Customer Segmentation Analysis with Implementation of Social Media in Retail Sector

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TABLE OF CONTENTS

1. INTRODUCTION

1.1 Study Background

Customers profit from retailing because it performs marketing tasks that enable them to have access to a variety of goods and services, forming the place, time, and possession functions (Glocker & Piribauer, 2021). The retail industry has a significant impact on the economy since it generates huge yearly revenues, employs many people, and delivers goods to customers (Maican & Orth, 2021). The delivery of goods that are ready for consumption to the customer's doorstep may be the most important task that retail companies execute (Sipahi & Enginoglu, 2015). Additionally, this industry contributes to the development of a place, time, and possession functions, enhancing the perceptions of the products (Willems, 2021). Retail enterprises maintain a supply of goods and ensure that they are available only when customers need them. They also provide customers more flexibility and choice by working longer hours throughout the week (Rugman et al., 2015).

It is an undeniable reality that products and services do not have value for customers unless they are purchased and used by those individuals (Teller & Reutterer, 2008). Retail establishments acquire products and services from many sources, classify them in a single location in line with client needs, and so make them easier for customers to access (Maican & Orth, 2021). Additionally, retail firms break bulk and provide the items in the quantities and dimensions requested by the customer (Gauri et al., 2021). These retail businesses assist clients by providing the right items, services, and advice regarding the grouping and quantity preferences. A successful retail business assists the clients by providing a range of produced goods and services in a timely manner (Ratchford et al., 2022). Both static websites and online platforms can be used to carry out this operation. The retail process includes supporting infrastructure, such delivery. In addition, the term "retailer" is used when a facility deliverer meets the needs of a large number of people, such as a public utility that provides electricity (Sipahi & Enginoglu, 2015). The act of retailing also helps to raise living standards and enables consumers to own a range of goods, services, and utilities (Har et al., 2022).

Retail establishments are an element of the supply chain, an organized system (Knezevic et al., 2011). A retail business purchases raw materials or produced items in bulk from producers or directly from a wholesaler, and then sells smaller quantities to the client in exchange for a profit (Sipahi & Enginoglu, 2015). Retail companies participate in the categorization process by assembling a variety of goods and services from a wide range of providers and offering them for sale. The strategy employed by the specific retail business determines the depth and intensity of the diversity (Boyd & Bresser, 2008). Most importantly, the retail sector provides a vital link between producers and final consumers (Bagdare & Jain, 2013). Retail firms should buy more products when clients purchase them to replenish their inventories. Subsequently, suppliers should create the commodities for retail businesses, and the plants should purchase additional resources to make more products (Balaji & Roy, 2018). This illustrates how heavily consumer spending influences the economy. The retail company informs and educates customers about the features and benefits of produced items along the production chain (Sun et al., 2021). They educate clients about marketing materials including signs, displays, and advertisements. Support from marketing research is provided to more participants and outlets (Grewal et al., 2009). Final stage of marketing channels for consumer products is the retailing process, which provides answers to client demands to suppliers and wholesalers who help them set up manufacture and supply (Wang, 2022). Thus, in-depth consumer intelligence, consumer segmentation, and multi-channel marketing efforts are essential components of retail business. Unavoidable truth of our day is that using social media sites as one of primary channels for marketing operations has become common place, and this is addressed on a massive scale by retail behemoths (Zhan et al., 2021; Ziaie et al., 2021; Jaeger & Höhler, 2021).

Customer segmentation process supports in doing analysis on not only customers' preferences and buying habits but assists in making decisions on researching changing market conditions and rivalry (Bilgic, Kantardzic & Cakir, 2015). Customer segmentation is a potential tool for guiding organizations toward effective product marketing strategies and supporting development of cutting-edge, unique ways to understand consumer behavior (Cooil, Aksoy & Keiningham, 2008).

Due to digitalisation, consumers are becoming more knowledgeable and reliant on traditional vending activities (Campbell et al., 2014). Customers rely more on online resources,

and they use social media more regularly as part of the shopping process (Müller et al., 2018). Each customer in the quickly developing digital era will belong to their own unique segment—a segment of one—regardless of their social or economic standing (De Oliveira et al., 2020). Retail organizations are using social networking sites to connect with new client segments made possible by easier information access (Campbell et al., 2014). Because of this, they are moving away from the idea of mass-targeting and toward micro-segmentation (Müller et al., 2018). Due to the limited availability of additional statistics, few segments could previously be identified merely based on demographic data; nevertheless, today's consumers seek tailored relationships with merchants throughout their journey from the first encounter to the completion of the transaction (Mammen & Bhakat, 2019). Retailers are increasingly segmenting their customer bases into different groups based on attribute data, such as the products purchased, prior buying history, date of the acquisition, context of the acquisition, and acquisition channel (Verhoef, Kannan and Inman, 2015). According to Blazquez (2014), the use of the internet, mobile devices, and various social media networks has brought fresh patterns in the retail business and increased competition in this industry.

