ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΙΑΣ

ΠΟΛΥΤΕΧΝΙΚΗ ΣΧΟΛΗ

ΤΜΗΜΑ ΗΛΕΚΤΡΟΛΟΓΩΝ ΜΗΧΑΝΙΚΩΝ ΚΑΙ ΜΗΧΑΝΙΚΩΝ ΥΠΟΛΟΓΙΣΤΩΝ

Η χρήση των πληροφοριακών συστημάτων στη μελέτη της αγοραστικής συμπεριφοράς των καταναλωτών από μικρομεσαίες επιχειρήσεις (ΜμΕ) με σκοπό τη δημιουργία πιστής πελατείας.

Using Information Systems for the tracking of Small and Medium Enteprises (SMEs) customers' purchase behavior to achieve customer loyalty.

ΔΙΠΛΩΜΑΤΙΚΗ ΕΡΓΑΣΙΑ

Του

ΚΟΥΒΕΛΟΥ ΠΑΡΑΣΚΕΥΑ

Βόλος, Ιούλιος 2017

ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΙΑΣ
ΠΟΛΥΤΕΧΝΙΚΗ ΣΧΟΛΗ

ΤΜΗΜΑ ΗΛΕΚΤΡΟΛΟΓΩΝ ΜΗΧΑΝΙΚΩΝ ΚΑΙ ΜΗΧΑΝΙΚΩΝ

ΥΠΟΛΟΓΙΣΤΩΝ

Η χρήση των πληροφοριακών συστημάτων στη μελέτη της αγοραστικής συμπεριφοράς των καταναλωτών από μικρομεσαίες επιχειρήσεις (ΜμΕ) με σκοπό τη δημιουργία πιστής πελατείας.

Using Information Systems for the tracking of Small and Medium Enteprise (SMEs) customers' purchase behavior to achieve customer loyalty.

ΔΙΠΛΩΜΑΤΙΚΗ ΕΡΓΑΣΙΑ

Του

ΚΟΥΒΕΛΟΥ ΠΑΡΑΣΚΕΥΑ

Επιβλέποντες :

ΤΣΟΜΠΑΝΟΠΟΥΛΟΥ ΠΑΝΑΓΙΩΤΑ **ΜΠΟΖΑΝΗΣ ΠΑΝΑΓΙΩΤΗΣ**
Αναπληρώτρια Καθηγήτρια Π.Θ.   Καθηγητής Π.Θ.

Εγκρίθηκε από την διμελή εξεταστική επιτροπή την 7η Ιουλίου 2017

(Υπογραφή)   *(Υπογραφή)*

…......................................   ....

ΤΣΟΜΠΑΝΟΠΟΥΛΟΥ ΠΑΝΑΓΙΩΤΑ   ΜΠΟΖΑΝΗΣ ΠΑΝΑΓΙΩΤΗΣ

Αναπληρώτρια Καθηγήτρια Π.Θ.   Καθηγητής Π.Θ.

Βόλος, Ιούλιος 2017

(Υπογραφή)

....

ΚΟΥΒΕΛΟΣ ΠΑΡΑΣΚΕΥΑΣ

Διπλωματούχος Μηχανικός Ηλεκτρονικών Υπολογιστών, Τηλεπικοινωνιών και

Δικτύων του Τμήματος Ηλεκτρολόγων Μηχανικών και Μηχανικών Υπολογιστών,

Πανεπιστημίου Θεσσαλίας

Ackowledgements

I would like to take this opportunity to thank everyone who played a part in the successful conclusion of this journey. First of all, I would like to thank all of my professors that have helped me over the years to approach and finally attain my goal. I would like to thank my supervisors: Associate Professor Panagiota Tsompanopoulou, and Professor Panagiotis Bozanis for trusting me with the responsibility of completing this thesis and their support throughout the process. I would particularly like to express my gratitude to Ms. Tsompanopoulou for her continuous encouragement and for inspiring me to persevere. In addition, I must assert my gratefulness to the Administrative Support - notably Ms. Papalexandri - and to the Secretary of the school Ms. Karasimou. Finally, I would like to thank my family, friends and colleagues for their trust, deep commitment and endless patience.

Περίληψη

Η παρούσα εργασία επιχειρεί να απαντήσει στο ερώτημα πώς οι μικρομεσαίες επιχειρήσεις μπορούν να δημιουργήσουν μια πιστή πελατειακή βάση χρησιμοποιώντας Πληροφοριακά Συστήματα που καταγράφουν την καταναλωτική συμπεριφορά των πελατών τους. Διεξήχθη εκτενής βιβλιογραφική ανασκόπηση για την κατανόηση των διαφόρων πτυχών της συμπεριφοράς των καταναλωτών και για τον προσδιορισμό των οφελών, των καταλυτών και των δυνατοτήτων μέτρησης της πιστότητας των πελατών, πριν προσδιοριστούν τα βασικά χαρακτηριστικά των μικρών και μεσαίων επιχειρήσεων που τις διαφοροποιούν από τις υπόλοιπες εταιρείες. Με βάση τα παραπάνω, αξιολογήθηκαν ορισμένες τεχνολογίες - που επιλέχθηκαν ειδικά για τις ΜμΕ - και υλοποιήθηκε ένα παράδειγμα ενός Πληροφοριακού Συστήματος που παρακολουθεί τη αγοραστική συμπεριφορά των καταναλωτών στο διαδίκτυο καθώς επίσης μέτρα και προωθεί την πιστότητα των πελατών.

Abstract

The present work attempts to answer the question of how small and medium-sized enterprises can create a loyal customer base by using Information Systems that track the consumer purchasing behaviour of their customers. An extensive literature review was conducted to understand the different aspects of consumer purchase behaviour, and to define the benefits, the drivers, and the potential metrics of customer loyalty, before identifying key-characteristics of small and medium-sized companies that set them apart from other companies. On the basis of the above, certain technologies - chosen specifically for SMEs - were assessed and an example of an Information System that tracks consumer purchase behaviour online and also measures and promotes customer loyalty was implemented.

Contents

List of figures

14

1   *Introduction*

It is gradually becoming a common belief that enterprises which retain their customers over longer periods of time, increasing the lifetime value of their customer base, reducing price-elasticity of demand, and intelligently targeting their marketing investment, enjoy greater revenues and reduced operating costs. Customer loyalty, as a form of purchase behaviour, impacts both directly and indirectly on the profitability of firms, placing the companies that earn it in a favourable and superior business position. In an increasingly competitive environment, threatened by larger and more resource-rich rivals, small and medium-sized enterprises (SMEs) - the backbone of both developing and mature economies - cannot afford to see their customers defect to the competition. The aim of this thesis is to examine if and how small and medium-sized enterprises can create a loyal customer base by using Information Systems (IS) to track the purchase behaviour of their customers.

In pursuance of answering these questions a broad literature review was conducted. The starting point was defining the meaning of consumer purchasing behaviour and how that is studied and modeled with the aim of predicting and affecting customer behaviour in the future. The cultural, social, personal, and psychological factors of consumers that impact on their purchase behaviour were identified and the purchase decision process was analysed in five stages and discussed. Then the research was focused on what is customer loyalty and how it can be beneficial for the companies that attain it. The available methods of how to measure loyalty were then examined, before detailing the ways that consumer loyalty can be incentivised and earned. Finally, the definitions of small and medium-sized enterprises in different parts of the world were provided, and their special characteristics - with a focus on their relationship with Information Technology (IT) - were presented.

In the next part of the thesis, certain technologies that can be used to track the purchase behaviour of customers have been tested and an implementation of an information system that tracks and promotes loyalty has been demonstrated.

In the final chapter, the conclusions from the literature review and the implementation of the information system are being presented along with some thoughts and ideas for the future.

2 *Theoretical Background*

2.1 *Consumer purchase behaviour*

2.1.1 Definition of consumer purchase behaviour

Consumer purchase behaviour or consumer buying behaviour is the study of the individuals or groups and the practices they employ to fulfil their needs for products, services, experiences or ideas. It refers to the purchase behaviour of final consumers who acquire products or services for own consumption as it focuses on B2C (Business-To-Consumer) activities. It studies all phases of buying behaviour - from pre-purchase interactions to post-purchase utilisation and assessment activities - as well as all people that are involved in the decision-making and consuming activities. [1][2][3]

The study and eventually the prediction of consumer purchase behaviour is not an easy task, in part because of how diverse consumers' demographics and other characteristics - such as personality and lifestyles - are. [2] In order to answer the main question of how consumers will react to particular marketing efforts and specific incentives, a model named "Model of Consumer Buying Behaviour" has been developed, which is based on the observation that some groups of consumers behave similarly to each other. [3] Figure 1, shows a comprehensive visual representation of this model. [4]
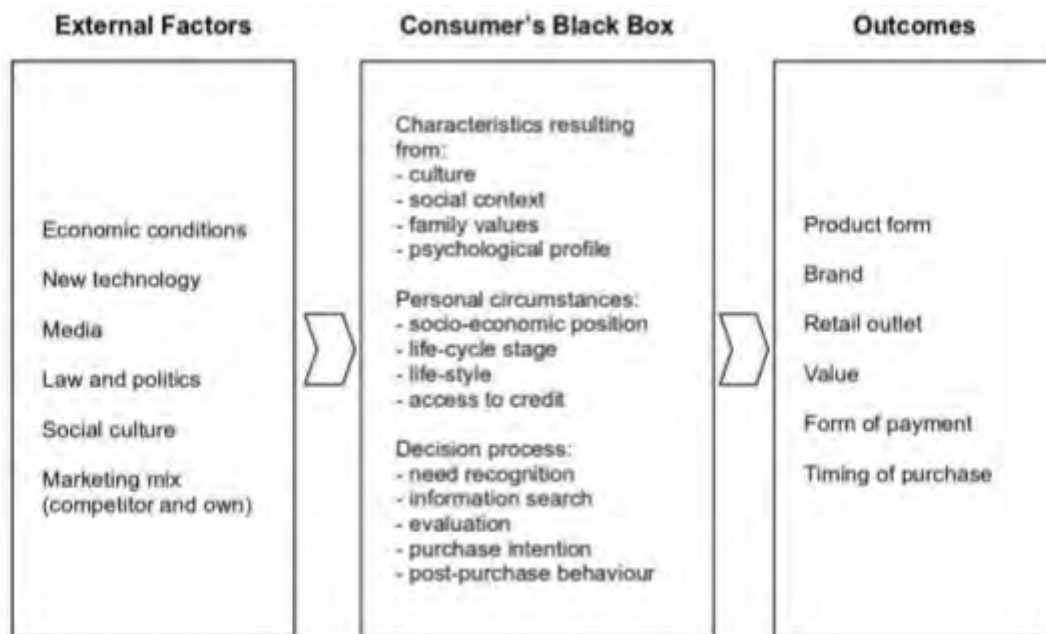
Figure 1: The Consumer Buying Behaviour Model [4]

The first box lists the external factors that may affect the behaviour of buyers. They include elements of their environment such as economic situation, technological evolution, media exposure/coverage, legal and political forces, cultural environment and the marketing mixes employed by competing entities. [4] With marketing mix we refer to the four expansive dimensions of marketing choices, also known as the "4 P's": Product, Price, Place and Promotion. [3] [5]

These external stimuli enter the "Consumer's Black Box" which consists of a combination of internal elements of the buyers, such as certain personal characteristics or circumstances, as well as their individual purchase decision process. It is in the "Black Box" that the consumers' internal considerations help to construct their reaction to all external stimuli. The outcomes of this process are shown in the third box and they come in the form of choices that consumers make: choice of product, of brand, of amount spent, of payment form and finally of place and timing of purchase.

The first step in understanding, predicting and eventually influencing consumer purchase behaviour is to concentrate on the internal factors of the "Consumer's Black Box": Consumers' Characteristics and Consumer Purchase Decision Process.

2.1.1.1   Consumers'/Buyers' characteristics

We can organise and summarise the Buyers' Characteristics in the following figure (Figure 2). These characteristics are distinct aspects of the consumers and can affect their buying behaviour in diverse ways. [6]

Figure 2: "Consumer's Black Box", Consumers' characteristics [6]

Cultural factors

Culture is largely a learned behaviour, formed by the society in which consumers grow up and it is the fundamental source of consumers' desires and their purchase behaviour. Those basic wants and behaviors, values and perceptions that are taught to

consumers by their families and other important social organisations are the Cultural Factors. What is being taught to consumers may differ from country to country or by social group to social group, but every society or group have a culture and it can have a very strong influence on consumers' purchase behaviour.

Societies or cultural groups may have several **subcultures**. A subculture is a group of people that shares certain qualities or beliefs that stem from specific life experiences and circumstances but it can include people from different countries, religions, races and geographic region. An example of such a subculture is the "mature" consumer. [7]

Social classes can also be considered as subcultures: they are broad groups in society having common economic, cultural or political status. The transfer of subcultural values and corresponding behavioural patterns to the next generation is happening through socialisation. Most concepts of social class nowadays assume three general categories: **Upper** class, **Middle** Class and **Lower** class. Consumers from different social classes tend to have distinct purchase behaviour and will most likely aspire for different categories of products. For example, people from the lower class are more likely to spend their available income to buy "budget" items that are required for their survival and less inclined to buy "luxury" products. [8][9][10]

The cultural factors of a society or a group are not set in stone. They too follow certain trends and evolve over time. It is important to monitor the customer segments, their cultures and subcultures and observe for possible cultural shifts in order to be able to predict changes in their consumer behaviour. [7]

Social factors

People are social beings and by default they live in some type of society, interacting with others, assuming certain roles, demonstrating distinct behaviours and adhering to specific rules and regulations. These are important social factors that influence

consumers' purchase behaviour. We can classify the social factors as follows: **groups**, **role in society** and **social status**. [10][11]

In business, a **group** is described as having two or more people that will interact with each other and work together with the purpose of achieving individual or mutual goals. More often than not, consumers are part of more than just one group that influence their purchase behaviour on different stages of the purchase decision process and on different purchasing occasions and it is also possible that they are influenced by groups to which they don't belong (aspirational groups). Groups that influence buyers' behaviour are called **reference groups** and they consist of people that serve as direct or indirect points of comparison for individuals. [10][11][12]

Individual members of reference groups with direct influence may play distinct roles in the purchase process. Those roles are usually the following:

- The **Initiator** is the person that first brings up the idea of buying a product or service
- The **Influencer** whose ideas, perceptions and advice influence the purchase decision process the most because they have special skills or knowledge. An influencer can also be described as an Opinion Leader.
- The **Decider** is the individual that has the authority (financial or otherwise) to finalise the decision process and choose for a specific product or service. This person is not necessarily the consumer.
- The **Buyer** performs the purchase transaction. This is normally the consumer but that is not always the case.
- The **User** is the person (or people) that consumes the product or service that has been bought.

A special type of groups with particularly crucial role in consumers' preferences and behaviour is **Family Groups**. The family is usually the first group that influences individuals as it is the environment where they grow up and where they are being taught the basic perceptions and values that form their desires and behaviours (Family of Orientation). It can also affect buying behaviour by altering already established

patterns later in life due to the influence of the spouse (Family of Procreation). Families can influence purchase behaviour in two ways:

- By shaping the personality, beliefs and characteristics of the person.
- By guiding and forming the purchase decision process of the individual.

The different **roles** that one holds **in society** can also affect one's buying behaviours. For example, a person who holds a prominent position in an organisation may be expected to purchase certain goods that reflect the prestige but at the same time the individual can be a parent that has to cover more pressing needs of the family. Similarly, the **social status** of people impacts on the shopping tendencies and patterns. By social status we refer to the ascribed or achieved position of an individual or a group in society. [10][13]

Personal factors

Personal factors such as occupation, economic situation, gender, age or life-stage, lifestyle and personality or self-concept strongly influence consumer purchasing behaviour. [6][15]

It is fairly evident that the **occupation** and **economic situation** of consumers have significant impact on their buying. For example, a white-collar worker would need to buy suits for work while at the same time a blue-collar worker wouldn't have that need. Similarly, the higher the income and the savings of consumers, the more possible it is that they are interested in luxury products and services. It is important to mention that the perceived economic situation that buyers have of themselves is equally important to the actual, as one can observe in times of extremely good or bad economical times. [16]

Gender plays an important role as men and women need and eventually buy different products. It has been observed that the majority of purchases of everyday domestic goods is carried out or at least decided by women while most of alcoholic drinks are being purchased by men. This is to a great extent due to the traditional roles that male

and female consumers have in their social groups. As the roles that are appointed to each gender change and evolve, so do the needs and ultimately the purchasing. On the other hand, it seems that men and women are also doing their shopping in different ways. Studies have shown that when buying online women are happy just to see pictures of the products in real-life context - a set of plates on a table for example - while men favor websites with numerous pictures of the products. [15]

It is also easy to notice how **age** - both chronological (actual) and cognitive (perceived) - have an effect on what and how people spend their income. Consumers' cognitive age can help considerably in anticipating their buying choices, from the restaurant they pick for dinner to the apartment they want to rent. Usually, consumers' cognitive age is younger than their chronological. [15]

Similarly, the **life-stage** of consumers alters purchasing habits. A male consumer who is single will most likely not be interested in buying products such as a baby-crib or services such as babysitting - these would be more likely products a married man would buy. Most consumers will usually go through separate stages of life that come with distinct purchasing mindsets (bachelorhood, newly married/ "fresh" couple, married with children/long-term couple, empty nest/retirement/old age). [10][13]

Lifestyle is the way that people have chosen to live their lives and interact with their environment. It "is a composite of motivations, needs, and wants and is influenced by factors such as culture, family, reference groups, and social class.". [17] It is demonstrated through the **activities** (work, hobbies, sports, etc.), **interests** (recreation, family, food, etc.) and **opinions** (about themselves, products, social issues, etc.) of consumers. These are referred to as AIO Dimensions. Psychographics, which is the analysis of consumer lifestyles, is used to identify how buyers are making their purchase decisions. A widely used classification system of lifestyles that is based on psychographics is known as VALS (Values, Attitudes and LifeStyles) framework.

