.2307/1252099

Panteli, N., & Sockalingam, S. (2005). Trust and conflict within virtual inter-organizational alliances: A
framework for facilitating knowledge sharing. *Decision Support Systems*, *39*(4), 599–617.

Patterson, A. (2012). Social-networkers of the world, unite and take over: A meta-introspective
perspective on the Facebook brand. *Journal of Business Research*, *65*(4), 527–534.
https://doi.org/10.1016/j.jbusres.2011.02.032

Pavlou, P. A., & Gefen, D. (2004). Building Effective Online Marketplaces with Institution-Based Trust.
Information Systems Research, *15*(1), 37–59.

Pavlou, P. A., Liang, H., & Xue, Y. (2007). Understanding and mitigating uncertainty in online
environments: A principal-agent perspective. *MIS Quarterly*, *31*(1), 105–136.

Peng, J., Quan, J., & Zhang, S. (2013). Mobile phone customer retention strategies and Chinese e-
commerce. *Electronic Commerce Research and Applications*, *12*(5), 321–327.
https://doi.org/10.1016/j.elerap.2013.05.002

Perrière, G., & Thioulouse, J. (2003). Use of correspondence discriminant analysis to predict the subcellular location of bacterial proteins. *Computer Methods and Programs in Biomedicine*, *70*(2), 99–105. https://doi.org/10.1016/S0169-2607(02)00011-1

Pick, D., & Eisend, M. (2016). Customer Responses to Switching Costs: A Meta-Analytic Investigation of the Moderating Influence of Culture. *Journal of International Marketing*, *24*(4), 39–60. https://doi.org/10.1509/jim.15.0139

Postmes, T., Tanis, M., & De Wit, B. (2001). Communication and commitment in organizations: A social identity approach. *Group Processes & Intergroup Relations*, *4*(3), 227–246.

Prentice, D., Miller, D. T., & Lightdale, J. R. (Eds.). (1994). Asymmetries in attachments to groups and to their members: Distinguishing between common-identity and common-bond groups. *Personality & Social Psychology Bulletin*, *20*(5), 484–493.

Qiu, L., & Benbasat, I. (2005). An investigation into the effects of Text-To-Speech voice and 3D avatars on the perception of presence and flow of live help in electronic commerce. *ACM Transactions on Computer-Human Interaction (TOCHI)*, *12*(4), 329–355.

Quelch, J. A., & Klein, L. R. (1996). The Internet and international marketing. *Sloan Management Review*, *37*(3), 60–75.

Raab, J., & Kenis, P. (2009). Heading Toward a Society of Networks: Empirical Developments and Theoretical Challenges. *Journal of Management Inquiry*. https://doi.org/10.1177/1056492609337493

Raacke, J., & Bonds-Raacke, J. (2008). MySpace and Facebook: Applying the Uses and Gratifications Theory to Exploring Friend-Networking Sites. *CyberPsychology & Behavior*, *11*(2), 169–174. https://doi.org/10.1089/cpb.2007.0056

Rapoport, A., & Horvath, W. J. (1961). A study of a large sociogram. *Behavioral Science*, *6*(4), 279–291.

Ratnasingam, P. (2005). Trust in inter-organizational exchanges: A case study in business to business electronic commerce. *Decision Support Systems*, *39*(3), 525–544. https://doi.org/10.1016/j.dss.2003.12.005

Reeskens, T., & Hooghe, M. (2007). Cross-cultural measurement equivalence of generalized trust. Evidence from the European Social Survey (2002 and 2004). *Social Indicators Research*, *85*(3), 515–532. https://doi.org/10.1007/s11205-007-9100-z

Reichheld, F. (1996). *The loyalty effect: The hidden force behind growth, profits and lasting value.* Boston. MA.: Harvard Business School Press.

Reichheld, F., & Sasser, Jr. F. W. (1990). Zero defections: Quality comes to services. *Harvard Business Review*, *68*(September-October), 105–111.

Reinartz, W. J., & Kumar, V. (2003). The impact of customer relationship characteristics on profitable lifetime duration. *Journal of Marketing*, *67*(1), 77–99.

Relling, M., Schnittka, O., Ringle, C., Sattler, H., & Johnen, M. (2016). Community Members' Perception of Brand Community Character: Construction and Validation of a New Scale. *Journal of Interactive Marketing*, forthcoming.

Rempel, J. K., Holmes, J. G., & Zanna, M. P. (1985). Trust in close relationships. *Journal of Personality and Social Psychology*, *49*(1), 95.