Since the introduction of the first social networking platforms, public understanding and scholarly interest in social media sites have both increased rapidly during the past forty years (Sundararaj & Rejeesh, 2021). Social media evolved from providing a platform for people to interact with their friends to what it is today—a platform where users can learn about the companies, goods, and services that are offered (Jacobson et al., 2020). These platforms are being used by retailers as a new way to reach customers and do business (Cortinas et al., 2019). Technology-enabled advancements, such the rise of cutting-edge search engines, modern mobile devices, peer-to-peer communication tools, and social networks, have expanded a company's ability to connect with customers through new touch points (Ramanathan et al., 2017). Currently, social networking sites use AI-powered algorithms, enabling advertisers to quickly contact their target demographics (Arango et al., 2020). People divulge personal information, such as their ages, marital status, and places of residence, which enables firms to easily reach their clients, for example through tailored advertisements (Lee, Park & Manikowske, 2020).

1.2 Problem Statement and Importance of Study

Since many businesses started selling their products through physical and internet networks, the multi-channel retail ecosystem has developed in our day (Chawla & Chodak, 2021). Without a doubt, the retail sector plays a crucial role in the widespread distribution of goods and the high-level exposure of commercial establishments, since its participants engage with the industry's final consumers (Ramanathan et al., 2017). Because of this, achieving synergy by combining communication and sales channels has taken on more relevance (Nakano & Kondo, 2018). Businesses may now forge an unbreakable relationship with customers thanks to the development of multimedia communication channels, such as mobile devices and social networking (Ganesan et al., 2009, Van Bruggen et al., 2010). In addition to using traditional communication methods, companies may now create an interactive relationship by sharing information via their own websites or social networking platforms (such as Facebook, Instagram, Twitter, and Telegram, among others) (Mammen & Bhakat, 2019).

Clientele-wise, there are more opportunities for people to choose to buy information (De Oliveira et al., 2020). They can get the knowledge they need whenever they want without having to go to a physical store because they can buy anything online (Chawla & Chodak, 2021). Consequently, it has become more crucial for organizations to understand how clients utilize various platforms and social media and how to incorporate them (Dholakia et al., 2010, Verhoef, Kannan & Inman, 2015).

For billions of people worldwide, internet, social networking, mobile applications, and other modern digital technologies have become part of daily life (Rapp et al., 2013). More than half of world's population, or 4.66 billion regular online users and 4.2 billion active social media users, were online as of January 2021. (Johnson, 2022). Usage of social networking sites has become a staple in lives of millions of people worldwide, allowing businesses to reach their marketing objectives at relatively modest prices (Ajina, 2019). Over 60 million accounts on the Facebook network are dedicated to businesses, and 88 percent of companies use Twitter for promotion (Dwivedi et al., 2021). An increasing number of people are using the internet to research products and services, engage with other consumers (by posting reviews), and communicate with businesses (Garg et al., 2020). Retail companies have reacted to changes in

consumer behavior by establishing a digital presence and making social media a crucial and integral part of their marketing efforts (Mason et al, 2020).

Planning channel strategies based on client segmentation is a successful strategy (Neslin et al., 2006). Customer segmentation is dividing a company's clientele into categories that indicate similarity among clienteles in each category (Cooil et al., 2008). This method' goal is to choose how to interact with each segment's clientele in order to increase each client's worth to the business (Jonker et al., 2004). Retail organizations can count every consumer in the most effective ways thanks to precise customer segmentation (Nakano & Kondo, 2018). Customer segmentation has the potential to help retailers reach out to each customer primarily through the social networking channel (Ballestar et al., 2018). As a result, using the vast amounts of data on customers (and potential customers) available, this analysis enables firms to identify different client groups with a high degree of accuracy based on demographic, behavioral, and other factors (Müller et al., 2018).

Application of social media to consumer segmentation research in retail industry, specifically in case of Azerbaijan, is not understood in existing theory, nevertheless. Therefore, purpose of this study is to investigate how social networking is used in retail firms in Azerbaijan to segment their customers.