With the term **personality** we refer to certain traits of a person that define the person's temperament and tendencies. Such traits that psychologists usually mention are the following: openness (how receptive one is to new experiences),

conscientiousness (how persevering one is), extraversion (how extroverted or reserved one is), agreeableness (how well one gets on with others) and neuroticism (how inclined one is to negative mindsets). Some marketers tend to think that personality is very important to study and try to understand as it permits the creation of a customer profile, which can then be used to tailor products and services for that customer. Other marketing experts suggest that consumers' behaviour is more closely linked to **self-concept** than personality itself. Self-concept is the way buyers see themselves and it can be positive or negative. Their ideal self-concept - how they would prefer to see themselves - or how they believe others see them can impact their buying behaviour. **Brands** can also have personalities - selections of human traits associated with brands - designed to encourage target consumers to relate and engage more profoundly with said brands. [15][18]

Psychological factors

The **psychological factors** are the aspects of a person's psychology that prompt them to take certain actions in order to pursue satisfaction. The four principal psychological factors are shown in Figure 3. [19]

Figure 3: The Psychological Factors [19]

The level and nature of **motivation** can have an effect on the buying behaviour of consumers. A motive is a need or desire that creates enough strain for consumers that they take actions to satisfy it. Abraham Maslow, an American psychologist of the 20th century, established a hierarchy of needs that consists of basic or physiological needs (food, water and sleep), safety or satisfaction needs (feeling safe and protected), social or love/belonging needs (friends, family and sexual intimacy), esteem needs (being recognised and respected by others) and self-actualisation needs (realising one's full potential). Typically consumers tend to first satisfy their needs in the same order following the hierarchy presented. When a need is met, it stops being a motive and the consumer focuses on the next most pressing instigator. [15][18][19][20]

Purchase decisions are strongly affected by the **perception** that the consumers have of the products and the brands. Perception is the mechanism through which buyers process the information and stimuli from their environment in order to construct a relevant response. Consumers don't respond to all stimuli because first of all they tend

to ignore most of the messages - an impulse described as **selective attention**. Furthermore, even if they do acknowledge the message, they interpret it according to their already existing beliefs and mindsets, usually distorting it - this is called **selective distortion**. Lastly, consumers have the inclination to forget most messages and only retain those that support their own actual beliefs and attitudes, which is known as **selective retention**. These mechanisms of perception are some of the reasons that advertising campaigns tend to be so repetitive and why it is important for marketers to be able to identify the beliefs and attitudes of consumers. [15][18][19]

Learning is the process through which information and experiences are turned into a change of behaviour of the consumers. How individuals are learning is subject to their skills, knowledge and intentions. There can be **conditional learning** or **cognitive learning**. Conditional learning occurs when consumers learn by being conditioned to distinct stimuli, for example when being repeatedly faced with the same or similar circumstances they establish a specific reaction. Cognitive learning is happening when the individuals use all their problem-solving skills, memory retention abilities and their perception to resolve a problem and get satisfaction from it. Learning can affect both what consumers buy and how they buy. For example, after a negative experience with a product, if they have a choice they wouldn't buy it again. Similarly, if consumers don't have extended experience with a certain type of product or brand they might spend more time in collecting information. [15][19]

Consumers tend to develop certain **beliefs** and **attitudes** towards different products through their everyday routine. These beliefs and attitudes are part of the learnt behaviours of buyers and they can trigger specific reactions to them by pulling them towards or away from products, services, companies, ideas, issues or institutions. Attitudes and beliefs are very difficult to change and it usually necessitates that many more perceptions and attitudes - even in seemingly unrelated areas of the consumers' behaviours - are addressed at the same time. It is important for marketers to know and recognise the beliefs and attitudes of their target groups so they can adapt their messages to their consumers. [15][18][19]

2.1.1.2   Consumer purchase decision process

The consumer purchase decision process takes place before, during and after the purchase of products or services. Decision-making in general is considered a psychological construct which means that even though a decision is not something visible, we can assume that one has been made by examining the behaviour of people. Such behaviour suggests that a commitment to take some action has been made - in our case it's a commitment to making a purchase. [21] [22]

The consumer purchase decision process is usually divided into five stages that generally take place in the following order:

1. **Problem/Need recognition** is the first stage of the decision process and it refers to the moment when consumers are forced to recognise that there is a need or problem that they must address. It is the instance when the tension caused by a motive - for example a physical need like hunger - reaches a point that it cannot be ignored anymore and action must be taken. External stimuli such as advertisements can also help a need to arise as pressing. While other stages of the decision process can be omitted or interchanged, need recognition always occurs and specifically in the beginning of the process. [21][22]

2. **Information search** is the phase during which the consumers begin to gather information about how to resolve their problem or satisfy their need in the best way. If the motive is very strong and what appears to be a satisfactory solution is easily attainable then the buyers might even skip this step. If the need is less pressing, then the consumers will start an information search. In the beginning it is possible that they ask for the recommendations of their friends, family and other social groups. Then they might resort to commercial sources of information such as advertisements, reviews and in-store staff. Inevitably during this stage consumers become aware of competing brands and firms

offering similar products and services which is leading to the next step of the process. [22][23]

3. **Evaluation of alternatives** takes place after the consumers have identified some possible solutions and they assess them according to certain attributes that they themselves select as important. This phase is very strongly influenced by the beliefs and attitudes that the consumers have formed about the products during the information search. Another important aspect of this stage is the level of involvement of the consumers - in essence the perceived importance or personal relevance of the product/service to the buyer. Consumers with higher involvement tend to evaluate more brands and spent more time searching than consumers with little or none involvement. It would be valuable to identify how consumers select the attributes they use for the evaluation and how they assign importance to the selected attributes as it would allow for better prediction of their behaviour. [22][24]

4. **Purchase decision** is the fourth phase of the process and it is during this stage that the actual purchase happens. After the consumers have evaluated the possible solutions and have formed their beliefs and attitudes towards the competing brands/firms they would usually buy their preferred option. There are two instances that might prevent consumers from completing the buying transaction: negative feedback from other customers that are important to them (influencers) and unforeseen circumstances such as unexpected sales. Because it is possible for consumers to have a change of heart, it is essential that marketers continue to monitor the stimuli that buyers experience to adapt their own messaging up until the conclusion of the sales transaction. Even then the consumer purchase decision process is not over. [22][25]

5. **Post-purchase behaviour** is the last stage of the process and during this phase purchasers consume the product/service and conclude how satisfied or dissatisfied they are. This is the result of the comparison between the expectations that the buyers had before the purchase and how they perceive

that the product or service fulfilled those expectations. The less they feel those expectations were fulfilled the greater the dissatisfaction - a situation that can bring on **cognitive dissonance** which is the sense of discomfort that the consumers might experience after a purchase. It is not uncommon for people to develop some level of post purchase cognitive dissonance, especially after purchases of great value or great involvement - consumers tend to question their choice. The degree of cognitive dissonance and the level of satisfaction/dissatisfaction caused by a purchase can directly influence the decision process for similar purchases from the same brand in the future, primarily in the information search stage and the evaluation of alternatives stage. Satisfied customers may be positively biased during those two stages and become **loyal** to the brand. Satisfaction or dissatisfaction of consumers affect also the way they talk about the brand to their social groups - positive or negative word of mouth. To measure customer satisfaction and recover service in case it has gone wrong, it is important for companies to engage their customers, closely follow their post-purchase behaviours, recognise them and adapt their communications to them according to these behaviours. [22][26] [27][28]

All consumers go through the decision process but not everyone will go through it in a standard way. Some might spend more time during the information search stage while others might speed it up significantly because they have a preference for a brand. How consumers go through the process - especially the information search stage and the evaluation of alternatives stage - is helping us to categorise consumer decision behaviour into the following four types: [29][30][31]

- **Complex buying decision behaviour**: Consumers show a great degree of involvement and they manage to detect significant differences among brands. This type of behaviour is usually observed when the value - perceived or actual - of the product is high and the variety of solutions great, for example a mobile phone. [31]

- **Dissonance reducing buying decision behaviour**: Consumers demonstrate equally high level of involvement but they cannot identify many differences among the brands. This type of behaviour occurs with products/services that are seen as valuable and that are not very frequently bought. It is possible that consumers experience cognitive dissonance after the purchase. [31]
- **Habitual buying decision behaviour**: Consumers have very low level of involvement and they don't distinguish brands' characteristics. They might buy the same brand continuously but that's out of habit, not brand loyalty. [31]
- **Variety seeking buying decision behaviour**: Customer involvement is again very low but they are aware of the brands and their differences. Consumers with this behaviour are often switching brands just to try something new. [31]

Clearly understanding the decision making process and measuring (tracking) the actual decision making behaviour of an individual customer is essential to the business success and profitability of a manufacturer or service provider: only such knowledge permits and enables to impact customer behaviour.

It is widely believed that retaining customers over longer periods, increasing their lifetime value, reducing their price-sensitivity and targeting marketing investment delivers greater revenues and reduces lower cost. Threatened by larger competitors, managing loyalty is becoming a question of 'survival' in particular to small and medium enterprises in an increasingly competitive environment.

2.2 Customer Loyalty

2.2.1 Definition of customer loyalty

Literally, loyalty is defined as the state of being loyal, of showing commitment and adherence to someone (a person or a group of people) or something (a cause or a construct) [32][33]. If we want to make a connection to the previous chapter we could

say that **customer loyalty** is a repeatedly expressed, positively biased consumer purchasing behaviour but customer loyalty is a far more complex concept that has evolved over the last few decades and that is still the subject of research. [34][35]

In the beginning, the study of customer loyalty concentrated on repeat purchase behaviour. An early categorisation suggested by Brown (1952) divided loyalty into four types: undivided loyalty, divided loyalty, unstable loyalty and no loyalty according to the buying patterns of customers. Others, when measuring loyalty focused more on the probability that the buyers would repeat the purchase. By the 70's some marketing scientists argued that the strictly behavioural definition of loyalty was incomplete as it didn't differentiate between true loyalty and forced loyalty that could for example occur when there are no other alternatives. They suggested that the behavioural dimension of loyalty was not enough and introduced a second, attitudinal dimension - which measured how inclined consumers are to repeat a purchase of a brand and what is their attitude toward that brand. Already in 1982, Engel & Blackwell proposed the following definition of loyalty "the preferential, attitudinal and behavioral response toward one or more brands in a product category expressed over a period of time by a consumer" ([35]). Behavioural loyalty is often also referred to as "share-of-wallet", while attitudinal loyalty as "share-of-heart". [35][36]

A more recent definition of loyalty, that is based on how its dimensions can be measured, suggests that the behavioural aspect of loyalty is indicated by the "repurchase probability, long-term choice probability, or switching behaviour" ([34]). The attitudinal dimension of loyalty is demonstrated as emotional attachment to a brand and it is expressed by the "repurchase intention, resistance against better alternatives, price tolerance, and intention to recommend the product or service" ([34]).

However, these definitions of customer and brand loyalty don't take into account certain factors that affect consumers' purchase behaviour and make them loyal. **Brand awareness** is an important antecedent of brand loyalty, it consists of brand

recognition and brand recall, and it has an impact on the purchase decision process as it affects the "formation and strength of brand associations" ([36]) in the minds of consumers. Brand recognition is associated with the ability of consumers to confirm their awareness of a brand when given its name as a hint. Brand recall is associated with the ability of consumers to remember the brand when given a specific product category or a need that needs to be fulfilled as the clue. Brand awareness is important because it enhances the chances that the brand will be part of the consideration set in the purchase decision process and also because it can have an impact on the decision process itself by affecting the perceived value of the product. Furthermore, it is possible that even a basic degree of brand awareness has the potential to drive choice when the involvement of the buyer in the purchase is low. [36]

Any discussion about loyalty - and the factors that affect it - is incomplete if **customer satisfaction** is not considered. Satisfaction is a concept in social exchange theory and it is specified as a "pleasurable fulfillment" ([38]) or as "an outcome of successful relationships in business-to-business and business-to-consumer marketing" ([37]). How successful is the relationship or how satisfied are the customers is defined through the consumers' biased assessment of the product/service, the perceived value of it and the overall customer experience with the firm. Consumers have come to consider satisfaction as a prerequisite as without it they will in most cases defect but satisfaction on its own does not guarantee loyalty. If consumers have satisfactory experiences with a firm consistently over a period of time then it is possible that they develop trust in that firm. [34][37]

Trust is also a factor influencing customer loyalty and it can be defined as the conviction of consumers that a company will provide them with the experience they have been promised. Firms win the trust of their customers by investing resources in diminishing uncertainty and advancing the performance of their relationships. Trust and satisfaction can influence the commitment of consumers. **Commitment** refers to the inclination of customers to continue the relationship as they evaluate it as important and beneficial. Satisfaction, trust and commitment are all outcomes of the

relationships established between consumers and brands and increased levels of these outcomes may lead to loyalty. [34][37]

Other factors affecting customer loyalty and that sometimes are seen as **reasons for loyalty** can be:

- **Psychological**: For example, when customers develop some fondness for a person working for a company but no loyalty for the company itself.
- **Economic**: For example, when customers repeat purchases because they are members of a company's loyalty programme and their receive a deferred discount.
- **Technical/Functional**: Especially in business-to-business relationships, it is possible that companies adjust their processes and policies to specific suppliers and defection would cause a great deal of technical issues. Those issues could be the reason for staying loyal.
- **Contractual**: For example, when a customer has a contract with a company for a specific period of time. [38]

The broad spectrum of factors influencing customer loyalty doesn't allow for a simple and exhaustive definition of the term. For the needs of this paper we can generally describe it as a very strong commitment to repurchase a product or service in the future (attitudinal) that produces a repetitive purchasing behaviour (behavioural), despite external factors and marketing efforts that could otherwise push customers to defection. This definition does not cover all nuances of the term that can be detected in the anthology of definitions listed in Figure 4. [34]

Author	Definition
The Global Loyalty Agency	All the feelings or experiences that would incline a customer to consider the repurchase of a particular product, service or brand or revisit a particular company or shop or website
Newman J.W., Werbel R.A.	Repeat purchase of a particular brand, without considering the purchase of any other available brand
Jacoby J., Chestnut R.W., Day G.S.	Customer's predisposition towards the brand as a function of psychological processes
Storbacka K., Lehtinen J.R.	Intention to act and willingness to interact with others
Bloemer J., de Ruyter K.	Customers' non-incidental and intentional actions displayed over a long period of time towards a particular service/product supplier which operates among numerous and similar service/product suppliers
Olivier R.L.	Deeply-term engagement and product/service/brand re-purchase intention displayed toward a particular product, service or brand
Reichheld F.F.	Willingness to invest in further product/service/brand relationship development
Dick A.S., Baku K.	Function of attitude manifested in behaviour
Jacoby J., Kyner B.D.	The biased (i.e. non-random), behavioural response (i.e. purchase), expressed over time, by some decision making unit, with respect to one or more alternative brands out of a set of such brands, and is a function of psychological (i.e. decision making, evaluation) processes
Zawadzka A.M.	The result of rational-functional motivation teamed up with emotional-symbolic motivation

Figure 4: Definitions of customer loyalty in literature. [34]

2.2.2 Benefits of customer loyalty

Having discussed the definition of customer loyalty we can now examine the reasons that it has become so important for businesses of all sizes. Customer loyalty affects the relationship between consumers and companies in such ways that it eventually impacts - directly or indirectly - on the profitability of the firms. Research done in previous years indicates that loyal and non-loyal customers have distinct behaviours that influence directly the brands' gains. It has been found that non-loyal customers pay more attention to the economic aspects of purchases while loyal customers take into consideration also their relationship with the company. Another observation that has been made is that loyal consumers are more tolerant towards price increases and

also more inclined to paying a higher price in order to continue their relationship with their preferred companies (upselling). In addition, loyalty to a firm reduces the time spent by customers in examining alternatives while it deepens the inclination of consumers to buy from the same company in the future, even for a different product category (cross-selling). Finally, loyal customers are more prone to spread positive word-of-mouth about their preferred retailers - often referred to as brand advocacy - which can influence the purchase behaviours of people in their groups (family, social groups, etc.) and increase the brands' customer base. [34][35]

Customer loyalty can affect businesses' profits also indirectly, mainly by helping them to reduce costs. It is significantly more expensive for companies to acquire new customers than to retain existing ones, especially those that have been proven to be loyal and that have repeatedly deflected the marketing efforts of competitors. In addition, loyal customers can also be less expensive to serve as they know the product or service and they often require less information and reduced communication efforts - sometimes they even serve as employees of the brand sharing information and explaining specific processes to other consumers. The trust that is built over time can also lead loyal customers to share information about themselves but also valuable feedback that stems from their deep knowledge of the product/service, allowing companies to better design their offer. Furthermore, they can help brands to predict their future sales and plan accordingly their own purchases (raw materials, external services etc.). [34][39][40][41]

On the other hand, the **longevity** of the loyal relationship does not ensure increased profits or reduced costs for companies. According to the available research, loyal customers, though profitable through their regular re-purchasing, they are not increasing their expenditure over time. The same research indicates that in some industries managing long-term loyal customers is typically more expensive than dealing with new customers and that often firms have to offer incentives of significant value to deter the loyal customers from defecting. The propensity of loyal customers to spread positive word-of-mouth is also questioned by some research as it is

described as being "higher, yet still not certain" ([34]) and also positive feedback of buyers has been linked more to the level of satisfaction stemming from a particular purchase than the longevity of their relationship with the brand. [34]

Nevertheless, customer loyalty can be an important asset for companies as it increases their overall value and loyal customers are a capital that firms need to recognise and foster. To identify their most loyal customers brands need to first be able to measure their loyalty.

2.2.3 Methods of measuring customer loyalty

There is a number of metrics that marketers use to measure customer loyalty. Traditionally, these metrics or models calculate the projected value of customers in the future by analysing their past behaviour that has been tracked. [42]

The Recency, Frequency, and Monetary value (**RFM**) model proposes that the customers of the companies should be ranked based on three attributes: recency of their last purchase, frequency of their purchases, and the monetary value of their purchases. According to the model, the clients with the higher scores - those who have bought a short while ago, who have bought repeatedly and who have spent the most - are the most loyal customers of the companies and should be the targets of their marketing efforts. RFM has proven to be efficient for high-volume businesses and it is successful in helping marketers identify the customer segments that are more inclined to re-purchase - and for that reason they should be approached - as well as those segments with which communication is only a cost, and for that it should be avoided. On the other hand, the RFM model doesn't take into consideration any of the attitudinal factors that could help in predicting future purchase behaviour. Moreover, the importance given to each of the recency, frequency and monetary value dimensions, heavily impacts on the calculation of the projected value of each client. [42]

The use of Past Customer Value (PCV) metric as an indicator of loyalty is also based on the hypothesis that the value of customers' past consumption can be used to predict how profitable they will be in the future. In essence, PCV is the "sum of total previous contributions by a customer adjusted for time value of money" ([43]) and it can be calculated by the following formula:

$$\text{Past Customer Value of a customer} = \sum_{t=1}^{T} GC_{it} * (1 + r)^t$$

where: i is the number of the customer, r is the necessary discount rate to adjust the value of money (for example, 12% per year or 1% per month), T is the number of how many time periods went by since the purchase was made, GC_{it} is the gross contribution of transactions of the ith customer in the time period t. This model does not take into consideration the inclination of the customers to continue purchasing in the future and it does not take into account the cost of managing the relationship in the future. [42][43][44]

The Share-Of-Wallet (**SOW**) metric estimates the expenditure of clients on a specific brand in comparison to other brands and it can express their brand choice. It can also show how well the brand covers the needs of customers within a certain product category. Since SOW is a good indicator of preference it is considered to be a sign of loyalty, and it is deemed "more reliable than attitudinal measurements such as satisfaction" ([44]) as it is a calculation on actual consumer behaviour. SOW is used extensively in retail businesses in order to determine whether buyers are loyal to a particular store. However, despite giving a hint as for the brand preference of customers it does not provide precise predictions of how profitable a certain customer will be in the future. The Share-Of-Wallet of a specific brand in the expenditure of a particular buyer can be calculated with the following formula:

$$SOW_{\text{Individual}} = \frac{S_J}{\sum_{j=1}^{J} S_j}$$

where: S_j is the sales of a brand j to the particular buyer and $\sum\limits_{j=1}^{J} S_j$ is the total of sales made by all brands to the particular buyer. [42][44]

The Customer Lifetime Value (**CLV**) model is a forward-looking metric in the sense that it takes into consideration the probability that buyers continue to be active in the future as well as the costs that their retention will cause - that makes CLV a non-traditional metric of loyalty and customer value. On the individual level, CLV is "a prediction of the net profit attributed to the entire relationship with the customer" ([45]). It is the monetary value of a customer relationship calculated on the basis of the current value of the future cash flows expected to be produced by this relationship. Marketers compute CLV in order to determine how to assign marketing funds among different customer segments. This is also known as CLV-based segmentation and it is used by companies to identify their most profitable groups of clients and concentrate their marketing efforts on them. This metric is important also because it represents the upper limit of the resources that companies should invest in keeping an existing client but also in acquiring a new one. On an aggregated level, Customer Lifetime Value is also an important indicator for loyalty as it is greatly influenced by the frequency of purchases as well as the length of the lifetime of the relationship - higher retention rates lead to an increased CLV over time. [42][44][45][46]

Calculating the individual Customer Lifetime Value can be a complex process, depending on the model used. Inaccurate forecasting and complicated consumer tracking can negatively influence the process significantly. A rather simple formula for calculating CLV ([47]) is:

$$CLV = \sum_{t=0}^{T} \frac{(p_t - c_t)r_t}{(1+i)^t} - AC$$

where: p_t is the price paid by a consumer at time t, c_t is the direct cost of servicing the customer at time t, i is the discount rate or cost of capital for the company, r_t the probability of the client making a repeat purchase or being active at the time t

(retention rate), AC is the acquisition cost, and T is the time horizon for which we want to calculate the CLV. [45][47]

The formula can be further simplified if assuming that the margins $(p-c)$ and retention rates (r) are constant over time and an infinite horizon ($T \rightarrow \infty$) is used ([47]):

$$CLV = \sum_{t=0}^{\infty} \frac{(p-c)r^t}{(1+i)^t} = m \frac{r}{(1+i-r)}$$

where m is the margin $(p-c)$. [47]

On an aggregated level, there is an easier but not very sophisticated way of calculating the average CLV of all customers of a firm/merchant. It is particularly useful for ecommerce retailers that have access to some purchase tracking data - but not very detailed - and that are uncomfortable with complicated math equations. It includes computing the Average Order/Sale Value (AOV), the Purchase Frequency (PF) and the Average Customer Value (ACV). The AOV is the result of the division of the Total Revenue (TR) during a certain amount of Time (T) with the Number of Orders/Sales (NO) of the same amount of time:

$$AOV = \frac{TR}{NO}.$$

The Purchase Frequency derives from dividing the Number of Orders/Sales (NO) in the above mentioned period of Time (T) with the number of Unique Customers (UC) in the same period:

$$PF = \frac{NO}{UC}.$$

To identify the Average Customer Value (ACV) of a certain period of time, we need to multiply the Average Order Value (AOV) with the Purchase Frequency (PF):

$$ACV = AOV \times PF.$$

The calculated Average Customer Value (ACV) represents the gross value and in order to calculate the Customer Lifetime Value we need to first compute the Average Customer Profit (ACP). We can do that by multiplying the determined ACV with the Margin (M):

$$ACP = ACV \times M.$$

Identifying the Average Customer Lifespan (ACL) of the firm's customers can be problematic. The average customer lifespan is the length of time that the customer relationship usually lasts until the customers become inactive or stop purchasing permanently. Generally ACL ([50]) is defined as:

$$ACL = \frac{1}{Customer\ Churn\ Rate}.$$

The Customer Churn Rate is usually a monthly or yearly percentage that represents the amount of customers that stop being active in the given time frame. This can easily be measured if there is detailed historical data available. If the data is not very accurate or comprehensive or if there is no data because the store or company is new then the Average Customer Lifespan can be roughly estimated to be between 1 and 3 years.