Ren, Y., Kraut, R., & Kiesler, S. (2007). Applying Common Identity and Bond Theory to Design of Online Communities. *Organization Studies*, *28*(3), 377–408. https://doi.org/10.1177/0170840607076007

Rennie, J. D. M., Shih, L., Teevan, J., & Karger, D. R. (2003). Tackling the Poor Assumptions of Naive Bayes Text Classifiers. *ICML*.

Requena, F. (2003). Social capital, satisfaction and quality of life in the workplace. *Social Indicators Research*, *61*(3), 331–360.

Rheingold., H. (2000). *The Virtual Community: Homesteading on the Electronic Frontier.* (MIT Press). Cambridge, MA, USA.

Richard, M.-O., & Habibi, M. R. (2016). Advanced modeling of online consumer behavior: The moderating roles of hedonism and culture. *Journal of Business Research*, *69*(3), 1103–1119. https://doi.org/10.1016/j.jbusres.2015.08.026

Riketta, M., & Dick, R. V. (2005). Foci of attachment in organizations: A meta-analytic comparison of the strength and correlates of workgroup versus organizational identification and commitment. *Journal of Vocational Behavior*, *67*(3), 490–510. https://doi.org/10.1016/j.jvb.2004.06.001

Rish, I. (2001). An empirical study of the naive Bayes classifier. *IJCAI 2001 Work Empir Methods Artif Intell*.

Rodgers, S., & Chen, Q. (2005). Internet Community Group Participation: Psychosocial Benefits for Women with Breast Cancer. *Journal of Computer Mediated Communication*, *10*(4), Article 5.

Rokach, L., & Maimon, O. (2005). Top-down induction of decision trees classifiers—A survey. *IEEE Transactions on Systems, Man, and Cybernetics, Part C: Applications and Reviews*, *35*(4), 476–487. https://doi.org/10.1109/TSMCC.2004.843247

Rotter, J. (1967). A New Scale for the Measurement of Interpersonal Trust. *Journal of Personality*, 651–665.

Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A crossdiscipline view of trust. *Academy of Management Review*, *23*(3), 393–404.

Russell, J. A., Weiss, A., & Mendelsohn, G. A. (1989). Affect grid: A single-item scale of pleasure and arousal. *Journal of Personality and Social Psychology*, *57*(3), 493.

Russell, S. J., & Norvig, P. (2003). *Artificial intelligence: A modern approach ; [the intelligent agent book]* (2. ed., internat. ed). Upper Saddle River, NJ: Prentice Hall.

Ruxton, G. D. (2006). The unequal variance t-test is an underused alternative to Student's t-test and the Mann–Whitney U test. *Behavioral Ecology*, *17*, 688–690.

Sarason, S. B. (1974). *The psychological sense of community: Prospects for the community psychology*. San Francisco: Jossey-Bass.

Sashi, C. M. (2012). Customer engagement, buyer-seller relationships, and social media. *Management Decision*, *50*(2), 253–272. https://doi.org/10.1108/00251741211203551

Scholkopf, B., & Smola, A. J. (2001). *Learning with Kernels: Support Vector Machines, Regularization, Optimization, and Beyond*. Cambridge, MA, USA: MIT Press.

Schoorman, F. D., Mayer, R. C., & Davis, J. H. (2007). An integrative model of organizational trust: Past, present, and future. *Academy of Management Review*, *32*(2), 344–354.

Schouten, J. W., & McAlexander, J. H. (1995). Subcultures of consumption: An ethnography of the new bikers. *Journal of Consumer Research*, *22*(1), 43–61.

Schouten, J. W., McAlexander, J. H., & Koenig, H. F. (2007). Transcendent customer experience and brand community. *Journal of the Academy of Marketing Science*, *35*(3), 357–368. https://doi.org/10.1007/s11747-007-0034-4

Sedley, R. (2006). *Customer Engagement Survey Report* (Richard Sedley).

Seo, D., Ranganathan, C., & Babad, Y. (2008). Two-level model of customer retention in the US mobile telecommunications service market. *Telecommunications Policy*, *32*(3–4), 182–196. https://doi.org/10.1016/j.telpol.2007.09.004

Serva, M. A., & Fuller, M. A. (2004). The effects of trustworthiness perceptions on the formation of initial trust: Implications for MIS student teams. *Journal of Information Systems Education*, *15*(4), 383.