1.3 Study Objectives and Research Questions

This study aims to investigate how retail organizations use social networking and how consumer segmentation analysis is carried out with aid of social networking sites. In light of foregoing, main goal of this study is to conduct a thorough investigation into how social media are used in Azerbaijan's retail industry in order to do a consumer segmentation analysis. Following is a list of some of research's primary questions:

1. How some retail businesses carry out customer segmentation analysis?
2. What are some different uses and benefits of social media for retail businesses?
3. How can customer segmentation analysis be performed by use of social media channel?

4. How does social networking usage affect customer purchase channels in Azerbaijani retail sector?

I have set out certain hypothesis for this research based 3rd and 4th questions that I will be testing based on results of regression analysis which will be discussed in following sections.

Hypothesis 1: I assume that time spent on social media accounts by customers might have a positive impact on online purchase activities of customers.

Hypothesis II: I assume that number of retail companies followed by customers might have a positive impact on online purchase activities of customers.

Hypothesis III: I assume that more posts made and number of retail company profiles in social media accounts can result in more ads appearing for customers and more online purchases for those companies.

Hypothesis IV: I assume that more people share their personal information on their social media accounts means more advertising targeted sales for companies and more online purchases.

Hypothesis V: I assume that gender of customers is playing a role in frequency of online sales made by companies.

2. LITERATURE REVIEW

2.1 Customer Segmentation

Since it is difficult for any rival to remain in the market for an extended length of time due to cutthroat competition, marketing has become an essential component of any business' success today (Bilgic, Kantardzic & Cakir, 2015). Corporate objectives seek to gain a competitive edge over competing businesses, while marketing objectives support those corporate goals. In order to develop a brand, lower sales resistance, and generate interest and demand for a product or service, effective marketing plans or marketing initiatives frequently use a number of marketing approaches (Nakano & Kondo, 2018).

Every business wants to concentrate on clients to best of their ability, which necessitates segmenting market into groups of customers or customers with certain demands and goals. Segmentation is process of splitting a market into uniform groups. Customer segmentation is a conceptual tool that may assist in obtaining this focus. Even businesses that engage in mass marketing are using segmentation strategies that attempt to concentrate marketing effort and force on subdividing for competitive advantage inside segment (Hajibaba et al., 2020).

Customer segmentation is a method that helps marketing managers make decisions when it comes to choosing a target market for a particular product and creating an effective marketing mix (Tynan & Drayton, 1987). One of the fundamental pillars of strategic marketing is customer segmentation. Customer segmentation is crucial for effective marketing; most prosperous organizations build their operations on segmentation (Lilien & Rangaswamy, 2003). In order to divide a market into smaller groups of consumers with different wants, attributes, or behaviors who may need different goods or marketing mixes, segmentation is the technique used by businesses to make targeted marketing decisions (Goyat, 2011).

The first person to suggest segmentation as a marketing tactic was Smith in 1956. According to his definition of customer segmentation, a heterogeneous market may be divided into a number of smaller homogenous segments. Customer segmentation is defined as "slicing markets into slices" in a newsletter published by Grey Advertising Inc. and mentioned in Haley (1985), which is one of the simplest and clearest explanations available. In other words, customers who are part of the same market segments are comparable to one another in terms of the consumer traits that management considers to be important. Segmentation criteria are consumer traits that management deems essential for client segmentation.

A mobile phone business would not be able to meet the demands of each of those sectors if it tried to sell one mobile phone to the whole market. Instead, strategic marketing initiatives could be ineffective because the mobile phone industry doesn't serve any homogenous consumer groups. Offering a specific product to one market segment, such as the high-end, high-priced one, can result in both strong short-term sales and a long-term positioning as the best potential provider of high-end, high-priced mobile telephones (Dolnicar et al., 2018). A concentrated market strategy is the name for such a strategy (Croft, 1994). For businesses with limited

resources and high market rivalry, a focused approach is appealing since it can help them survive the future by focusing on one market segment's demands. However, it comes with a larger risk because it depends on a particular market sector.