The Customer Lifetime Value then becomes [47][48][49]:

$$CLV = ACP \times ACL.$$

Other metrics that can be used to measure customer loyalty include the Repeat Customer Rate (**RCR**). It is the division of number of customers of a company that have made a repeat purchase in a period of time (T) with the total number of customers of the company in the same:

$$RCR = \frac{Number\ of\ customers\ who\ bought\ more\ than\ once\ in\ time\ T}{Total\ number\ of\ customers\ in\ time\ T}.$$

The Repeat Customer Rate only measures behavioural aspects of the customers' response (repeated purchase) while the attitudinal aspects could be measured with the use of the traditional Customer Satisfaction Score (CSAT) or the Net Promoter Score (NPS) - through customer satisfaction and net promoter surveys. A customer satisfaction survey examines how satisfied are the customers of a company and it usually gives a score that relates to the short-term happiness of the clients after the purchase. On the other hand, a net promoter survey looks into how likely are customers to promote the company among their social groups. NPS is considered a

better predictor of loyalty than CSAT as it concentrates more in the long-term evaluation of the customer relationship. [46][51][52]

If a loyalty programme is in use then a further indicator of loyalty is the Redemption Rate (**RR**) which is the percentage of the points issued for the programme that are actually used against rewards:

$$RR = \frac{Number\ of\ points\ redeemed}{Total\ number\ of\ points\ issued}.$$

A high redemption rate can show that how loyal are the customers that are part of the programme while low redemption rates are a definite indication that the programme is not performing. [46]

2.2.4 Methods of influencing customer loyalty

"If you want loyalty get a dog." [53]. This is a famous and popular quote among marketers that evidences how true customer loyalty is considered to be an almost unattainable goal. Despite the fact that consumers are considered to be notoriously disloyal by marketing experts, there are some ways that their loyalty to a brand can be earned. Earlier in this paper, we identified that there are several factors that can affect customer loyalty and we established that some of the most prominent are: brand awareness, satisfaction, trust and commitment.

Brand awareness is relevant especially during two of the phases of the purchase decision process - information search and evaluation of alternatives - and can even drive decisions when there is low involvement of the buyer. Since increased brand recall and recognition can potentially lead to customer loyalty it is important for firms to put an effort in boosting their presence in the minds of their customers. Some of the most common ways of reinforcing brand awareness include advertising, strategic partnerships and sponsorships, social media and content marketing, and using existing customers for referral marketing. [54][55][56][57]

Customer satisfaction is a prerequisite for loyalty but it is not a guarantee as even satisfied consumers may defect - for example when their purchase decision behaviour

can be described as variety seeking. Customers are satisfied when their expectations are matched or exceeded. If the experiences of consumers with a brand are consistently satisfying over a period of time then they might develop **trust** towards the brand which reduces uncertainty and helps consumers form a positive buying intention. Satisfaction and trust may then result in **commitment** to the company from the side of the customers which directly affects their beliefs and attitudes regarding the brand. Customer dissatisfaction will in most cases lead to defection unless the dissatisfaction is tracked, identified, recognised and resolved through service recovery. The journey between brand awareness and loyalty or defection can be seen in Figure 5 [58]. Increased levels of customer satisfaction, trust and commitment are important for customer loyalty and companies can achieve them by employing **customer relationship management (CRM)** strategies. [58][59]
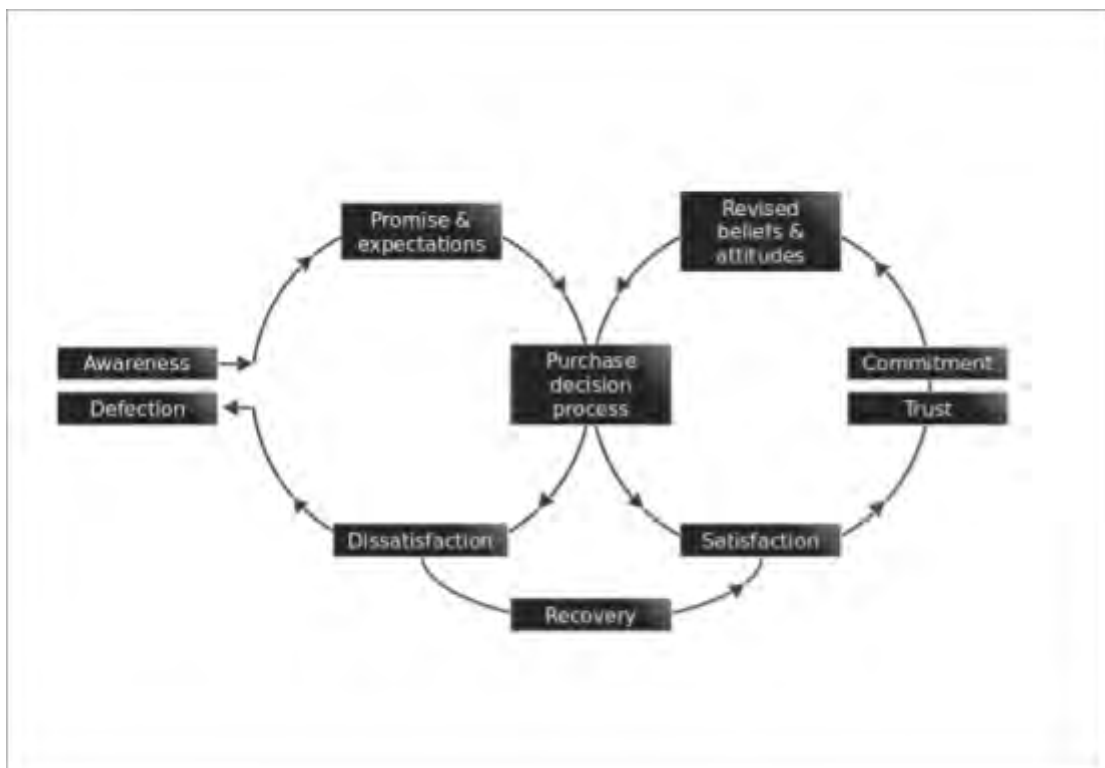

Figure 5: From awareness to loyalty or defection [58]

CRM refers to a collection of practices, strategies and technologies that are used by companies with the goal of improving their relationships with customers, increasing customer retention and boosting sales. CRM is used to manage the relationship

throughout the customer lifecycle, using data analysis of the information that companies track and that pertain to their historic interactions with their customers. Through this process, psychological, economic, functional or contractual reasons for loyalty can be created. An important element of the use of CRM is that CRM systems are built to gather information on consumers across many distinct communication channels between the consumers and the companies, including the company's traditional points of sales and contact, websites, telephone, live chat (instant messaging), email, printed or digital marketing materials (brochures, catalogs, newsletter, manuals etc.), and social media. [60] [61] [62]

CRM systems are based on software that carries out certain functions. Firstly, it stores information on the interactions between the customers and the companies through different channels. Secondly, it combines information and records of consumers in a single CRM database that allows for easier access and management by not necessarily tech savvy business users. Furthermore, it automates certain procedures that may include tasks that need to be completed triggered by calendar events or other alerts and using the information from the system logs it can help managers to measure employee performance and productivity. [61]

CRM systems can be classified into different types depending on the features they include and the goals that they can help to achieve. These **types are not exclusive** and some CRM systems may implement features from more than one types. One large category is **operational CRM systems** that can be used to attain sales, marketing and customer support integration and automation. Usually these systems provide a single customer view (SCV) - "an aggregated, consistent and holistic representation of the data known by an organisation about its customers that can be viewed in one place, such as a single page." ([63]) - to business users. There are three main features that operations CRM offers:

- **Marketing automation** that aims to simplifying and improving the performance of marketing procedures. Marketing automation uses software to "automate marketing processes such as customer segmentation, customer data

integration (CDI), and campaign management." ([64]) or other repeated functions such as sending out scheduled marketing emails or posting relevant information on social media. [60][61][64]

- **Sales force automation** that extends throughout the complete sales cycle, from acquiring and recording the contact information of potential clients to achieving their conversion to actual clients. The goal of this feature is to avoid duplicate communications between salespeople of the same organisation and their prospective clients and to track and record all initial contacts and follow-ups between the two sides. [60][61]

- **Service automation** that is designed to record and simplify customer service procedures through the use of direct customer service technologies which include "phone, email, knowledge bases, ticketing portals, FAQs and more." ([60]). [60][61]

A second type of CRM systems in called **analytical** and it includes systems that have as their main function the analysis of customer data by applying techniques such as data mining, correlation, and pattern recognition. Such analysis is being implemented on every aspect of an organisation's assets and procedures: [60] [65]

- **Customer base analysis**: the basic analysis that focuses on understanding the customer base of a firm by examining the behaviour and evaluating the values of customers in an attempt to define segments more accurately with the goal of increased satisfaction. [65]

- **Marketing analysis**: analysis that concentrates on "campaign management and planning, product analysis and branding" ([65]) with the aim of identifying and evaluating new market opportunities. [65]

- **Sales analysis**: the goal of sales analysis is to assist with the planning and prediction of sales volumes and profits and also improve the sales cycle through examining the sales behaviour of a company. [65]

- **Service analysis**: it focuses on improving customer service by identifying and analysing data concerning customer satisfaction, perceived cost and quality, complaint management and service recovery. [65]
- **Channel analysis**: the goal of channel analytics is to identify and record any channel preferences by the customers when it comes to how they like to be contacted.[65]

Another type of CRM systems is referred to as **collaborative** and the aim of such systems is to facilitate the sharing of customer information across different departments of organisations and also across different organisations (suppliers, vendors, distributors, etc.). [60][66]

Furthermore, systems that implement some integration with social media are termed as **social CRM systems**. The integration can expand from providing tools that simply monitor social conversations - identifying and recording mentions and their frequency of a specific brand - in order to help companies define their target groups and the platforms that they use, to tools that help brands engage with their customers, create communities, and even use social platforms as a customer service channel. [60][61][67]

Finally, there are CRM systems - often used in conjunction with social CRM - that are called **mobile CRM systems**. Mobile CRM by definition refers to tools "which utilise available technologies to gather and evaluate customer data online."([68]) and it was developed after 1999 when CRM providers embraced the idea of cloud-hosted and moveable customer databases. More recently, mobile CRM as a term became more associated to the CRM applications built for smartphones and tablets and as such it has become increasingly useful for sales and marketing professionals that need to have access to consumer data and to be able to perform certain organisational tasks when they are not in their offices. Mobile CRM systems can also benefit by certain capabilities of mobile devices, such as GPS and voice-recognition. [60][61][68]

Often holistic CRM strategies include loyalty programmes - structured marketing efforts used by marketers to identify consumers and incentivise their loyal behaviour

towards individual or affiliated firms through mainly financial and emotional benefits. While loyalty programmes have been used in retail since for centuries the first modern - CRM based - loyalty programme is considered to be American Airlines' frequent-flyer programme launched in 1981, which used mileage tracking to reward its passengers. The rest of the airlines and other hospitality industries (hotels, cruise liners, etc.) quickly followed. Retail loyalty programmes flourished only after it became clear that they were the only way for retailers to identify individual customers, track and measure their behaviour, and finally influence their behaviour through incentives/rewards. [69][70]

Loyalty programmes have been proven to be advantageous for both retailers and participating consumers alike. For the retailers, we've already mentioned that programmes allow them to identify their customers, monitor their behaviour and understand their needs so that they can target their clients more efficiently and cost-effectively. In addition, if loyalty is achieved then firms will also be the beneficiaries of its advantages: reduced cost of keeping and serving their loyal customers, clients that are more tolerant to price increases, more upselling and cross-selling opportunities, and also customers that are willing to spread positive word of mouth in their social groups. From the consumers' point of view, loyalty programmes offer opportunities for customers to save money by purchasing things they would buy anyway (financial rewards) but clients also feel they receive preferential treatment (emotional rewards) and that they are valued by their preferred companies. [70] [71]

Customer loyalty programmes follow some basic formats that have certain characteristics suitable for different businesses and products:

- **Punch/stamp programmes**: This is a very simple and old format of loyalty programmes, primarily used in brick-and-mortar businesses. A punch card is being issued for each member of such programme and every time the member purchases a specific product or service they are rewarded with a "punch"/stamp. When they collect a specified number of "punches"/stamps

they are awarded a product or service of the same or similar value for free. They are perfect for new loyalty programmes but they don't offer great opportunities for tracking while they are the most susceptible to fraud. [72]

- **Point programmes**: Consumers are collecting points that they can then use to get a reward or free products/service. They can earn points not only by spending money but also through other activities such as referring their friends, sharing content on social media, etc. This type of programmes are suitable for a vast variety of businesses and especially e-commerce businesses of different sizes and target groups. [71][72]

- **Spend programmes**: In this case customers receive a deferred discount based on the amounts of money they have spent. It is a type of programme easy to set up and manage and it usually results in reduced churn rates and increased transaction amounts for businesses. Gathering customer data may be less efficient with this type of programmes, depending on how they are realised. [72]

- **Tiered programmes**: In this type of programmes, consumers are segmented in tiers based on the different levels of spending or point accumulation. Customers that are members in such programmes receive gifts, free products/services, and exclusive privileges or products depending on their tier. Such programmes are very popular - and rightfully so - in e-commerce service providers and businesses in the transportation and hospitality industries. [71][72]

- **Paid programmes**: Not all programmes are open and free for everyone to join. Paid programmes require that consumers pay a fee in order to become members. This fee can be a one-time or a repeated charge - monthly or yearly - and it gives "access to special services, discounts, or unique opportunities." ([72]). The fact that members have to pay for entry increases the perceived value of the programme to them and also gives them a reason to continue

spending and using the programme. Paid programmes are appropriate for businesses with luxury products/services and great retailers. [71][72]

Despite the fact that employing CRM strategies and using - CRM based - loyalty concepts has proven to be advantageous both for the firms and the customers involved, the adoption of such processes and schemes doesn't come without challenges. It is not uncommon that due to lack of proper management CRM systems end being not used or at best being under- and partially used - a research performed in 2003 determined that more than 2bn worth of software fell in that category. Another challenge shared among a great number of businesses, is the training that employees require before being able to fully understand the CRM concept and to use the CRM systems to their entire capacity. Employs need to be trained in how to build and manage strong customer-brand relationship but also they need firstly to be encouraged to use the CRM systems that their organisations use and secondly to be trained in how to best use them. Furthermore, companies may be struggling with matching the expectations of their customers as far as delivering a consistent and seamless customer experience across different channels - a situation that has its roots in the fact that some firms fail to achieve the single customer view (SCV). Last but not least, companies face significant legal challenges when trying to adopt CRM strategies. [60][61]

Some of the most significant changes brought on by the introduction if GDPR will be affecting the: [74][75][76]

- **Definition of personal data**: The term personal data has a broadened definition under the GDPR as it includes information such as "IP addresses, mobile device identifiers, geolocation, and biometric data (fingerprints, retina scans, etc.)" ([76]) as well as information pertaining "an individual's physical, psychological, genetic, mental, economic, cultural, or social identity" ([76]). This change that follows the changes in technology and how companies gather and process data about their clients will be complicating marketing and sales efforts. [76]

- **Individual rights over personal data**: As stated before the main goal of the new regulation is to give the people of the EU more control over how their information is used. The GDPR stipulates that companies will have to get explicit consent by individuals before they are allowed to collect and/or process the individuals' data. In addition, after giving their consent the individuals have the right to access their data but they can also request to have their data erased and to revoke their consent at any time. [76]

- **Roles and responsibilities of Data Controllers and Data Processors**: The new regulation defines that the Data Controllers are "the natural legal person, public authority, agency or other body, which determines the purposes and means of the processing of personal data." ([76]) and the Data Processors are "the natural legal person, public authority, agency or other body, which processes data on behalf of the controller." ([76]). Under the previous legislation only controllers were made responsible for the privacy and security of data while under the GDPR both controllers and processors are liable and both of them will have to appoint a data protection officer if the core activities of the organisations includes the "regular and systematic monitoring of data subjects on a large scale" ([76]). A data protection officer can to be an existing employ of the company and needs to be aware of the ways the company is collecting and processing personal data. [76]

- **Information governance and security policies**: Information governance (or IG) is a collection of "multidisciplinary structures, policies, procedures, processes and controls implemented to manage information at an enterprise level" ([77]) that "should determine the balance point between two potentially divergent organisational goals: extracting value from information and reducing the potential risk of information" ([77]). The GDPR requires that the Information Governance follows the model called "privacy by design" which means that the privacy of the personal data collected must be a focal point in the process of developing a product or a service right from the beginning. It

also means that data controllers dispose of personal data that are no longer needed. [76][77]

- **Data breach notification and penalty policies**: Despite all the efforts made by companies to secure the privacy of the personal data collected and processed by them data breaches are still quite likely to take place and people still need to be notified when that happens. The GDPR establishes simple rules for these notifications that will be the same across all EU Member States. According to these rules, data controllers are required "notify the supervisory authority of a personal data breach within 72 hours of learning about the breach" ([76]) while data processors are required to notify the data controllers without undue delay. The new law also foresees some substantial penalties for the organisations - both data controllers and processors - that fail to do everything they can to protect personal data. Theses fines, depending on the violation, can be as high as 20 Million Euro or 4% of the organisation's global turnover (which even is greater). [76]

- **Geographical impact of the new law**: The GDPR will be affecting more than just European companies as it applies to the collection and processing of personal data of subjects located in the EU independently of where the controller or processor is incorporated. All companies that market their products and/or services in an EU state will be subject to the new law regardless of the physical location of the business - this fact renders the GDPR a worldwide law.