Serva, M. A., Fuller, M. A., & Mayer, R. C. (2005). The reciprocal nature of trust: A longitudinal study of interacting teams. *Journal of Organizational Behavior*, *26*(6), 625–648. https://doi.org/10.1002/job.331

Shevlin, R. (2007). Customer engagement is measurable. Retrieved April 7, 2017, from http://marketingroi. wordpress.com/2007/10/02/customer-engagement-is-measurable

Shi, Y., Sia, C. L., & Chen, H. (2013). Leveraging social grouping for trust building in foreign electronic commerce firms: An exploratory study. *International Journal of Information Management*, *33*(3), 419–428. https://doi.org/10.1016/j.ijinfomgt.2013.02.001

Shin, D.-H. (2013). User experience in social commerce: In friends we trust. *Behaviour & Information Technology*, *32*(1), 52–67. https://doi.org/10.1080/0144929X.2012.692167

Siber, R. (1997). .Combating the Churn Phenomenon-As the problem of customer defection increases, carriers are having to find new strategies for keeping subscribers happy. *Telecommunications-International Edition*, *31*(10), 77–81.

Sicilia, M., & Palazón, M. (2008). Brand communities on the internet: A case study of Coca-Cola's Spanish virtual community. *Corporate Communications: An International Journal*, *13*(3), 255–270. https://doi.org/10.1108/13563280810893643

Smith, C. B., McLaughlin, M. L., & Osborne, K. K. (1977). Conduct Control on Usenet. *Journal of Computer Mediated Communication*, *2*(4).

So, K. K. F., King, C., Sparks, B. A., & Wang, Y. (2016a). Enhancing customer relationships with retail service brands: The role of customer engagement. *Journal of Service Management*, *27*(2), 170–193.

So, K. K. F., King, C., Sparks, B. A., & Wang, Y. (2016b). The role of customer engagement in building consumer loyalty to tourism brands. *Journal of Travel Research*, *55*(1), 64–78.

Soderlund, M. (2002). Customer familiarity and its effects on satisfaction and behavioral intentions. *Psychology & Marketing*, *19*(10), 861–880.

Sokolova, M., Japkowicz, N., & Szpakowicz, S. (2006). Beyond Accuracy, F-Score and ROC: A Family of Discriminant Measures for Performance Evaluation. In A. Sattar & B. Kang (Eds.), *AI 2006: Advances in Artificial Intelligence* (Vol. 4304, pp. 1015–1021). https://doi.org/10.1007/11941439_114

Sokolova, M., & Lapalme, G. (2009). A systematic analysis of performance measures for classification tasks. *Information Processing & Management*, *45*(4), 427–437. https://doi.org/10.1016/j.ipm.2009.03.002

Solnick, S. J., & Hemenway, D. (1992). Complaints and disenrollment at a health maintenance organization. *Journal of Consumer Affairs*, *26*(1), 90–103.

Song, G., Yang, D., Wu, L., & Tang, S. (2006). *A Mixed Process Neural Network and Its Application to Churn Prediction in Mobile Communications.* Presented at the Data Mining Workshops, 2006. ICDM Workshops 2006. Sixth IEEE International Conference on. http://doi.ieeecomputersociety.org/10.1109/ICDMW.2006.12

Sonnenbichler, A. C. (2009). *A community membership life cycle model*. Presented at the Sunbelt XIX International Social Network Conference, University of California, San Diego. Retrieved from http://arxiv.org/abs/1006.4271

Stewart, K. J. (2003). Trust transfer on the world wide web. *Organization Science*, *14*(1), 5–17. https://doi.org/10.1287/orsc.14.1.5.12810

Stiglitz, J. E., Sen, A., Fitoussi, J.-P., & others. (2010). Report by the commission on the measurement of economic performance and social progress. *Paris: Commission on the Measurement of Economic Performance and Social Progress*. Retrieved from http://graphics8.nytimes.com/packages/pdf/business/Stiglitzreport.pdf

Stourse, K. G. (1999). *Marketing Telecommunications Services: New approaches for a Changing Environment*. Norwood, MA.: Artech House Inc.

Strub, P. J., & Priest, T. B. (1976). Two patterns of establishing trust: The marijuana user. *Sociological Focus*, *9*(4), 399–411.

Suls, J., Martin, R., & Wheeler, L. (2002). Social Comparison: Why, With Whom, and With What Effect? *Current Directions in Psychological Science*, *11*(5), 159–163.