There are several advantages to customer segmentation. Customer segmentation, at its most basic level, compels businesses to evaluate their current situation and future goals (Dolnicar et al., 2018). It compels businesses to consider their competitive advantages and make an attempt to understand the needs of their customers. Customer segmentation provides a chance for important new insights and views as well as for thinking and rethinking. When properly implemented, customer segmentation brings about measurable advantages, such as a greater comprehension of consumer differences, which enhances the alignment of organizational strengths and customer demands (McDonald & Dunbar, 1995). Such an enhanced match can therefore serve as the foundation for a sustained competitive advantage in a particular target market (s). Market domination, which comes from having the best ability to serve the demands of a highly specialized niche group, is an extreme example of long-term competitive advantage. Ideal niche sectors are uninteresting to rivals, large enough to be lucrative, match organizational skill sets in terms of their demands, and have strong potential for development (Kotler, 1994). Extreme customer segmentation would allow for the customization of a product or service for very tiny consumer groups. Hyper-segmentation or micro marketing are terms used to describe this strategy (Kara & Kaynak, 1997). In one phase, consumers express their own market segments in what Kara and Kaynak (1997) refer to as better categorization. Growth of e-commerce and utilization of advanced consumer datasets have made it possible for suppliers of goods and services to learn from a customer's purchasing history about what to offer them next, making better segmentation techniques more practical.

In addition to the previously mentioned, consumer categorization is a crucial customer relationship management (CRM) and customer value management stage idea. The two major methods for maintaining a client portfolio are (Verhoef & Lemon, 2013):

- Based on customer lifecycle
- Based on customer profitability analysis

Our initial strategy seeks to strike a balance between number of prospective consumers and first-time purchasers who produce low profits and high expenses with the greatest number of regular customers who have lower costs to the organization and better profitability (Jdrzejczyk, 2021). Customer lifecycle model makes the assumption that as a relationship grows, a client's demands vary and the value composition should adapt as well. Different client kinds can be identified via customer profitability analysis. Customers can also be categorized into following groups based on profitability factor: sensitive, stars, lost investments, and free riders.

Implementing this procedure needs a large commitment from the firm in addition to the advantages and value addition of client segmentation. An extensive consumer segmentation analysis requires a significant investment of time from a huge number of employees. The development and implementation of a tailored marketing mix requires additional human and financial resources when a segmentation approach is undertaken. Last but not least, continuing resource commitments are required for the effectiveness of segmentation plan review and ongoing market dynamics monitoring.

2.2 Customer Segmentation Analysis

Technique of classifying customers into occurring or intentionally constructed groups of consumers that have comparable product preferences or attributes is essence of customer segmentation study. Usually, this procedure involves statistics. It is nevertheless inquisitive in character. Data analyst's choices during process of deriving market segments from consumer data have an impact on final customer segmentation solution. Therefore, when target markets are retrieved from consumer information, both a competent data analyst and a user who is aware of organization's overarching mission need to be engaged in customer segmentation assessment to be beneficial to the organization. According to Dolnicar et al. (2018), there are three layers to the consumer segmentation analysis:

- Obtaining clientele segments
- Gathering product data, examining data, defining segments, and profiling data
- Making decision to segment, identifying ideal segment, choosing target segments, creating a unique marketing strategy, evaluating results, and keeping track of marketing modifications. (2018) (Dolnicar et al.)

A variety of extra, technical tasks, such gathering quality data, are necessary to ensure that the consumer grouping is of the highest quality. Bad data cannot be made up for by the statistical segment extraction technique at the center of consumer segmentation analysis. After data collecting is complete but before segment extraction really happens, data has to be examined to have a general understanding of the type of customer segmentation research that may be done utilizing this data. Next step is to profile and characterize each market segment once customers have been divided into groups. Companies may better understand each group and choose which to target by profiling and characterizing it. Following the selection of one or more target segments, a specific marketing mix is developed using information from segment profiling and description.

Users must evaluate the generated market segments or customer segmentation solutions after completing the segment extraction process and choose one or more target segments. While data analysts may provide information about various categories, they cannot choose most appropriate ones. Organization's strengths, possibilities, and alignment with most important demands of market segments all play a role in this choice. Users must next create a marketing strategy and a unique marketing mix for market segments they have chosen once one or more target segments have been decided upon.

There are several methods for doing consumer segmentation analysis; however, no one method is best. Instead, there are several methods to formalize approaches to client segmentation study. In current theory, two methodical strategies to customer segmentation analysis are used. First one, proposed by Dibb and Simkin, bases its assessment on degree to which institution undertaking research is prepared or inclined to modify its existing strategy to identifying market or a particular segment of market (2008). It is predicated on idea that due to organizational limitations, firms are unable to select any of various ways to consumer segmentation study. Structure of classification variable or variables utilized is customer segmentation study forms basis of a second systematics.