Organisations that are affected by the changes will have to develop strategies that will help them adapt to the new circumstances. Companies will need to understand which of the information that they track falls in the broadened category of personal data and determine how that information will be processed and also how they can get the consent of their clients before collecting and using that data. Furthermore they will need to simplify their user agreements in order to promote transparency and also create simple processes through which individuals can gain access to their own

personal data as well as request the deletion of their data. In addition, firms will be required to identify whether they are data controllers or data processors or both - in the case that they are working with external data processors, such as SaaS providers, the firms need to verify that their associates are GDPR compliant too. Moreover, organisations will have to identify how to apply the "privacy by design" model to their processes and they can start by discarding personal data that is no longer relevant. Finally, they will need to estimate what are the risks of a potential data breach and put in place a contingency plan in case a breach takes place. [76]

2.3 Small and Medium -sized Enterprises

Small and Medium-sized enterprises - or SMEs - play a significant role and hold a prominent position in most economies around the world as they constitute the vast majority of businesses in most countries. SMEs have an important function in emerging and developing economies as they create about 80% of new jobs and more than 50% of the formal working force is being employed by them. The situation is quite similar in North America as around 77% of the news jobs in Canada between 2002 and 2012 were created by SMEs while in the U.S. 99% of all companies are SMEs and they represent 48.4% of all jobs. In the EU, 90% of all firms are considered to be SMEs and their contribution to the local employment market is immense: "In 2013, over 21 million SMEs provided 88.8 million jobs throughout the EU."([80]). [78][79][80]

In addition, SMEs are considered to be significant drivers and strong incubating units for innovation, entrepreneurial spirit, and competitiveness. Their importance to the economy has led governments to adopt certain policies in order to support SMEs, such as favorable taxation laws or preferential funding. In order to ensure that these

policies are not abused there is a need for a clear definition of the term. [78][79][80][81]

2.3.1 Definition of an SME

A single definition of SMEs that is valid everywhere in the world does not exist. Every country has its own categorisation based on the number of employees, annual turnover, balance sheet total, assets, or any combination of these. In some countries even the type of industry may play a role. [79][80]

Such is the case in the **U.S.**, where "the definition of SMEs varies by industry, based on the North American Industry Classification System (NAICS)." ([79]). NAICS was developed by the statistical agencies of Canada, Mexico and the United States and it is designed to provide a common statistical framework for the analysis of business statistics. It is the job of the U.S. Small Business Administration to provide a list of small business size standards that matches the classification. The size standards define the limits - in terms of number of employees or revenue - that firms need to satisfy in order to be considered small businesses and thus qualify for government contracts and targeted funding. For example, a firm in manufacturing is considered an SME if they employ 500 or less people, have gross annual sales below $100 million, and annual energy bills between $100,000 and $2.5 million. Similarly, the definition of SMEs in **China** depends on the industry and it is defined by the Ministry of Industry and Information Technology. Some examples of different industries can be seen below in Figure 6. [79][81][82]

Industry	Staff headcount	Revenue (RMB)	Assets
Heavy Industry	< 1000	≤ 400 m	
Wholesale Trade	< 200	≤ 400 m	
Retail	< 300	≤ 200 m	
Transportation	< 1000	≤ 300 m	
Warehousing	< 200	≤ 300 m	
Accommodation	< 300	≤ 100 m	
Restaurant/Catering	< 300	≤ 100 m	
Software/IT	< 300	≤ 100 m	
Real Estate Development		≤ 2 b	≤ 100 m
Information Transmission	< 2000	≤ 1 b	

Figure 6: The definition of SMEs in China varies by industry [81]

In **Canada** the term SME is used to described all businesses with fewer than 500 employees - companies with more are considered large enterprises - and with less that $50 million in gross revenues. Firms with fewer than 100 employees (for companies that create products) or fewer than 50 employees (for companies that offer services) are categorised as small businesses. Companies with more than 100 (or 50 in the case of service-based firms) and less than 500 employees are considered medium-sized businesses. Firms with fewer than 5 employees are classified as micro-businesses. [79][81]

While different member states of the **European Union** (**EU**) may have different criteria when determining the size of a business, the **European Commission** has adopted a common definition of SMEs that is used when deciding which businesses should benefit from the Commission's support. The same definition is used when national-state funding is in question. The definition is primarily based on the size of the companies as that is determined by headcount, turnover and/or balance sheet. All businesses with fewer than 250 employees and with an annual turnover below €50

million or an annual balance sheet under €43 million fall into the category of SMEs. In Figure 7 the criteria that define whether a company is a micro, small or medium-sized enterprise are shown. Secondarily, the definition takes into consideration the type of relationship that an enterprise can have with another, distinguishing the enterprise in three different categories: [80][81][83]

- **Autonomous**: "the enterprise is entirely independent or has one or more minority partnerships (each less than 25%) with other enterprises"([80])
- **Partner**: An enterprise is regarded as a partner enterprise "if holdings with other enterprises rise to at least 25% but no more than 50%" ([80]). The enterprises involved in this relationship do not exercise effective direct or indirect control over the other. [80]
- **Linked enterprise**: the holdings with other enterprises exceed 50%. "Linked enterprises are those that form a group through the direct or indirect control of the majority of voting rights of an enterprise by another or through the ability to exercise a dominant influence on an enterprise." ([80])

These categories play an important role in the definition or not of an enterprise as an SME because they influence the way the employee headcount, annual turnover and total balance sheet are calculated. In the case of autonomous enterprises, when they want to identify in which category they belong (micro, small, medium or large) they only need to take into account their own data. For partner enterprises, their own data plus a proportion of the partner enterprise data needs to be calculated. Finally, linked enterprises need to consider their own data plus all the data of enterprises that are considered linked to them. [80]

Figure 7: SME definition in the EU [80]

In **Greece**, according to the Greek Organisation of Small and Medium-sized Enterprises and Handcrafts (an state- funded and managed organisation that is no longer active), only businesses with up to 100 employees are considered as SMEs. That choice has been made because if the Commission's definition was to be used (more than 250 employees), practically all Greek firms would fall into the category. Still, SMEs make up for 99.8% of all businesses and employ about 60% of all the working force that is active in the secondary and tertiary production sector. Micro enterprises (fewer than 10 employees) make up the biggest part of the Greek economy as they constitute 96.3% of all businesses. A very important sector in which SMEs in Greece are active is trade - about 34% of SEMs are operating in wholesale or retail trade. [84][85]

2.3.2 Special characteristics of SMEs

The size of Small and Medium-sized Enterprises is not the only characteristic that makes them so prominent in both emerging and mature economies. There are qualitative as well as quantitative characteristics of SMEs such as the scarcity of resources (management, workforce, funds etc.) that define them and distinguish them from larger companies. Some of those characteristics include: [86]

- **Personalised management**: It is more common than not that the owners of SMEs are often part of the managing team of their companies and that they are responsible for all of the business decisions. This may have a direct effect to the business culture of the organisation, both in a positive and in a negative way. The advantages of personalised management include flexibility and promptness of decision making in the face of new challenges, as well as the creation of strong and meaningful relationships between the management and the employees. On the other hand, when the owners/managers are so involved in the operation of the firms, if they are for some reason removed from their positions the companies fail.[86][87]
- **Small market share**: SMEs and particularly small and micro businesses are often too small to be able to define the prices of their products/services or to decide on the volume of their production. Their buying power is limited and that may result in having to buy their supplies at higher prices, meaning that their own prices may be higher which could significantly hurt their competitiveness. One of the options they have is to target niche markets and to specialise by investing into knowledge. [86][87]
- **Customer loyalty**: SMEs - especially those with personalised management and those serving niche markets - have the opportunity to get to know their customers personally and understand their needs which gives them the chance to offer bespoke products and services that exceed the expectations of their clients. By achieving great levels of satisfaction they create the prerequisites for customer loyalty which is indispensable for SMEs as the defection of customers could very quickly lead to failure. [86][87]
- **High failure rate**: Micro, small and medium-sized firms have a rather high failure rate. The reasons behind such high failure rates include the ease of entry in the market (it is very easy and inexpensive to create an own company), mismanagement of expenses, misinformed business decisions, and of course insufficient funding right from the beginning. [87][88]
- **Finance**: It is very common for SMEs to have difficulties finding funds for the development of their business - sometimes even for their everyday operational costs. Their survival is directly linked to the financial health of their clients and often the inability of their customers to pay their debts lead to the financial demise of the SMEs. Getting investors is usually very difficult, especially in the beginning, as the investment risks are rather high and banks are not very successful at informing SMEs about other forms of fundraising. New forms of fundraising such as crowd funding can offer great opportunities to SMEs and Startups. [86][87]

- **New technologies/Innovation**: The adoption of new technologies by SMEs can prove to be extremely valuable as it could provide them with a competitive edge against their competitors or it could at least ensure that they will not be falling behind. Innovation is ingrained in the very concept of SMEs and it is undeniable that firms that are more innovative and more technologically advanced tend to grow faster. [87]

In the South of Europe and in Greece in particular, for the vast majority of SMEs the owner has also the role of the manager and is the sole responsible for all business decisions. The small financial size of most businesses limits their ability to employ specialised managers or to hire skilled employees or external specialists for functions such as marketing and IT. Their limited buying power renders them less competitive and as a result more vulnerable to changes of the economic environment. The high cost of raw materials and their often questionable quality limit their production capacity and hinder their export ability and in general their growth potential which makes them more introvert. The financial situation, the lack of funding and complete inability of banks to support the economy, have left them without the funds that would be necessary if they were to adopt new technologies or even maintain the systems they already have in place. Businesses have to rely on the personal relationships that they foster with their loyal clients - by satisfying their needs and building trust - in order to ensure their survival. The combination of all that as well as the innate high failure rate of SMEs have as a result that about 50% of SMEs founded in Greece seize their operation in the first 3-5 years. [87]

As far as the adoption of Information Technology - and more specifically electronic business and e-commerce technologies - is concerned, SMEs are regretfully lagging behind. The obvious exception of course are those businesses whose core activity is related to IT. Some of the reasons that prevent companies from embracing such solutions are: [87]

- Most SMEs have an idea of the advantages that IT can offer them but they are not completely persuaded of the benefits that their business would experience, should they adopt such practices. It is quite common that micro, small and medium-sized companies have very niche clientele which is active in a restricted geographical location - SMEs believe they can serve this controlled area without employing e-business solutions. [87]
- The majority of companies have limited resources (financial, trained staff, knowledgeable management, etc.) and they don't dare to experiment for fear of making resource-depleting mistakes. [87]
- The knowledge that SMEs have about IT can be limited to the tools they use in their everyday operation - such as a productivity suite - and everything else seems to be too complicated. [87]

- The e-business solutions targeted to SMEs have often been developed for larger companies which may mean that they don't answer to the needs of SMEs or that they are indeed way too complicated and sometimes very expensive. [87][89]

A good example of how SMEs appear to be put off by IT and specifically implementing e-commerce solutions is the retail sector in Greece. Even though retailers have suffered greatly in the last few years, and despite them being aware of the potential benefits that they could have by incorporating e-commerce solutions to their existing distribution channels, only 21% have done so until now. About 50% of businesses have already attempted to change their strategies in more traditional ways such as negotiating with new and old suppliers and re-evaluating their product/service offers but they are still hesitant when it comes to IT even though they indicate that they plan to employ IT solutions in the next 2 years. [89]

3 Information Systems solutions used to track consumer purchase behaviour with loyalty as the goal

The aim of this chapter is to demonstrate and assess IT solutions that can be used by SMEs to track the purchase behaviour of their customers in order to understand it and positively influence their future conduct and increase their levels of loyalty. For the purposes of this discussion we focused on consumers' behaviour online - on the brand's website and social media - and we considered and chose tools that better suit the needs and resources of micro and small businesses as this seems to agree more with the reality of the business ecosystem in the South of Europe and more particularly in Greece. For the same reason we opted to take as an example the consumer goods retail industry. To achieve the goals of this chapter we took the following steps:

- Used a popular Content Management System (CMS) to create an online store and used its built-in reporting system to calculate loyalty metrics. We also took some necessary steps to integrate it with social media in order to create awareness, a prerequisite for loyalty.
- Employed web analytics to track consumers' behaviour on the store and identify metrics that illustrate the levels of customer satisfaction and loyalty.

- Installed a software add-on on the website in order to implement a basic, point-based, loyalty programme that rewards certain behaviours.

Purposefully, the use of complete, enterprise-level CRM solutions has been avoided as they are considered too complicated or too expensive for micro and small businesses and also, to our knowledge, they do not fully integrate with most of the CMSs. Moreover, CRM solutions that can be installed as add-ons to the CMSs have not been included as their majority focuses on lead generation and management and not customer retention.

3.1 Setting up the online store and using its built-in reporting system

As the basis of the online store we used the Wordpress CMS (https://wordpress.org). This choice was made because Wordpress is an open source software and because of the immense popularity of the system - "28% of the web is using Wordpress" ([90]) - with a strong and engaged community of end users but also developers around it. Its popularity and community support that stem from its user-friendliness, make it a perfect choice for SMEs as it ensures the availability of dependable, convenient and affordable solutions. [90]

We set up the website on shared hosting under the domain name http://verysmallbusiness.eu using the "Famous 5-Minute Installation" ([91]). Though Wordpress is by design very efficient when it comes to publishing content, it needs extra pieces of software called plugins for more demanding functions, such as e-commerce features. For our application we utilised the most widely employed - and available for free - ecommerce platform called Woocommerce (https://woocommerce.com) and we installed it using the "Two-Click Installation" ([93]). In general, installing plugins in Wordpress is a rather intuitive process with 5 steps, as shown also on Figure 8: 1) Click on "Plugins", 2) Select "Add New", 3)

Search for the plugin using relevant keywords, 4) Click on "Install Now" and finally 5) Click on "Activate" - further configuration might be necessary, depending on the plugin. Furthermore, Wordpress relies on collections of templates and stylesheets to define the appearance of the applications that are made with it. These collections are called themes and for our store we used a free theme that offers deep integration with Woocommerce with the name Storefront (https://woocommerce.com/storefront/) - we installed it using the process described on the page "Storefront Installation & Configuration" ([94]). Installing themes for Wordpress is very similar to the process of installing plugins and equally intuitive. [91][92][93][94]
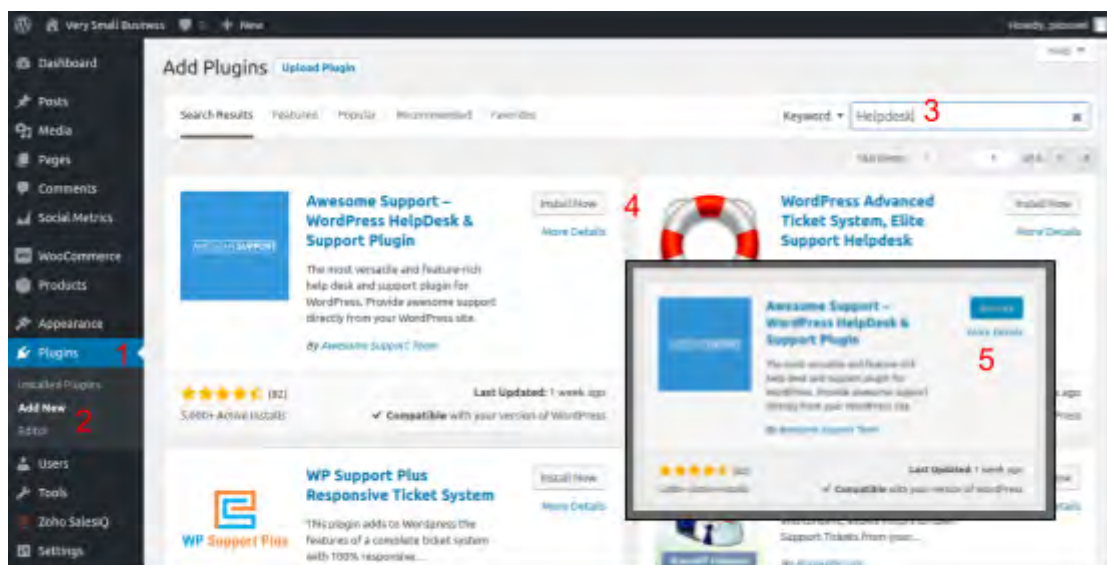
Figure 8 : How to install a plugin in Wordpress

At this point, all we had was an empty store but Woocommerce comes with data files that can be used to populate the shop with demo products. To make that possible we first needed to install and activate the plugin "Wordpress Importer" and then locate the file "dummy-data.xml" in the folder of the Woocommerce plugin on the server - as shown in Figure 9 - and then import the data. [95]
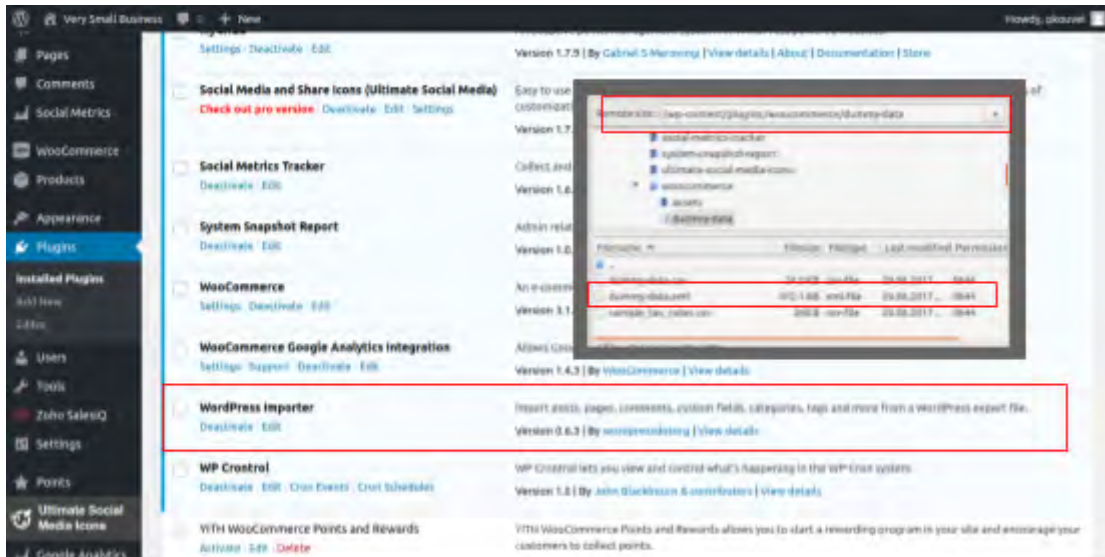
Figure 9: The "Wordpress Importer" plugin and the location of the file "dummy-data.xml" on the server.

Following this process had as a result the population of the store with 35 demo products of different demo categories. It goes beyond the scope of this discussion to examine in detail the attributes of each product (e.g. name, description, price, etc.) and the advanced functionalities of Woocommerce as an ecommerce platform. At this point, the landing page of our store looked like Figure 10 and we had a fully functional online store selling clothes ready to accept and process orders. By default, Woocommerce accepts orders both by the users that create an account with the store and those that opt not to register - they refer to the first as Customers and the latter as Guests. Instead of creating those orders manually we used a plugin called "Order Simulator for Woocommerce" ([96]) that creates fake orders in great volumes for testing purposes. Unfortunately the order simulator creates all orders using the date- and time- stamp of the moment that it is run while we wanted the orders to be more equally dispersed within a period of a month for demonstration purposes so we had to manually alter the date of many of the orders. [96]

Figure 10: The landing page of the store

Woocommerce has very powerful reporting features that provide abundant information about the orders/sales and the customers in a visually clear and intuitive way as it is shown in Figure 11. For a fixed (Year, Last month, This month, or Last 7 days) or a custom period of time we get a report about the sales per date as well as consolidated data about sales in the selected period (gross and net sales, average daily sales, placed orders, number of items purchased, etc.).

Figure 11: Woocommerce reporting system: Sales by date

The system can also provide data by product or category as shown in Figures 12 and 13 respectively.
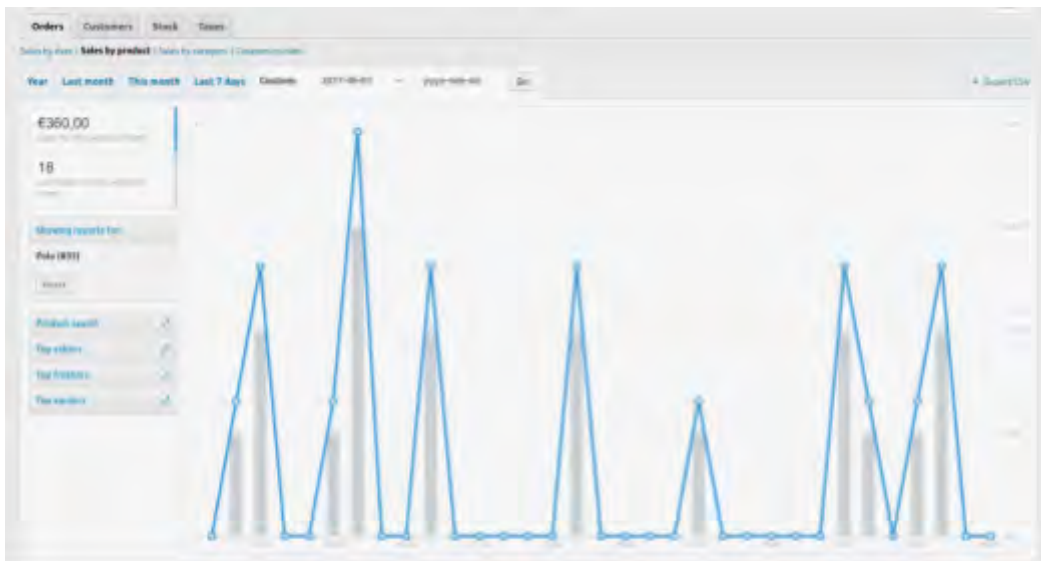
Figure 12: Woocommerce reporting system: Sales by product

Figure 13: Woocommerce reporting system: Sales by category

The system can also provide information on the users: how many newly registered users in the selected period, how many newly registered users per day, amount of sales made by Customers vs. Guests, etc. as can be seen in Figure 14.
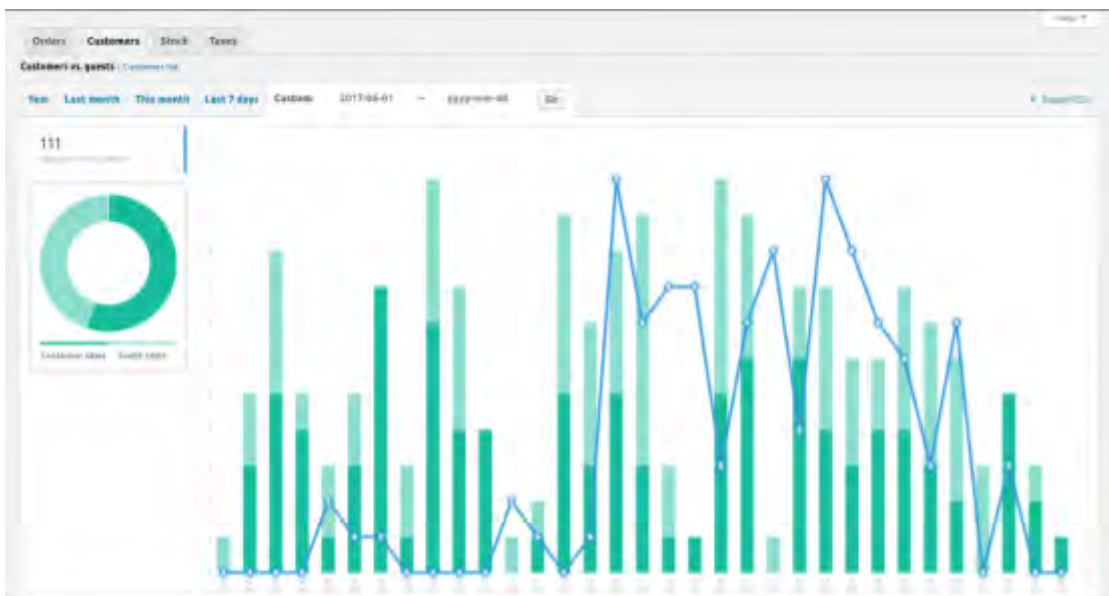
Figure 14: Woocommerce reporting system: Users per period, per day and sales by Customers or Guests