Sussan, F., Hall, R., & Meamber, L. A. (2012). Introspecting the spiritual nature of a brand divorce. *Journal of Business Research*, *65*(4), 520–526. https://doi.org/10.1016/j.jbusres.2011.02.031

Swimberghe, K. R., Astakhova, M., & Wooldridge, B. R. (2014). A new dualistic approach to brand passion: Harmonious and obsessive. *Journal of Business Research*, *67*(12), 2657–2665. https://doi.org/10.1016/j.jbusres.2014.04.003

Swinyard, W. R. (1993). The effects of mood, involvement, and quality of store experience on shopping intentions. *Journal of Consumer Research*, *20*(2), 271–280.

Szmigin, I., & Reppel, A. E. (2004). Internet community bonding:the case of macnews.de. *European Journal of Marketing*, *38*(5/6), 626–640. https://doi.org/10.1108/03090560410529259

Tajfel, H. (1981). *Human Groups and Social Categories—Studies in Social Psychology*. Cambridge: Cambridge University Press.

Tan, S. J., & Tambyah, S. K. (2011). Generalized Trust and Trust in Institutions in Confucian Asia. *Social Indicators Research*, *103*(3), 357–377. https://doi.org/10.1007/s11205-010-9703-7

Tardini, S., & Cantoni, L. A. . (2005). *A semiotic approach to online communities: Belonging, Interest and identity in websites' and video games' communities*. 371–378.

Taylor, S. E., Fiske, S. T., Etcoff, N. L., & Ruderman, A. J. (1978). Categorical and contextual bases of person memory and stereotyping. *Journal of Personality and Social Psychology*, *36*(7), 778.

Thompson, S. A., & Sinha, R. K. (2008). Brand communities and new product adoption: The influence and limits of oppositional loyalty. *Journal of Marketing*, *72*(6), 65–80.

Tsai, M.-C., Laczko, L., & Bjørnskov, C. (2011). Social Diversity, Institutions and Trust: A Cross-National Analysis. *Social Indicators Research*, *101*(3), 305–322. https://doi.org/10.1007/s11205-010-9670-z

Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, *5*(4), 297–323.

Uzzi, B. (1996). The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect. *American Sociological Review*, *61*, 674–698.

Van den Bulte, C., & Wuyts, S. H. K. (2007). *Social networks in marketing.* Cambridge, MA: MSI Relevant Knowledge Series.

van der Horst, M., & Coffé, H. (2012). How Friendship Network Characteristics Influence Subjective Well-Being. *Social Indicators Research*, *107*(3), 509–529. https://doi.org/10.1007/s11205-011-9861-2

van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer Engagement Behavior: Theoretical Foundations and Research Directions. *Journal of Service Research*, *13*(3), 253–266. https://doi.org/10.1177/1094670510375599

Vandenberghe, C., Bentein, K., & Stinglhamber, F. (2004). Affective commitment to the organization, supervisor, and work group: Antecedents and outcomes. *Journal of Vocational Behavior*, *64*(1), 47–71. https://doi.org/10.1016/S0001-8791(03)00029-0

Varki, S., & Wong, S. (2003). Consumer Involvement in Relationship Marketing of Services. *Journal of Service Research*, *6*(1), 83–91. https://doi.org/10.1177/1094670503254287

Verbeke, W., Dejaeger, K., Martens, D., Hur, J., & Baesens, B. (2012). New insights into churn prediction in the telecommunication sector: A profit driven data mining approach. *European Journal of Operational Research*, *218*(1), 211–229. https://doi.org/10.1016/j.ejor.2011.09.031

Verhoef, P. C., Franses, P. H., & Hoekstra, J. C. (2002). The effect of relational constructs on customer referrals and number of services purchased from a multiservice provider: Does age of relationship matter? *Journal of the Academy of Marketing Science*, *30*(3), 202–216.

Vivek, S. D., Beatty, S. E., & Morgan, R. M. (2012). Customer Engagement: Exploring Customer Relationships Beyond Purchase. *The Journal of Marketing Theory and Practice*, *20*(2), 122–146. https://doi.org/10.2753/MTP1069-6679200201

Wagner, C., & Majchrzak, A. (2007). Enabling Customer-Centricity Using Wikis and the Wiki Way. *Journal of Management Information Systems*, *23*(3), 17–43. https://doi.org/10.2753/MIS0742-1222230302

Wang, C., & Zhang, P. (2012). The evolution of social commerce: The people, management, technology, and information dimensions. *Communications of the Association for Information Systems*, *31*(5), 1–23.

Wei, C.-P., & Chiu, I.-T. (2002). Turning telecommunications call details to churn prediction: A data mining approach. *Expert Systems with Applications*, *23*(2), 103–112.