Finally, we can find a list of all the Customers and their information (Name, Username, Email, Location, number of Orders, Money Spent, and the date of the Last Order). We can also look into detail in the purchase history of each Customer as seen in Figure 15.
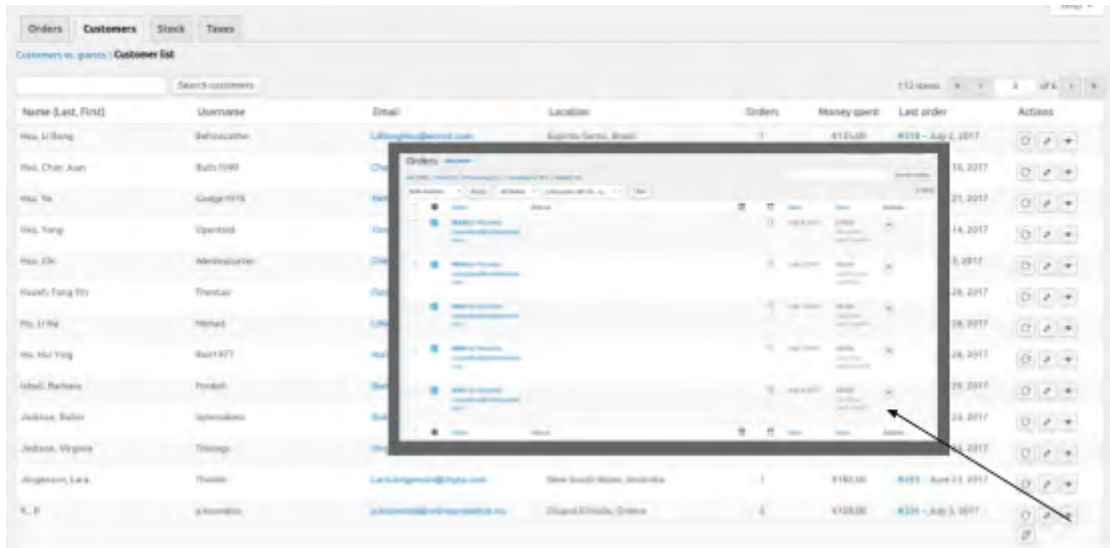
Figure 15 : Customer list and detailed view of Customer's purchase history

Looking back at Figure 11 we can see that we have enough information to calculate certain metrics that give an indication of loyalty. As we have seen, a very important metric for loyalty is Customer Lifetime Value (CLV) - or Lifetime Value (LTV) - and on an aggregated level we can calculate it by using the equation:

$$CLV = ACP \times ACL, \qquad (1)$$

where ACL is the Average Customer Lifespan and ACP is the Average Customer Profit. ACL is usually given by the calculation:

$$ACL = \frac{1}{Customer\ Churn\ Rate}, \qquad (2)$$

but since our store has a very limited lifespan and we have limited data so far we cannot calculate the Customer Churn Rate. We have seen though that we can roughly estimate the ACL to be between 1 and 3 years. For our example we will arbitrarily choose a lifespan of 1 year.

ACP is calculated by multiplying the Average Customer Value with the Margin of our business.

$$ACP = ACV \times M. \qquad (3)$$

According to industry analysts, "profit margins for retail clothes are generally within a range of 4 percent to 13 percent" ([97). For our example we will assume that the

margin (M) for our business is 10% to simplify calculations. The ACV is the result of the multiplication of the Average Order Value (AOV) with the Purchase Frequency (PF) as seen also in the following equation:

$$ACV = AOV \times PF. \qquad (4)$$

The AOV is the result of the division of the Total Revenue (TR) during a certain amount of time (T) with the Number of Orders (NO) in the same amount of time:

$$AOV = \frac{TR}{NO}. \qquad (5)$$

From Figure 11 we have that the TR for the selected period is €13.509,00. During the same period there have been 195 orders which means that for the selected period the Average Order Value, using equation (5) is calculated as:

$$AOV = 69,27€.$$

The Purchase Frequency (PF) derives from dividing the Number of Orders (NO) with the number of Unique Customers (UC) in a certain period. We know that the NO for the selected period is 195 but Woocommerce does not provide us with the number of Unique Customers. From Figure 14 we know that in the given period there have been 111 Customers (registered users) that have made a purchase. From the Customer List that Woocommerce reporting system provides - part of which is shown in Figure 15 - we can identify that 110 of the Customers made only one purchase while one made 5. That means that the Customers are responsible for 115 orders. The rest of the orders - 80 orders - were made by Guests (unregistered users). There is no way for us to know whether some of the Guests made more that one purchases so we must assume that each of the 80 orders has been made by a unique customer. That means that the number of Unique Customers that we need can be estimated at 191. Which makes PF:

$$PF = \frac{195}{191} = 1,02.$$

This is a very low Purchase Frequency as it clearly indicates that the behavioural aspect of loyalty (repeat purchase) isn't present, but that can be attributed to the fact that the data span is only 33 days.

With the value that we found for PF the Average Customer Value (ACV) becomes :

$$ACV = 69,27 \times 1,02 = 70,65 €\,.$$

We can now calculate the Average Customer Profit (ACP), taking into consideration that we have assumed that the Margin is 10%:

$$ACP = 70,65 \times 0,10 = 7,065 €\,.$$

Finally, with our assumption that the Average Customer Lifespan is 1 year we can calculate that the Customer Lifetime Value for our store is:

$$CLV = 7,065 \times 1 = 7,065 €\,.$$

This is not a very sophisticated way of calculating CLV but it is very helpful for ecommerce retailers that don't have unlimited amount of data and that are not comfortable with complicated math. For more exact ways of calculating CLV there are more sophisticated tools, as we will see in the next pages.

Another metric that we can easily calculate using the information from the Woocommerce plugin is the Repeat Customer Rate (RCR). We can calculate the RCR using the following equation:

$$RCR = \frac{\textit{Number of customers who bought more than once in time T}}{\textit{Total number of customers in time T}}\,.$$

In the time period that we are discussing the RCR is:

$$RCR = \frac{1}{191} = 0,0052\,.$$

The extremely low RCR indicates the complete lack of behavioural loyalty, which agrees with our findings from the calculation of the CLV.

As we have mentioned previously in this paper, one of the factors that affect loyalty is awareness. It is especially important during two of the phases of the purchase decision process - the information search phase and the evaluation of alternatives phase. One way of creating awareness for an online store is to make it very easy for customers to share the pages of the website on their social media accounts. This feature can be easily added to a Wordpress site by installing a plugin. We opted for the "AddToAny Share Buttons" ([98]) plugin for Wordpress because it is free of charge, because it offers all the configuration options and network alternatives that a small business might need and it also integrates very well with Woocommerce. Essentially, this

plugin adds at the bottom (or at another location, depending on the configuration) of each page of the store that qualifies (depending on the configuration - one might want to add it only on Products pages) the selected sharing buttons. In Figure 16 the behaviour of the plugin is visible.
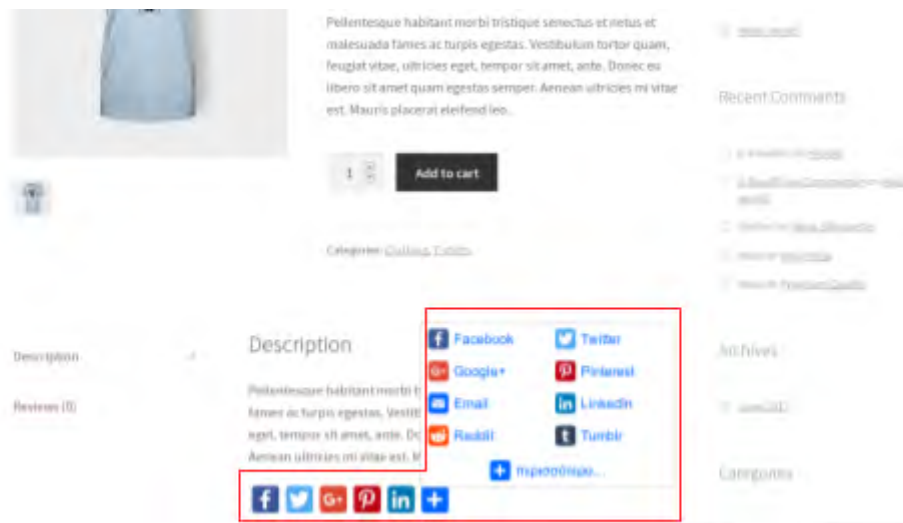

Figure 16: The behaviour of the "AddToAny Share Buttons" plugin for Wordpress

There is a drawback in the use of the "AddToAny Share Buttons" plugin and that is that AddToAny may be using cookies in order to be able to store the preferences of users and to offer their services. According to the experts cookies "are small files which are stored on a user's computer. They are designed to hold a modest amount of data specific to a particular client and website, and can be accessed either by the webserver or the client computer." ([100]). Users can set their browsers to decline cookies and they can also delete them at their convenience. Some of the cookies are necessary for a website to function as is the case of the cookie that is used to store the state of a shopping cart of an e-store. Other cookies, like the ones that "AddToAny" service may be using are not considered strictly necessary. The European Union has created legislation that demands from website owners to notify their users that they are using cookies that are not considered strictly necessary and to ask them to accept or decline the use of cookies. In order to add that feature to the store we installed and configured the "Cookie Notice by dFactory" ([102]) plugin. The behaviour of this plugin can be seen in Figure 17. When the General Data Privacy Regulation (GDPR)

that we discussed in a previous chapter of this paper becomes activated it is possible that more changes to similar stores will be necessary to attain compliance. [99][100][101][102]

Figure 17 : The behaviour of the "Cookie Notice by dFactory" plugin.

Equally important to creating the opportunity of gaining awareness through social media is the ability to track how often and where the content of the store is being shared. Before resorting to complicated Social CRM systems, the managers of SMEs can assess more simple solutions that integrate smoothly with their websites. For our example, in order to implement this feature, we chose the "Social Metrics Tracker" ([103]) plugin which simply tracks the number of times a page has been shared on each of the social media platforms that the plugin supports and also the number of comments a page has received on the store itself. The specific plugin has some limitations, such as the limited choice of social media platforms, but it is very simple to configure and it has straightforward reporting. An example of the reporting is shown in Figure 18. Tracking customer engagement does not lead directly to loyalty but it can result in useful insights that can increase satisfaction of the consumers - which is a prerequisite of loyalty.
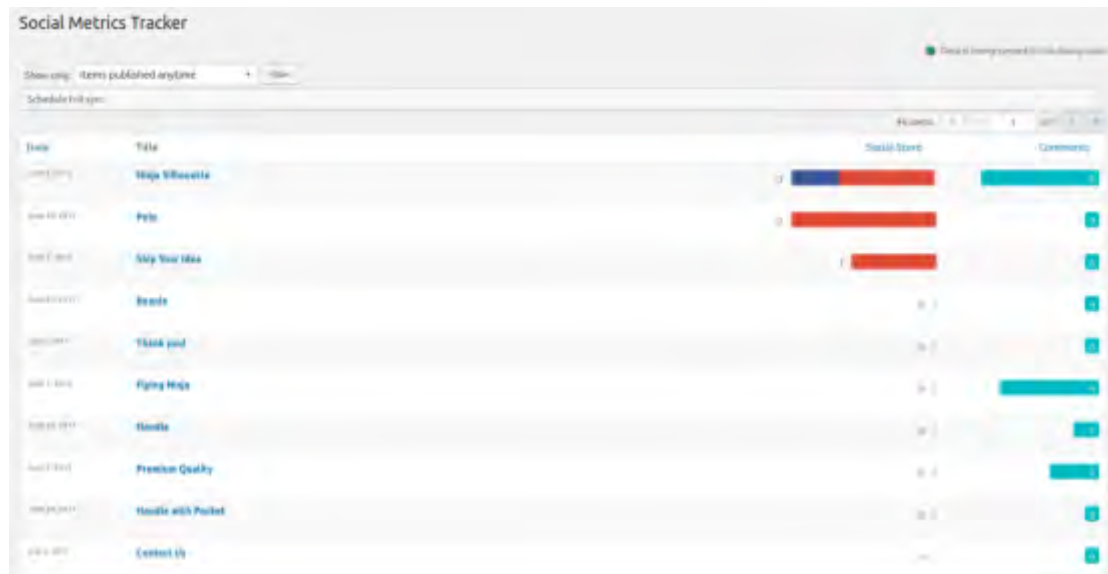
Figure 18: Social Metrics Tracker report. Share on different platforms are shown in different colours.

3.2 Using web analytics to track customers' behaviour onsite

Web analytics is the process through which companies measure, collect and report web data with the objective to better comprehend and to optimise the use of their websites. It's not only about measuring traffic but also evaluating and enhancing the performance of the websites. A typical web analytics process has 4 stages: 1) collection of data, 2) processing of data into information, 3) developing KPI (Key Performance Indicator), and 4) formulating online strategy, as they are also visible in Figure 19 ([105]). Each stage can affect the others and not always in a linear way: for example, the data that is available to be collected may impact on which KPIs are developed, and KPIs can equally affect which data is sought out. We can distinguish two categories of web analytics: off-site and on-site analytics, with the core difference being where the data is coming from and who has access to it. Off-site web analytics tools measure the potential audience of websites with data that is available also to people that are not the owners of the websites - for example, data available through Internet Service Providers (ISPs). On the other hand, on-site web analytics measure the traffic and the behaviour of users as of the moment that they land on a specific website and that type of data is only available to the owners of the websites. Technically there are two ways that the data is being collected by onsite analytics tools: 1) the traditional server log file analysis method, where the logfiles - in which the records of the clients' file requests are kept - are read, and 2) the page tagging

method where Javascript is used. Most web analytics tools employing the page tagging method also use third-party cookies which raises the same privacy questions and law compliance issues that we discussed previously. [104] [105] [106]
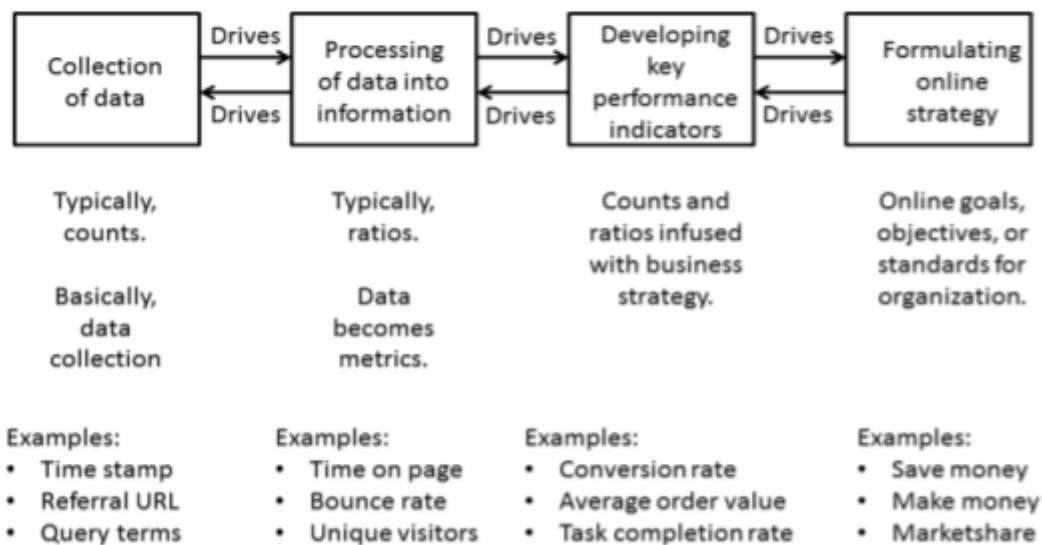

Figure 19: Basic stages of Web Analytics Process [105]

One of the most widely used on-site web analytics service that also uses page tagging is Google Analytics. While the core services of Google Analytics is offered free of charge there is also a subscription-based version called Google Analytics 360°. Google Analytics offers immense tracking and reporting capabilities that may be confusing and rather complicated for the average user. These capabilities expand from simply identifying where the traffic of a website comes from, where its visitors live and what are their demographics to advanced ecommerce reports that display information about the sites' transactions, their revenue, and other ecommerce-related metrics. For our store we decided to use the free Google Analytics solution. The first step was to create a new Google Analytics Account for the store by filling in the form that is shown in Figure 20. At the bottom of the form there is a button reading "Get Tracking ID" which when clicked it led us to the next screen that is shown in Figure