Weiner, B. (1986). *An Attributional Theory of Motivation and Emotion.* New York: Springer.

Welch, B. L. (1947). The generalization of "Student's" problem when several different population variances are involved. *Biometrika*, *34*(1–2), 28–35.

Wilder, D., & Simon, A. F. (1998). Groups: Implications for social perception and intergroup behavior. In *Intergroup Cognition and Intergroup Behavior* (Sedikides C., Schopler J., and Insko C. A. (eds.), pp. 27–44). Mahwah: NJ: Lawrence Erlbaum Associates.

Williamson, O.E. (1985). *The Economic Institutions of Capitalism* (Free Press). New York.

Williamson, Oliver E. (1993). Calculativeness, trust, and economic organization. *The Journal of Law & Economics*, *36*(1), 453–486.

Winship, C., & Mare, R. D. (1984). Regression Models with Ordinal Variables. *American Sociological Review*, *49*(4), 512–525.

Wirtz, J., den Ambtman, A., Bloemer, J., Horváth, C., Ramaseshan, B., van de Klundert, J., … Kandampully, J. (2013). Managing brands and customer engagement in online brand communities. *Journal of Service Management*, *24*(3), 223–244. https://doi.org/10.1108/09564231311326978

Woisetschläger, D. M., Hartleb, V., & Blut, M. (2008). How to Make Brand Communities Work: Antecedents and Consequences of Consumer Participation. *Journal of Relationship Marketing*, *7*(3), 237–256. https://doi.org/10.1080/15332660802409605

Wold, S., Sjöström, M., & Eriksson, L. (2001). PLS-regression: A basic tool of chemometrics. *Chemometrics and Intelligent Laboratory Systems*, *58*(2), 109–130.

Wood, J. (1989). Theory and Research Concerning Social Comparisons of Personal Attributes. *Psychological Bulletin*, *106*(2), 231–248.

World Bank. (2014). GINI Index (World Bank Estimate). Retrieved June 25, 2019, from World Bank Database website: https://data.worldbank.org/indicator/SI.POV.GINI/

Wu, C.-C., Huang, Y., & Hsu, C.-L. (2014). Benevolence trust: A key determinant of user continuance use of online social networks. *Information Systems and E-Business Management*, *12*(2), 189–211. https://doi.org/10.1007/s10257-013-0216-1

Wu, J.-J., Chen, Y.-H., & Chung, Y.-S. (2010). Trust factors influencing virtual community members: A study of transaction communities. *Journal of Business Research*, *63*(9–10), 1025–1032. https://doi.org/10.1016/j.jbusres.2009.03.022

Yadav, M. S., de Valck, K., Hennig-Thurau, T., Hoffman, D. L., & Spann, M. (2013). Social Commerce:

A Contingency Framework for Assessing Marketing Potential. *Journal of Interactive Marketing*,

27(4), 311–323. https://doi.org/10.1016/j.intmar.2013.09.001

Zaglia, M. E. (2013). Brand communities embedded in social networks. *Journal of Business Research*,

66(2), 216–223. https://doi.org/10.1016/j.jbusres.2012.07.015

Zajonc, R. B. (1968). Attitudinal Effects of Mere Exposure. *Journal of Personality and Social

Psychology*, *9*(1), 1–27.

Zhou, L., Zhang, P., & Zimmermann, H.-D. (2013). Social commerce research: An integrated view.

Electronic Commerce Research and Applications, *12*(2), 61–68.

https://doi.org/10.1016/j.elerap.2013.02.003

Zhou, Zhimin, Zhang, Q., Su, C., & Zhou, N. (2012). How do brand communities generate brand

relationships? Intermediate mechanisms. *Journal of Business Research*, *65*(7), 890–895.

https://doi.org/10.1016/j.jbusres.2011.06.034

Zhou, Zhongyun, Jin, X.-L., Vogel, D. R., Fang, Y., & Chen, X. (2011). Individual motivations and

demographic differences in social virtual world uses: An exploratory investigation in Second

Life. *International Journal of Information Management*, *31*(3), 261–271.

https://doi.org/10.1016/j.ijinfomgt.2010.07.007

Zimmerman, D. W. (2004). A note on preliminary tests of equality of variances. *British Journal of

Mathematical and Statistical Psychology*, *57*, 173–181.

Zucker, L. G. (1986). Production of trust: Institutional sources of economic structure, 1840–1920.

Research in Organizational Behavior, *8*, 53-111.