21 and where the Tracking ID of the account is visible, as is the Javascript code - for the page tagging - that must be copied into every webpage that we want to track. Thankfully, with Wordpress this doesn't need to be done manually as there is a number of plugins that offer some level of integration between Wordpress and Google Analytics. One last step before integrating the Google Analytics code to our store is to turn on the advanced ecommerce tracking and reporting that the Google Analytics offer (Figure 22). [107]
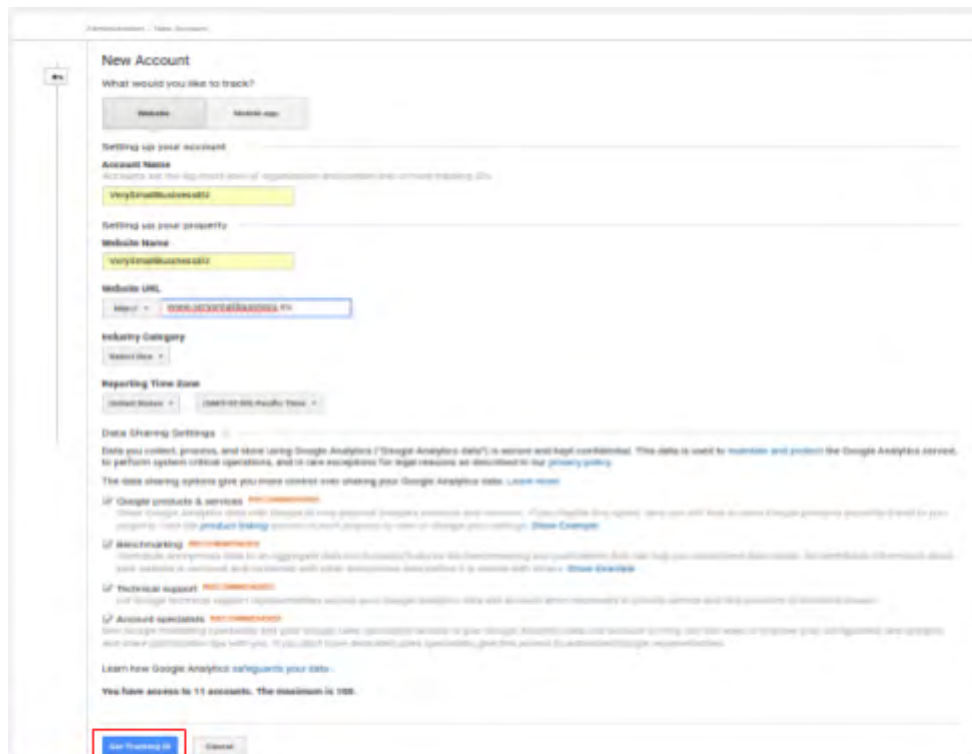
Figure 20: Creating the Google Analytics Account for the website http://verysmallbusiness.eu
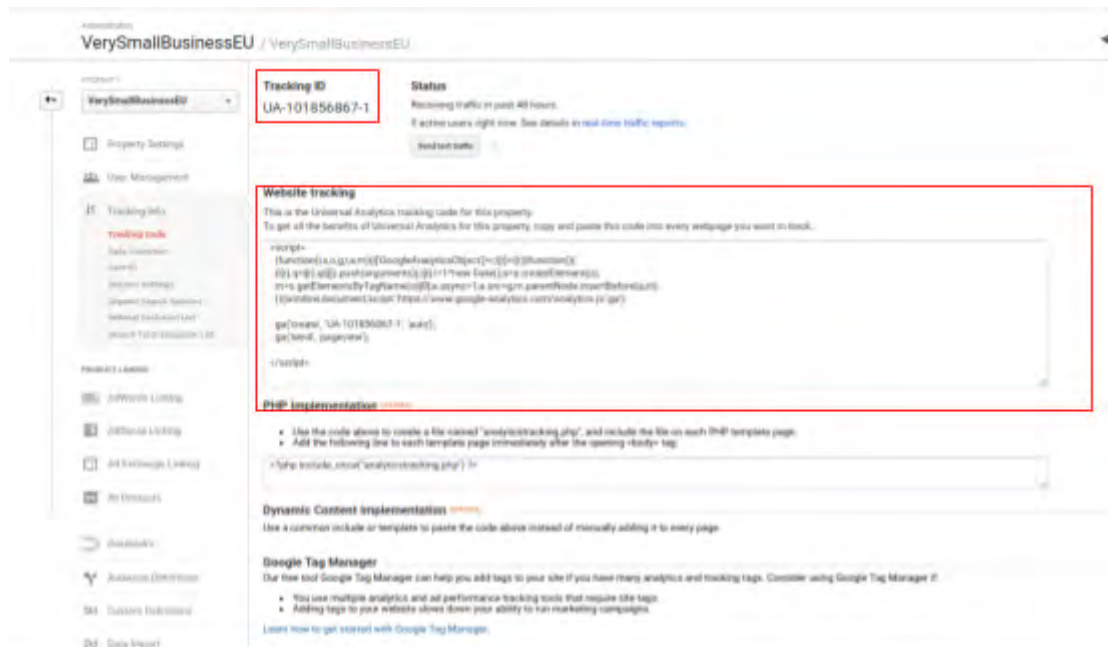
Figure 21 : The website's Tracking ID and the Javascript code that needs to be copied into every webpage that we need to track.
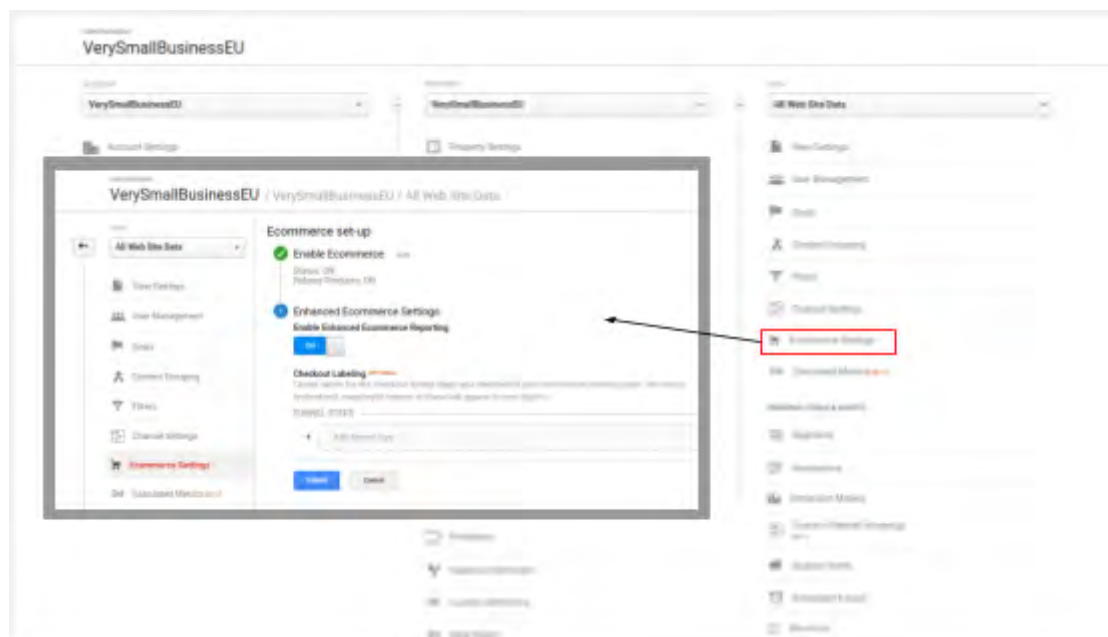
Figure 22 : Turning on the advanced Ecommerce reporting in Google Analytics

To connect our store with the Google Analytics application we used the integrated support that comes with Woocommerce. Once the plugin is configured the Google Analytics platform starts recording data. We also chose to install the "Google Analytics Dashboard for WP (GADWP)" ([108]) plugin as it offers some basic

reporting right on the Dashboard of our electronic store, without having to visit the Google Analytics website. The reporting system of the plugin offers a choice of fixed time-ranges (Real-Time, Today, Yesterday, Last 7 Days, Last 14 Days, Last 30 Days, Last 90 Days, One Year, and Three Years) and a specific selection of metrics (Sessions, Users, Organic, Page Views, Bounce Rate, Locations, Pages, Referrers, Searches, Traffic, Technology, 404 Errors) as it can also be seen in Figure 23.
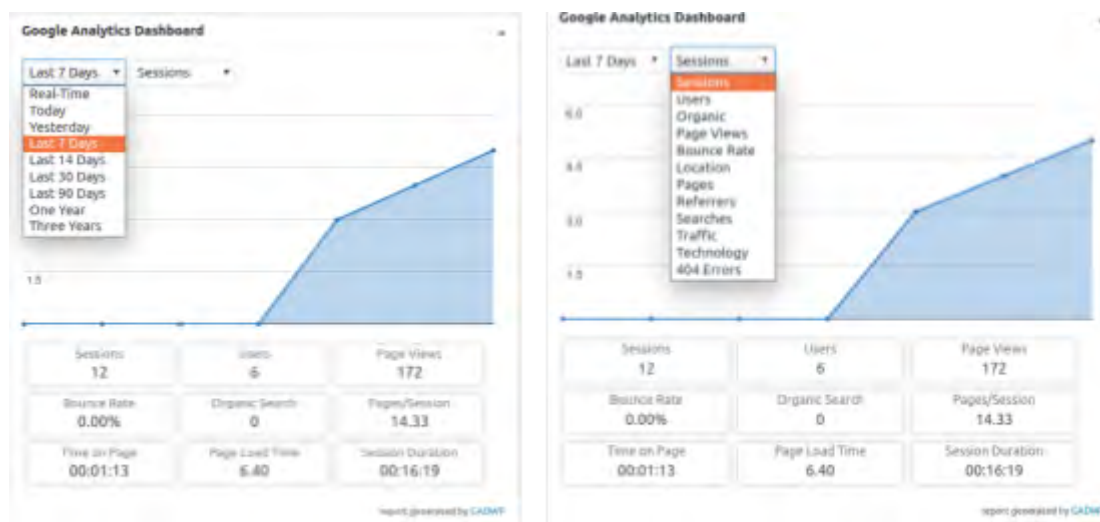
Figure 23 : The report provided by the Google Analytics Dashboard plugin

Unfortunately, as our store is only a demo ecommerce site there isn't so much traffic to measure and not so many customers whose behaviour we can track. Obviously we are not the first to face this issue as Google has created a Demo Account for Google Analytics that everyone with a Google account can access for experimenting and learning purposes. The account in question is fully functional and it offers the opportunity to experiment with the features of the platform with real business data which comes from the "Google Merchandise Store" ([110]), an ecommerce site selling Google-branded merchandise. The data includes all kinds of information: Traffic source data, content data, and transaction data and there are very few limitations in the way that it can be processed and used. Since our store is also a retail clothing store we can easily use the data from the Demo account for our demonstration purposes. In Figure 24 we can see the Audience Overview report of the

76

Demo account for the period of time between 1 June and 3 July, which is the same period that we used for the Woocommerce reporting. [109]
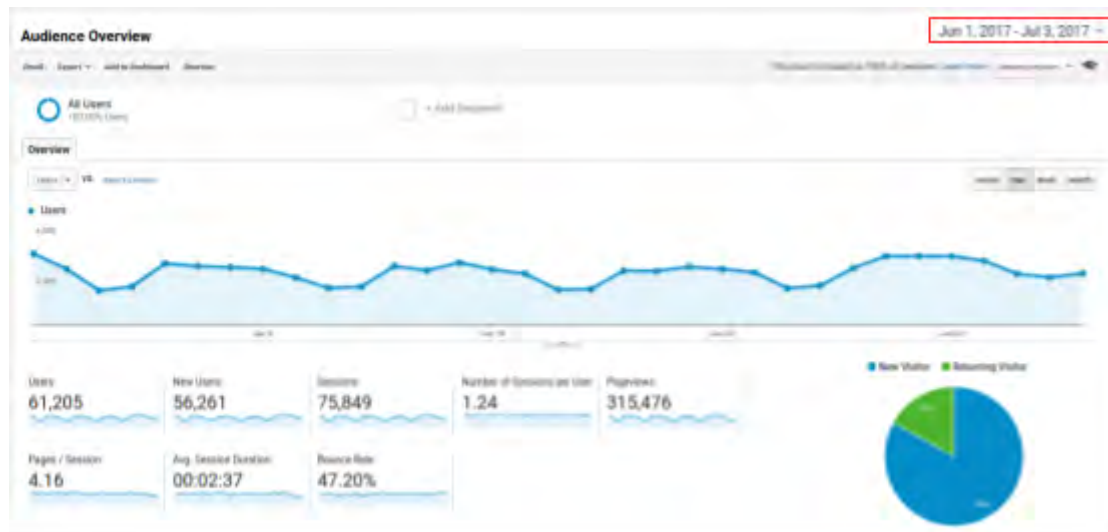

Figure 24: Audience Overview report for the Demo account between 1 June and 3 July

When trying to identify the satisfaction or dissatisfaction of consumers there are certain Google Analytics metrics that can offer some insights and one of these metrics is bounce rates. Bounce rate is "the percentage of visits that are single page visits" ([104]) and it's a metric that widely varies depending on the type of traffic that a site attracts, as well as how is that traffic acquired. A high bounce rate can mean that the visitors didn't like at all the content of the page where they landed and left immediately or it can mean exactly the opposite, that they found precisely what they were looking for and didn't need to visit another page. Therefore the variation of bounce rate of a specific page - or a site overall - over different time periods is more significant than the bounce rate itself and what is important is to track it over time in order to identify potential issues. In Figure 25, we can see the comparison of the bounce rates for the overall site recorded in the period between 1 June and 3 July and those recorded in the previous period, between 29 April and 31 May. We can see that the overall bounce rate is higher in the period 1 June - 3 July by 4,82% which is not significant and it does not clearly imply that there is an issue with the store. Should there have been an important difference in the bounce rates, we would have to look

into the Pages report (Behaviour--> All Pages) and order them by bounce rate as can be seen in Figure 26 and we should focus on the pages that have a relatively high number of pageviews. This would allow us to find potential issues on individual pages and fix them.

Figure 25 : Bounce rates comparison for the periods 1 June - 3 July and 29 April - 31 May

Figure 26 : The Pages Report (Behaviour → All Pages) comparing 2 time-ranges and ordered by Bounce Rate.

Bounce rates can be applied on all kinds of different data and give us important insights that we can then use when formulating an online strategy. For example we can access our Channels report (on which we can see through which channels do

visitors land on our website) and then order them by bounce rate. In Figure 27 we can see that the Social channel has the highest bounce rate which could indicate that our communications on social media misleads our visitors who, when landing on the site, don't find what they were promised. On the other hand, it could mean that our firm is using social media campaigns that require visitors to only visit one page. Similarly, we can use bounce rates or search keywords, or most visited content, etc., but we need to be aware of the overall online strategy to identify the meaning of bounce rates - satisfaction or dissatisfaction. [111]

Figure 27 : Channels report ordered by bounce rate

Another metric that can be used to gauge the satisfaction of customers with the content of a website is the engagement rate, which measures the level of engagement some content is receiving by an audience. The engagement rates take into consideration much time people are spending on a website and also the number of pageviews. How good or how bad is a certain engagement rate depends on the type of content and the online strategy of the firm. For example, for a website with long informative articles, a high engagement rate would indicate satisfaction, while for a simple website with easy calls for action it might signal confusion on the customer side and thus dissatisfaction. The engagement report for our chosen time range can be seen in Figure 28. [111]
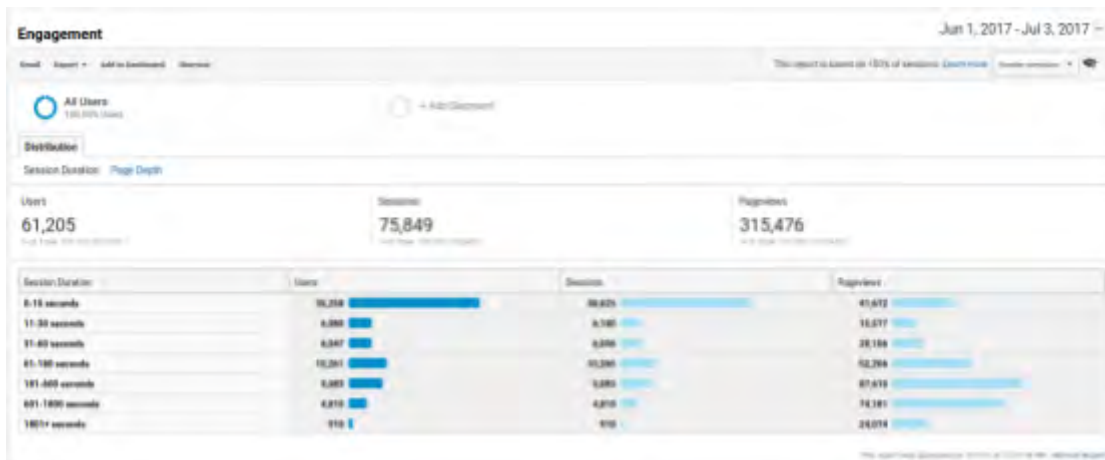
Figure 28: Engagement report for the Demo account

The most essential way of tracking satisfaction using Google Analytics is setting and tracking Goals. Goals measure how well a website fulfils the objectives of the online strategy. With a goal we refer to a completed activity - otherwise mentioned as a conversion - which adds to the success of the website. A goal can be a completed purchase (for an ecommerce site), or a registration to the website's newsletter or anything else that can be the successful endpoint to the customer journey. Goals are being defined on the View level - which is "the level in an Analytics account where you can access reports and analysis tools" ([113]) - as it can be seen in Figure 29. We cannot create Goals for the Demo account by Google Analytics but there are 5 Goals already defined and for which we can see the report in Figure 30: 1) Purchase Completed, 2) Engaged Users, 3) Registrations, 4) Entered Checkout, and 5) Smart Goals. Low goal completion rates clearly indicate that there are issues with the website that put off visitors and prevent them from concluding their journey. [112]
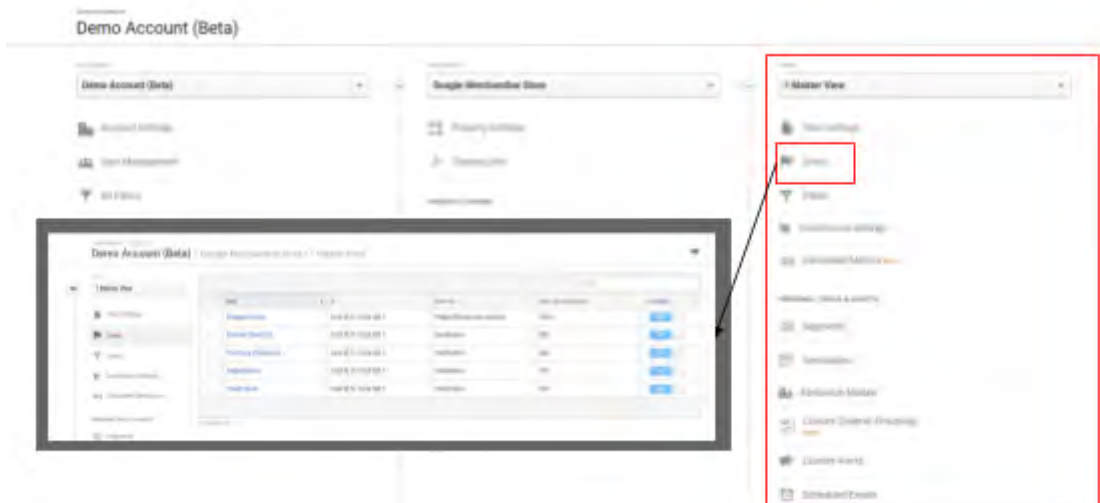
Figure 29: Goals are defined on the Views level. The Demo account has 5 already defined Goals.

Figure 30: Goal Completion Report

Google Analytics also provide us with metrics that can help us estimate the loyalty of our customers. Two such metrics are the frequency and the recency of visits. The frequency of site visits accounts for the total number of visits made by each visitor of the website. It allows us to estimate the percentage of new users and also the familiarity level of return visitors. The recency metric refers to the "number of days that have passed since each user's last visit" ([114]) and it allows us to measure the "average amount of time between visits" ([114]). The combination of the two gives us

an estimate of the level of loyalty that visitors have towards the website. The Frequency and Recency Reports can be seen in Figures 31 and 32 respectively.
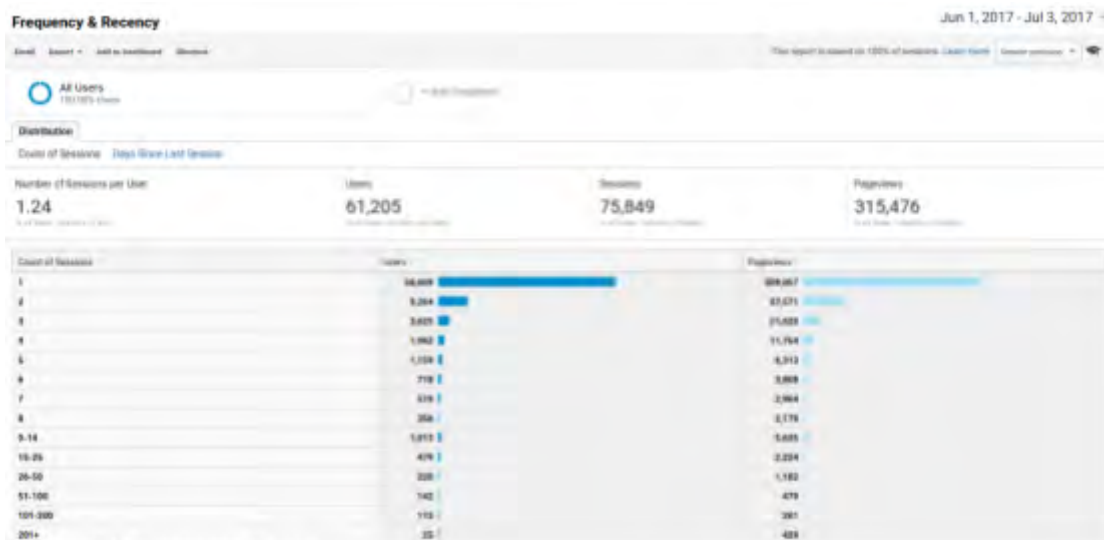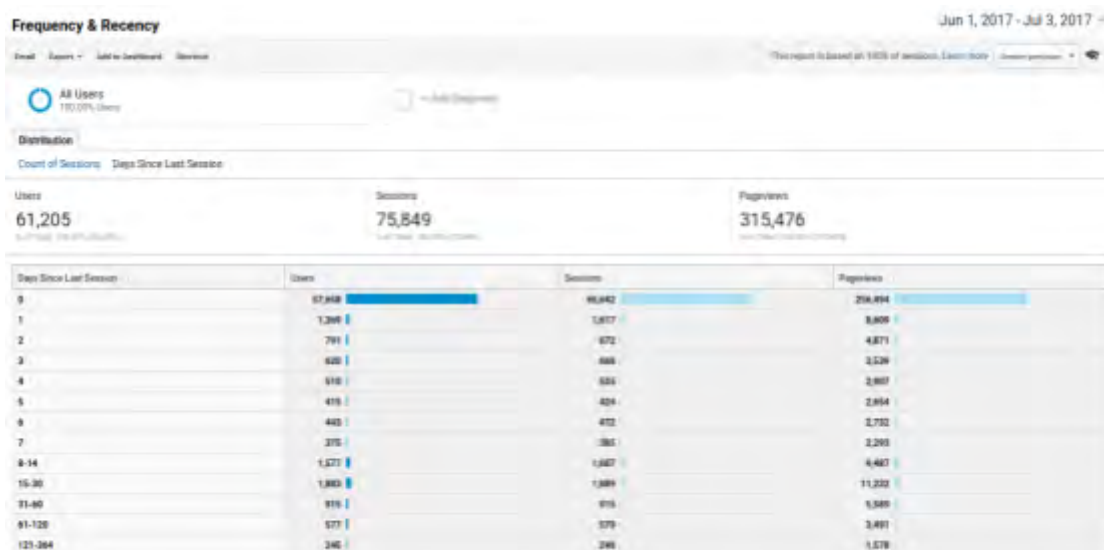

Figure 31: Frequency Report

Figure 32: Recency Report

Last but not least, the Google Analytics suite can calculate the Customer Lifetime Value (CLV), or as they call it in the reports, the Lifetime Value (LTV). The LTV report helps us understand how valuable visitors that have been acquired from different sources are for a business by estimating their lifetime performance. It is also an indicator of loyalty. Such knowledge allows as to identify where our most loyal and profitable customers come from and to better allocate marketing resources. The

report consists of a graph and a table and there are several metrics and dimensions available as it can be seen also in Figure 33.
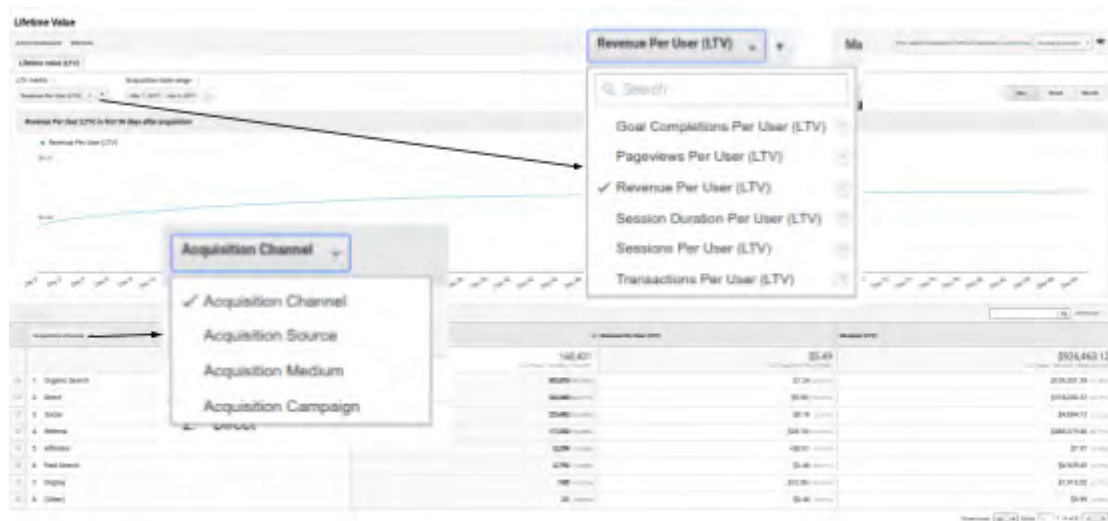

Figure 33: The Lifetime Value report

3.3 Setting up and managing a point-based loyalty programme

As we have mentioned earlier, loyalty programmes are structured marketing efforts used by marketers to identify customers and incentivise their loyal behaviour towards the brand. There are different formats that we have already explained: simple punch programmes, more elaborate point-based or tiered programmes, deferred discount spend-based programmes, and exclusive paid programmes. For our demo Woocommerce store we found several plugins that could help us setup and manage a loyalty programme of our choice. Most of them were paid plugins or they were very limited in terms of capabilities. We chose to use the "myCred" plugin ([115]) because it is open source and it is offered free of charge while it provides very good integration with Woocommerce and it is very simple to setup and manage. Unfortunately, it does not support rewarding customers for purchases out-of-the-box but one can still reward other loyal behaviours as it can be seen in Figure 34. It is also visible that for every behaviour we can define the number of points that are awarded

and we can choose to reward different actions with a different amount of points. Under the heading "Active Hooks" we can see the behaviours that we have chosen to reward: viewing content, registering as a member, logging in, making comments, referring friends, and writing product reviews.
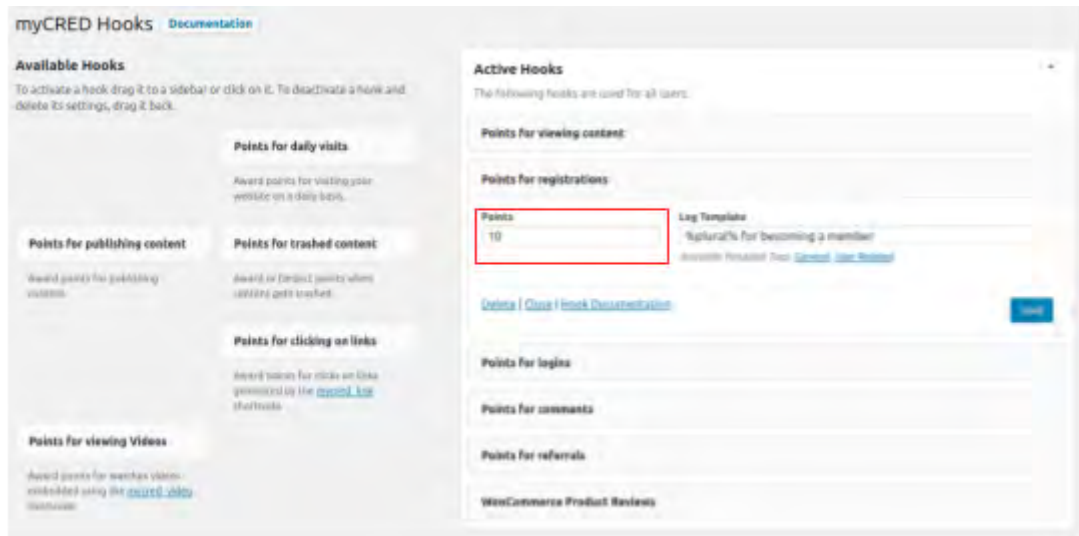

Figure 34 : myCred, the behaviours that are rewarded

Visitors must be registered and logged in to be rewarded for their behaviour but to also be informed about their point balance through the Dashboard of their account (Figure 35). The managers of the store can award but also remove points to Customers arbitrarily by manually manipulating their point balances in their profiles. They can also define some limits in the number of points that are awarded for certain behaviours (Figure 36).
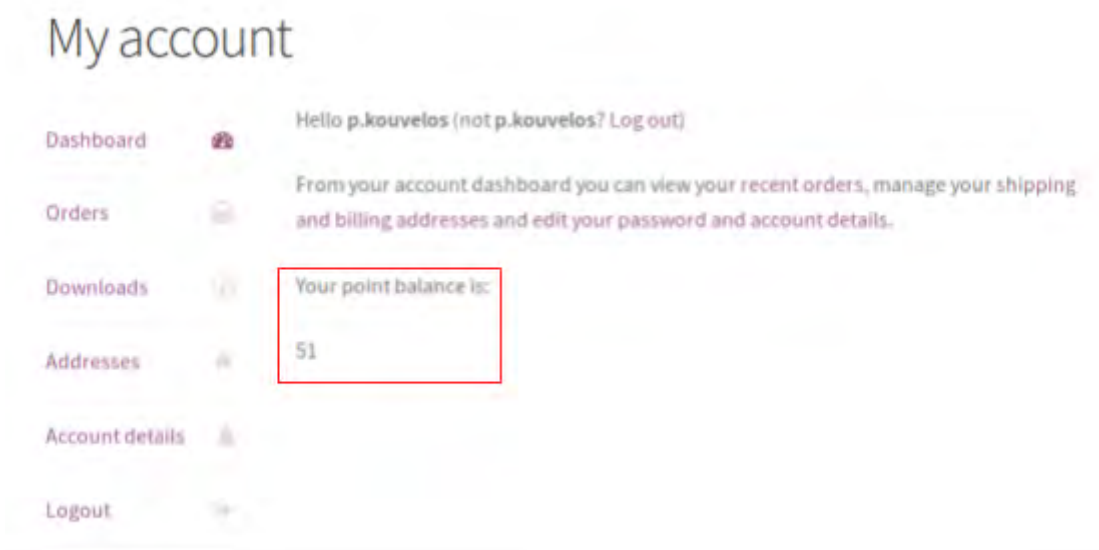
Figure 35: The point balance of a Customer on the Dashboard of their account.
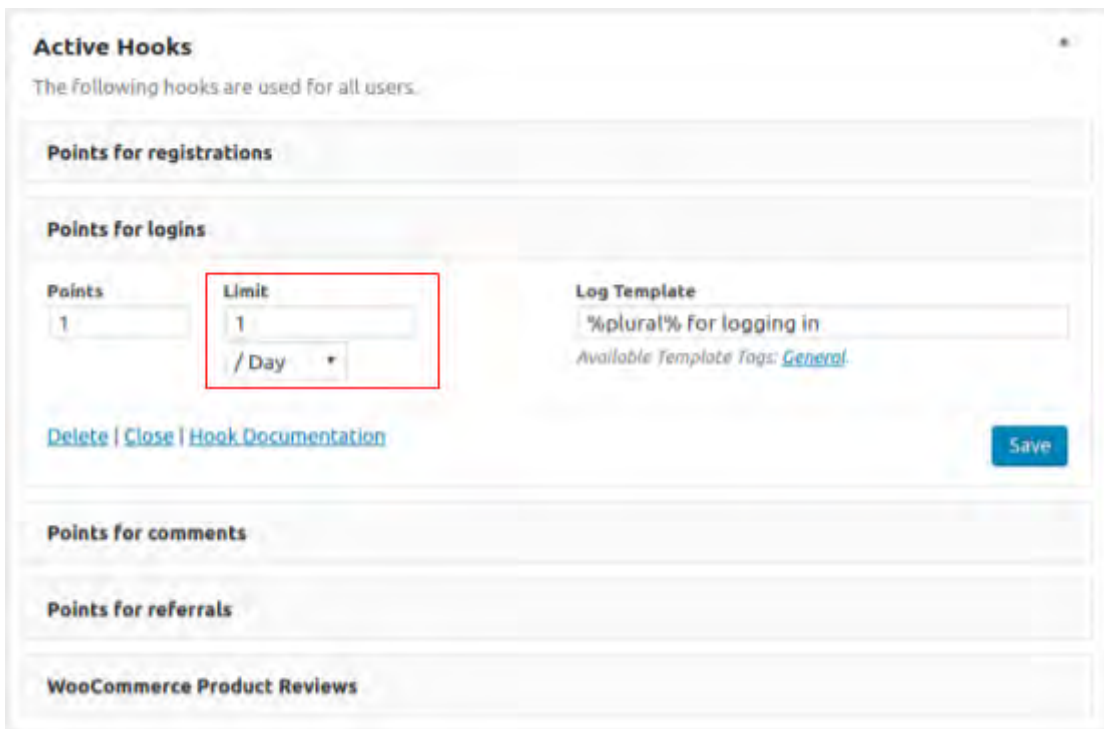
Figure 36: Store managers can limit the number of points that are awarded for certain behaviours.

Customers are also given the chance to use their credited point as a means of payment for a purchase. The exchange rate between the points and the currency that is used in the store (in our case the Euro) can be defined by the managers of the store (Figure 37). This option is given to them at the checkout only if they are logged in and only if

the points they've been awarded are enough to cover the entire cost of the purchase (Figure 38).

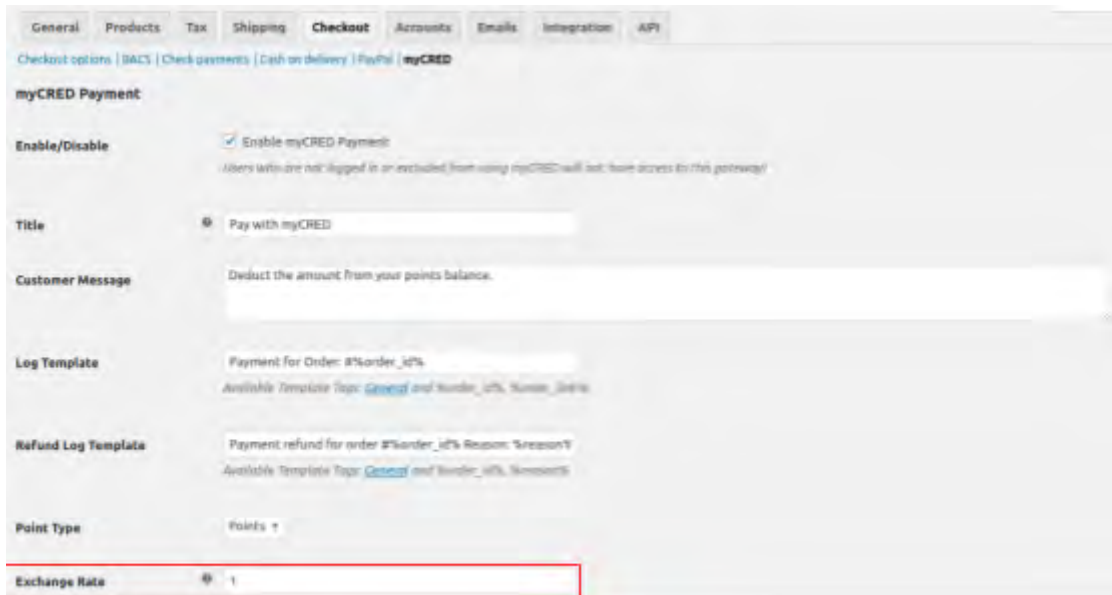Figure 37 : Store managers can determine the exchange rate between point and the currency of the store.
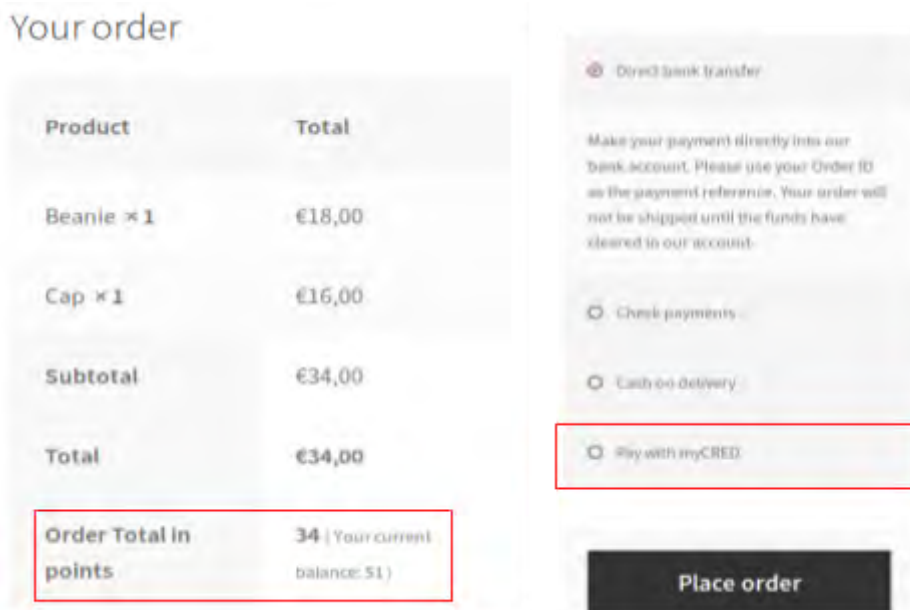

Figure 38: Customers can use their points as a payment for purchases

All points that are being awarded or used for purchases are being logged along with all the information necessary (the user, the date and time, the amount, and the reason for the reward) and an overview of how many points are now in circulation (Points

Awarded minus Points Deducted) can be found in the Dashboard of the store (Figure 39).

myCRED Overview

★ Points   42

Awarded: 55

Deducted: -13
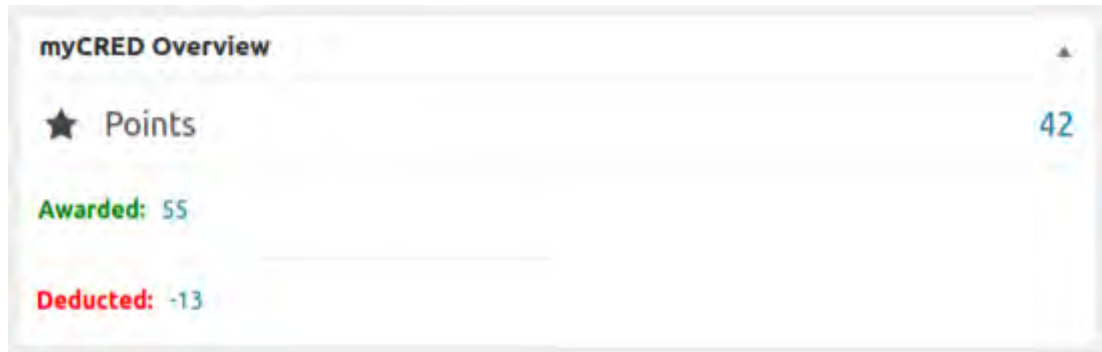
Figure 39: Overview of all point in circulation

As we have seen, a further indicator of loyalty - if a loyalty programme is in use - is the Redemption Rate (RR) which can be calculated through the following equation:

$$RR = \frac{Number\ of\ points\ redeemed}{Total\ number\ of\ points\ issued}.$$

A high redemption rate can show how loyal are the customers that are part of the programme while low redemption rates are a definite indication that the programme is not performing. In our case the Redemption Rate is:

$$RR = \frac{13}{55} = 0,2363,$$

which is low. It shows that the programme is not performing but it also agrees with our findings in the previous sections suggesting that our store does not have loyal customers.

4 Conclusion

Through the presented work, the attempt to answer the main question of the thesis that was to determine if it is possible and financially interesting for small and medium-sized enterprises to promote loyalty among their customer base by tracking the consumer purchasing behaviour of their clients was successful. The literature review revealed that by identifying and tracking certain characteristics of the consumers and also their individual purchase decision process it is possible to better understand, predict and eventually affect their purchase behaviour. It also became clear that customer loyalty, as a subset of the consumer purchase behaviour, it can be influenced and that it can - both directly and indirectly - impact on the profitability of the companies that earn it. Furthermore, it was established that even though small and medium-sized enterprises rely on personal relationships with their loyal clients and on innovation to remain competitive, they often lack the resources - financial and/or managerial - to pursue any of the two. Through the assessment of different technologies it was acknowledged that there are available solutions for SMEs that are affordable and not very complicated to use; still the managers are not persuaded of the benefits for their business and they are reluctant to adopt them, possibly because of lack of awareness. Creating awareness to the managers of SMEs, providing them with educational tools on the subject of loyalty and the use of IT, as well as offering further developed and simplified tools at reasonable prices would encourage the use of Information System in tracking consumer purchase behaviour to achieve customer loyalty.

5   *Bibliography*

[1] Vaghela, M. (n.d.). DIFFERENCE BETWEEN CONSUMER BUYING &
    INDUSTRIAL BUYING- MARKETING MANAGEMENT. Retrieved from
    http://smartlearningway.blogspot.com/2015/01/difference-between-consumer-bu
    ying.html

[2] Consumer behaviour. (2017, April 23). In *Wikipedia*. Retrieved from
    https://en.wikipedia.org/w/index.php?title=Consumer_behaviour&oldid=7768139
    47

[3] Marketing 101: An Overview of Consumer Buying Behavior. (n.d.). Retrieved
    from
    http://marketmedialife.blogspot.com/2012/09/marketing-101-overview-of-consu
    mer.html

[4] Meldrum, M., & McDonald, M. (1995). Consumer Buying Behaviour. In *Key
    Marketing Concepts* (pp. 97–102). Macmillan Education UK. Retrieved from
    http://link.springer.com/chapter/10.1007/978-1-349-13877-7_20

[5] Marketing mix. (2017, April 30). In *Wikipedia*. Retrieved from
https://en.wikipedia.org/w/index.php?title=Marketing_mix&oldid=778033624

[6] tutor2u. (n.d.). Buyer behaviour: stimulus-response model [text/html]. Retrieved
from
https://www.tutor2u.net/business/reference/buyer-behaviour-stimulus-response-m
odel

[7] Marketing 101: Cultural Factors Affecting Consumer Purchases. (n.d.). Retrieved
from
http://marketmedialife.blogspot.com/2012/09/marketing-101-cultural-factors.htm
l

[8] Social Class As Subculture Introduction to Sociology Social Sciences Sociology.

(n.d.). Retrieved from http://www.zeepedia.com/read.php?b=99&c=25

[9] Social class | Define Social class at Dictionary.com. (n.d.). Retrieved from
http://www.dictionary.com/browse/social-class

[10] Marketing 101: Social Factors Affecting Consumer Buyer Behavior. (n.d.).

Retrieved from

http://marketmedialife.blogspot.com/2012/10/marketing-101-social-factors-affect

ing.html

[11] Social Factors affecting Consumer Behaviour. (n.d.). Retrieved from

http://www.managementstudyguide.com/social-factors-affecting-consumer-behav

iour.htm

[12] Do you know this term? (n.d.). Retrieved from

http://www.businessdictionary.com/definition/group.html

[13] Social status. (2017, April 18). In *Wikipedia*. Retrieved from

https://en.wikipedia.org/w/index.php?title=Social_status&oldid=775992985

[14] Social Factors Influencing Consumer Behavior. (2016, April 18). Retrieved from

http://businessjargons.com/social-factors-influencing-consumer-behavior.html

[15] 3.1 Factors That Influence Consumers' Buying Behavior | Principles of

Marketing. (n.d.). Retrieved from

https://open.lib.umn.edu/principlesmarketing/chapter/3-1-factors-that-influence-c

onsumers-buying-behavior/

[16] Marketing 101: The VALS Study. (n.d.). Retrieved from

http://marketmedialife.blogspot.com/2012/10/marketing-101-vals-study.html

[17] Which of your friends needs to learn this term? (n.d.). Retrieved from

http://www.businessdictionary.com/definition/lifestyle.html

[18] Marketing 101: Pyschological Factors of Consumer Buyer Behavior. (n.d.).

Retrieved from

http://marketmedialife.blogspot.com/2012/11/marketing-101-pyschological-facto

rs-of.html

[19] Psychological Factors Influencing Consumer Behavior. (2016, April 18).

Retrieved from

http://businessjargons.com/psychological-factors-influencing-consumer-behavior.

html

[20] Abraham Maslow. (2017, April 5). In *Wikipedia*. Retrieved from

https://en.wikipedia.org/w/index.php?title=Abraham_Maslow&oldid=773995734

[21] Marketing 101: The Buyer Decision Process - Need Recognition. (n.d.).

Retrieved from

http://marketmedialife.blogspot.com/2013/02/marketing-101-buyer-decision-process.html

[22] Buyer decision process. (2017, April 17). In *Wikipedia*. Retrieved from

https://en.wikipedia.org/w/index.php?title=Buyer_decision_process&oldid=775894286

[23] Marketing 101: The Buyer Decision Process - Information Search. (n.d.).

Retrieved from

http://marketmedialife.blogspot.com/2013/02/marketing-101-buyer-decision-process_25.html

[24] Marketing 101: The Buyer Decision Process: Evaluation of Alternatives. (n.d.).

Retrieved from

http://marketmedialife.blogspot.com/2013/03/marketing-101-buyer-decision-process.html

[25] Consumer Buying Behaviours: 4 Important Types of Consumer Buying

Behaviours. (2013, December 26). Retrieved from

http://www.yourarticlelibrary.com/consumers/consumer-buying-behaviours-4-important-types-of-consumer-buying-behaviours/22153/

[26] Marketing 101: Purchase Decision. (n.d.). Retrieved from

http://marketmedialife.blogspot.com/2013/03/marketing-101-purchase-decision.html

[27] Marketing 101: Post-Purchase Behavior. (n.d.). Retrieved from

http://marketmedialife.blogspot.com/2013/04/marketing-101-post-purchase-beha

vior.html

[28] Cognitive dissonance. (2017, May 8). In *Wikipedia*. Retrieved from

https://en.wikipedia.org/w/index.php?title=Cognitive_dissonance&oldid=779348

763

[29] Post Purchase Cognitive Dissonance – avoiding disappointment requires honesty.

(2010, May 10). Retrieved from

https://abranddayout.wordpress.com/2010/05/10/post-purchase-cognitive-dissona

nce-avoiding-disappointment-requires-honesty/

[30] Marketing 101: Complex Buying Behavior. (n.d.). Retrieved from

http://marketmedialife.blogspot.com/2012/12/marketing-101-complex-buying-be

havior.html

[31] Types of Buying Decision Behavior, Complex, Dissonance, Habitual. (n.d.).

Retrieved from

http://www.studylecturenotes.com/management-sciences/marketing/233-types-of

-buying-decision-behavior

[32] Loyalty | Define Loyalty at Dictionary.com. (n.d.). Retrieved from
http://www.dictionary.com/browse/loyalty

[33] Loyalty. (2017, May 3). In *Wikipedia*. Retrieved from
https://en.wikipedia.org/w/index.php?title=Loyalty&oldid=778500021

[34] Szczepanska, K., & Gawron, P. P. (2011). Changes in Approach to Customer
Loyalty. *Contemporary Economics*, *5*(1), 60-69.

[35] Srinivasan, S. S., Anderson, R., & Ponnavolu, K. (2002). Consumer loyalty in e-commerce: An exploration of its antecedents and consequences. *Journal of Retailing*, *78*(1), 41–50. https://doi.org/10.1016/S0022-4359(01)00065-3

[36] Osman, A., & Subhani, M. I. (2010). *A Study on the Association between Brand Awareness and Consumer/Brand Loyalty for the Packaged Milk Industry in Pakistan* (SSRN Scholarly Paper No. ID 1695113). Rochester, NY: Social Science Research Network. Retrieved from https://papers.ssrn.com/abstract=1695113

[37] Wagner, J., & Rydstrom, G. (2001). Satisfaction, Trust and Commitment in Consumers= Relationships With Online Retailers. *ACR European Advances*, *E-05*. Retrieved from http://acrwebsite.org/volumes/11227/volumes/e05/E-05

[38] Customer Loyalty Definition from Financial Times Lexicon. (n.d.). Retrieved from http://lexicon.ft.com/Term?term=customer-loyalty

[39] Brand loyalty. (2017, February 21). In *Wikipedia*. Retrieved from https://en.wikipedia.org/w/index.php?title=Brand_loyalty&oldid=766614955

[40] Ballam, L. (n.d.). The Benefits of Customer Loyalty. Retrieved from https://www.teamsupport.com/blog/customer-loyalty-benefits

[41] John T. Bowen, & Shiang‑Lih Chen. (2001). The relationship between customer loyalty and customer satisfaction. *International Journal of Contemporary Hospitality Management*, *13*(5), 213–217. https://doi.org/10.1108/09596110110395893

[42] Kumar, V. (2008). *Customer Lifetime Value: The Path to Profitability*. Now Publishers Inc.

[43] What is Past Customer Value | IGI Global. (n.d.). Retrieved from

http://www.igi-global.com/dictionary/past-customer-value/39587

[44] Ganesan, S. (2012). *Handbook of Marketing and Finance*. Edward Elgar

Publishing.

[45] Customer lifetime value. (2017, April 11). In *Wikipedia*. Retrieved from

https://en.wikipedia.org/w/index.php?title=Customer_lifetime_value&oldid=774
875626

[46] McEachern, A. (2015, June 18). The Metrics You Need to Measure Customer

Loyalty Online. Retrieved from

https://www.sweettoothrewards.com/blog/measure-customer-loyalty-online/

[47] Gupta, S., Hanssens, D., Hardie, B., Kahn, W., Kumar, V., Lin, N., … Sriram, S.

(2006). Modeling Customer Lifetime Value. *Journal of Service Research*, *9*(2),

139–155. https://doi.org/10.1177/1094670506293810

[48] McEachern, A. (n.d.). The Easy Way to Calculate Customer Lifetime Value.

Retrieved from https://blog.smile.io/easy-way-tocalculate-clv-increase-it

[49] Analytics Tip #17: Calculate Customer Lifetime Value (LTV). (2010, April 5).

Retrieved from

https://www.kaushik.net/avinash/analytics-tip-calculate-ltv-customer-lifetime-val
ue/

[50] Skok, D. (2014, July 4). SaaS Metrics 2.0 – Detailed Definitions. Retrieved from

http://www.forentrepreneurs.com/saas-metrics-2-definitions-2/

[51] Karr, A. (2001). Loyalty metrics shortsighted. *Customer Interface*, *14*(9), 14–14.

[52] Measure customer satisfaction: CSAT, CES and NPS. (2014, November 27).

Retrieved from https://www.checkmarket.com/blog/csat-ces-nps-compared/

[53] Grant Fairley Famous Quote about Attention, Loyal, Loyalty, So True!! | Quotes

Daddy. (n.d.). Retrieved from

https://www.quotesdaddy.com/quote/570676/grant-fairley/if-you-want-loyalty-ge

t-a-dog-if-you-want-loyalty

[54] How to Increase Brand Awareness for a Product. (n.d.). Retrieved from

http://smallbusiness.chron.com/increase-brand-awareness-product-41158.html

[55] 18 Sneaky Ways to Build Brand Awareness | WordStream. (n.d.). Retrieved from

http://www.wordstream.com/blog/ws/2015/07/10/brand-awareness

[56] Booker, B. (2015, January 15). 10 Ways to Increase Your Brand Awareness.

Retrieved from

https://www.eventbrite.co.uk/blog/8-ways-to-increase-brand-awareness-ds00/

[57] Toner, L. (n.d.). 11 Ideas to Grow Brand Awareness at Lightning Speed.

Retrieved from

https://blog.hubspot.com/marketing/14-ideas-to-grow-brand-awareness-at-lightni

ng-speed

[58] Koch, M. (1997) Introduction to new marketing strategy for Lufthansa U.S.

[59] Van Vuuren, T., Roberts-Lombard, M., & Van Tonder, E. (2012). Customer

satisfaction, trust and commitment as predictors of customer loyalty within an

optometric practice environment. *Southern African Business Review*, *16*(3), 81–96.

[60] Customer relationship management. (2017, June 1). In *Wikipedia*. Retrieved from https://en.wikipedia.org/w/index.php?title=Customer_relationship_management&oldid=783327729

[61] What is customer relationship management (CRM) ? - Definition from WhatIs.com. (n.d.). Retrieved from http://searchcrm.techtarget.com/definition/CRM

[62] Staff, E. (n.d.). Marketing Materials. Retrieved from https://www.entrepreneur.com/encyclopedia/marketing-materials

[63] Single customer view. (2017, March 29). In *Wikipedia*. Retrieved from https://en.wikipedia.org/w/index.php?title=Single_customer_view&oldid=772768792

[64] What is marketing automation? - Definition from WhatIs.com. (n.d.). Retrieved from http://searchsalesforce.techtarget.com/definition/marketing-automation

[65] Analytical CRM - Meaning and its Key Features. (n.d.). Retrieved from http://www.managementstudyguide.com/analytical-crm.htm

[66] Collaborative CRM [E-Commerce Wiki]. (n.d.). Retrieved from http://en.ecommercewiki.info/crm/components/collaborative_crm

[67] Social CRM [E-Commerce Wiki]. (n.d.). Retrieved from

http://en.ecommercewiki.info/crm/concepts/social_crm

[68] Mobile CRM [E-Commerce Wiki]. (n.d.). Retrieved from

http://en.ecommercewiki.info/crm/concepts/mobile/crm

[69] Loyalty program. (2017, April 2). In *Wikipedia*. Retrieved from

https://en.wikipedia.org/w/index.php?title=Loyalty_program&oldid=773423789

[70] Loyalty Marketing Best Practices. (n.d.). Retrieved from

http://www.crmtrends.com/loyalty.html

[71] Customer Loyalty Programs: Why Retailers Need Them (and How to Create

One) – Shopify. (n.d.). Retrieved from

https://www.shopify.com/retail/customer-loyalty-program-why-retailers-need-on

e-and-how-to-build-one-of-your-own

[72] The Beginner's Guide To Customer Loyalty Programs. (2015, December 10).

Retrieved from https://selfstartr.com/customer-loyalty-programs/

[73] Ethical Issues in CRM. (n.d.). Retrieved from

http://www.ehow.com/info_8384284_ethical-issues-crm.html

[74] Heath, N. (n.d.). SaaS and EU legislation: What you need to know. Retrieved

from

http://www.zdnet.com/article/saas-and-eu-legislation-what-you-need-to-know/

[75] Protection of personal data - European Commission. (n.d.). Retrieved from

http://ec.europa.eu/justice/data-protection/

[76] GDPR-Whitepaper-British-Legal-Technology-Forum-2017-Sponsor.pdf. (n.d.).

Retrieved from

https://britishlegalitforum.com/wp-content/uploads/2017/02/GDPR-Whitepaper-

British-Legal-Technology-Forum-2017-Sponsor.pdf

[77] Information governance. (2016, December 27). In *Wikipedia*. Retrieved from

https://en.wikipedia.org/w/index.php?title=Information_governance&oldid=7569

25029

[78] Staff, I. (2006, June 19). Small And Midsize Enterprises - SME. Retrieved from

http://www.investopedia.com/terms/s/smallandmidsizeenterprises.asp

[79] Ward, S. (n.d.). What Are SMEs? It Depends On Where You Are. Retrieved

from

https://www.thebalance.com/sme-small-to-medium-enterprise-definition-294796

2

[80] European Commission. (2015). User guide to the SME Definition. Retrieved

from

https://ec.europa.eu/docsroom/documents/15582/attachments/1/translations/en/re

nditions/native

[81] Small and medium-sized enterprises. (2017, June 7). In *Wikipedia*. Retrieved

from

https://en.wikipedia.org/w/index.php?title=Small_and_medium-sized_enterprises

&oldid=784250586

[82] Government of Canada, S. C. (2007, March 19). Archived – North American

Industry Classification System (NAICS) 2007. Retrieved from

http://www.statcan.gc.ca/eng/subjects/standard/naics/2007/introduction

[83] What is an SME? - Growth - European Commission. (n.d.). Retrieved from

http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_e

n

[84] Μουτσιούλης Κ. (2010) *Πηγές Χρηματοδότησης και Αξιολόγηση Μικρομεσαίων*

Επιχειρήσεων στην Ελλάδα. Χανιά, Ελλάδα: Τμήμα Μηχανικών Παραγωγής και

Διοίκησης, Πολυτεχνείο Κρήτης. Retrieved from

http://artemis.library.tuc.gr/DT2010-0108/DT2010-0108.pdf

[85] Σταυρουλάκης Δ. (2015) *Ι. Οργάνωση και Διοίκηση Μικρομεσαίων Μονάδων*.

Πειραιάς, Ελλάδα: Τμήμα Λογιστικής και Χρηματοοικονομικής, Ανώτατο

Εκπαιδευτικό Ίδρυμα Πειραιά Τεχνολογικού Τομέα. [Powerpoint slides].

Retrieved from:

http://eclass.teipir.gr/openeclass/modules/document/file.php/ACCO122/I.%20%

CE%94%CE%B9%CE%B1%CF%86%CE%AC%CE%BD%CE%B5%CE%B9

%CE%B5%CF%82%20%CE%9C%CE%B1%CE%B8%CE%AE%CE%BC%C

E%B1%CF%84%CE%BF%CF%82/I.%20%CE%9F%CF%81%CE%B3%CE%

AC%CE%BD%CF%89%CF%83%CE%B7%20%26%20%CE%94%CE%B9%C

E%BF%CE%AF%CE%BA%CE%B7%CF%83%CE%B7%20%CE%9C%CE%

B9%CE%BA%CF%81%CE%BF%CE%BC%CE%B5%CF%83%CE%B1%CE

%AF%CF%89%CE%BD%20%CE%9C%CE%BF%CE%BD%CE%AC%CE%B
4%CF%89%CE%BD.pptx

[86] Τσεκούρας Κ., Κουτσονίκος Ι., Γκυπάλη Α. (2008) *ΜΕΛΕΤΗ ΔΙΕΡΕΥΝΗΣΗΣ ΑΝΑΓΚΩΝ των Μικρών Ελληνικών Επιχειρήσεων σε Προγράμματα Δια Βίου Μάθησης*. Αθήνα, Ελλάδα: ΙΜΕ ΓΣΕΒΕΕ. Retrieved from http://www.imegsevee.gr/attachments/article/108/anagkwn_mikrwn_epixeirisew n.pdf

[87] Αφεντούλη Β. (2012). *Πηγές χρηματοδότησης μικρομεσαίων επιχειρήσεων στα πλαίσια της Ελληνικής πραγματικότητας*. Θεσσαλονίκη, Ελλάδα: Τμήμα Λογιστικής και Χρηματοοικονομικής, Πανεπιστήμιο Μακεδονίας. [Master's Thesis]. Retrieved from https://dspace.lib.uom.gr/bitstream/2159/15333/3/AphentouliVasilikiMsc2012.pd f

[88] Τζαφέρης Γ. (2007). *Οι μικρομεσαίες επιχειρήσεις στην Ελλάδα στο στόχαστρο των τραπεζών μέσω των νέων προϊόντων που προβάλλονται ότι μπορούν να αποτελέσουν εργαλείο ανάπτυξης της επιχειρηματικότητάς τους*. Πρέβεζα, Ελλάδα: Τμήμα Λογιστικής, Σχολή Διοίκησης και Οικονομίας, ΤΕΙ Ηπείρου. [Bachelor's Thesis]. Retrieved from http://apothetirio.teiep.gr/xmlui/bitstream/handle/123456789/972/log_20070277. pdf?sequence=1

[89] Μυλωνάς Π., Τζάκου - Λαμπροπούλου Ν. (2016). *Μικρομεσαίες Επιχειρήσεις: Λιανικό εμπόριο*. Αθήνα, Ελλάδα: ΕΘΝΙΚΗ ΤΡΑΠΕΖΑ Διεύθυνση Οικονομικής

Ανάλυσης. [PDF Slides]. Retrieved from:

https://www.nbg.gr/greek/the-group/press-office/e-spot/reports/Documents/SMEs
%20Survey_Retail%20Trade%20(September%202016).pdf

[90] Blog Tool, Publishing Platform, and CMS — WordPress. (n.d.). Retrieved from

https://wordpress.org/

[91] Installing WordPress « WordPress Codex. (n.d.). Retrieved from

https://codex.wordpress.org/Installing_WordPress

[92] What is a WordPress Plugin? (n.d.). Retrieved from

http://www.wpbeginner.com/glossary/plugin/

[93] Installing and Uninstalling WooCommerce. (n.d.). Retrieved from

https://docs.woocommerce.com/document/installing-uninstalling-woocommerce/

[94] Storefront Installation & Configuration. (n.d.). Retrieved from

https://docs.woocommerce.com/document/installation-configuration/

[95] Importing WooCommerce Dummy Data. (n.d.). Retrieved from

https://docs.woocommerce.com/document/importing-woocommerce-dummy-data
/

[96] Media, 75nineteen. (2017). *order-simulator-woocommerce: An automated
generator of fake orders for WooCommerce for testing or other purposes*. PHP.
Retrieved from https://github.com/75nineteen/order-simulator-woocommerce

[97] What Is the Profit Margin for Retail Clothes? (n.d.). Retrieved from

http://smallbusiness.chron.com/profit-margin-retail-clothes-25123.html

[98] AddToAny. (n.d.). AddToAny Share Buttons. Retrieved from

https://wordpress.org/plugins/add-to-any/

[99] AddToAny - Privacy Policy. (n.d.). Retrieved from

https://www.addtoany.com/privacy

[100] What are Cookies - Computer Cookies - What is a Cookie. (n.d.). Retrieved

from http://www.whatarecookies.com/

[101] The Cookie Law Explained. (n.d.). Retrieved from

https://www.cookielaw.org/the-cookie-law/

[102] dFactory. (n.d.). Cookie Notice by dFactory. Retrieved from

https://wordpress.org/plugins/cookie-notice/

[103] Cole, B. (n.d.). Social Metrics Tracker. Retrieved from

https://wordpress.org/plugins/social-metrics-tracker/

[104] Web analytics. (2017, June 26). In *Wikipedia*. Retrieved from

https://en.wikipedia.org/w/index.php?title=Web_analytics&oldid=787561471

[105] Researcher9999. (2015). *English: Basic Steps of Web Analytics Process*.

Retrieved from

https://commons.wikimedia.org/wiki/File:Basic_Steps_of_Web_Analytics_Proce

ss.png

[106] On-site Versus Off-site Web Analytics – 2. How They Work. (n.d.). Retrieved

from

https://brianclifton.com/blog/2015/08/20/on-site-versus-off-site-web-analytics/

[107] Google Analytics. (2017, June 27). In *Wikipedia*. Retrieved from

https://en.wikipedia.org/w/index.php?title=Google_Analytics&oldid=787739724

[108] Marcu, A. (n.d.). Google Analytics Dashboard for WP (GADWP). Retrieved

from https://wordpress.org/plugins/google-analytics-dashboard-for-wp/

[109] Demo account - Analytics Help. (n.d.). Retrieved from

https://support.google.com/analytics/answer/6367342?hl=en

[110] Home. (n.d.). Retrieved from https://shop.googlemerchandisestore.com/

[111] How to use Google Analytics to track customer satisfaction. (2015, March 5).

Retrieved from

http://www.nickelled.com/blog/how-to-use-google-analytics-to-track-customer-s

atisfaction/

[112] About goals - Analytics Help. (n.d.). Retrieved from

https://support.google.com/analytics/answer/1012040?hl=en

[113] About views - Analytics Help. (n.d.). Retrieved from

https://support.google.com/analytics/answer/2649553?hl=en

[114] Frequency & Recency of Site Visits: 2 Metrics for User Engagement. (n.d.).

Retrieved from https://www.nngroup.com/articles/frequency-recency/

[115] Merovingi, G. S. (n.d.). myCRED. Retrieved from

https://wordpress.org/plugins/mycred/