2.2.1 Customer Segmentation Analysis Grounded on Organizational Restraints

Creating segments from pre-existing consumer categories, creating segments from qualitative study, and quantitative survey-based techniques are the three ways to customer

segmentation that Dibb and Simkin (2008) identify. These three strategies diverge in how drastically the organization will alter as a consequence. When examining each of these strategies in further depth, segment revolution or quantitative survey-based approach to segmentation is frequently regarded as standard method of consumer analysis. Approach's fundamental premise is that company undertaking consumer segmentation research is prepared and equipped to start from scratch. An organization must create a whole new marketing strategy in light of results of customer segmentation study if it identifies a prospective niche market segment or a promising group of market segments to target with a differentiated market strategy.

In terms of having maximum chance of reaping rewards that a customer segmentation strategy has to offer, this plan follows all rules. There are alternative, less extreme methods, such as segmenting present targeted sectors and parts. This strategy emphasizes segment focus refinement and refining rather than segment revolution. Exploratory study pointing to segments is a third strategy. In this method, market segments are discovered via an exploratory research process that may originally be carried out for a quite different objective. Segment mutation may occur because to data mining of data streams rather than qualitative study in the era of big data. To determine whether market architecture has altered in a way that necessitates adapting segmentation strategy to maintain organizational survival and profitability, a constant monitoring of nature of market segments in vast streams of data pouring in on a continuous basis can be employed.

2.2.2 Customer Segmentation Analysis Grounded on Selection of the Segmentation Variables

Utilizing nature of consumer variables used to identify market groups as a foundation is a more technical method of systematizing segmentation procedures. There are situations when one piece of customer data is used. This statistical quandary has one dimension. Age is one instance. Older customers might be chosen as a target segment from resulting age groupings of segments. In other situations, many consumer-related bits of information are crucial. Statistical issue becomes complex in this situation. Spending habits of customers might serve as one illustration. Total dollars spent on ten various vacation activities, such as theme park admission fees, dining

out, shopping, and other vacation activities, might be a spending pattern supporting a customer segmentation study.

Segment approaches are known as a priori (Mazanec, 2000), convenience-group (Lilien & Rangaswamy, 2003), or commonsense customer segmentation when just one segmentation variable is utilized (Dolnicar, 2004). This method of client segmentation was developed without use of primary market research, according to Morritt (2007). Consumers are divided into several segments using managerial intuition, secondary data analysis, study of internal consumer databases, and already-existing divisions.

A posteriori, cluster-based, or post hoc segmentation is a proactive strategy that makes use of several segmentation factors (Dolnicar et al., 2018). These expressions suggest that the final market segments' characteristics won't be known until after data analysis has been done. A different phrase is "data-driven segmentation" (Dolnicar 2004). This phrase suggests that data analysis determines the segmentation solution and that data analysis generates the solution. The essential element of this strategy, according to Morritt (2007), is that it is founded on primary (original) research on the preferences and purchasing patterns of your target market.

When doing data-driven segmentation, organization makes some hypotheses about customer traits that are important for determining most appropriate market group to target, but it does not understand precise profiles of those segments. Therefore, there are two goals of data-driven segmented: first, to examine various market groups that may be extracted using specified segmentation characteristics, and second, to provide a thorough profile and description of the segment chosen for targeting.

Based on nature of segment criterion, common sense and data-driven segmentation represent two extremes and two pure kinds of segmentation methodologies. In actuality, one of the distinct groups includes studies on client segmentation. By dividing customers into categories based on one segmentation factor, commonsense/commonsense segmentation is produced. These possible combinations of demographic segmentation, which Morritt (2007) refers to as multiple or multiphase segment, are advised to be used in consumer segmentation analysis.

	Commonsense/ commonsense segmentation	Commonsense/ data-driven segmentation	Data-driven/ commonsense segmentation	Data-driven/ commonsense segmentation
Data-driven/ commonsense segmentation	Commonsense (e.g. age, country of origin)	Commonsense (e.g. age, country of origin)	Data-driven (e.g. expenditures, buying activities)	Data-driven (e.g. buying motives, expenditures)
Secondary segmentation variable(s)	Commonsense (e.g. gender, seeking new products or not)	Data-driven (e.g. buying motives)	Commonsense (e.g. gender, family status)	Data-driven (e.g. purchase activities, information resources used)

Table 1:Combinations of segmentation approaches based on the nature of segmentation variables used

Source: Dolnicar, 2004

2.3 Social Media Marketing

Businesses have used social media platforms in the past to increase their geographical scope to customers (Gao et al. 2018), improve brand perceptions (Naylor et al. 2012), and forge tighter relationships with clients (Rapp et al. 2013). On the other side, social media has given customers more power and given them authority over the communications process. They are now message makers, collaborators, and commentators (Hamilton et al. 2016). It is essential for marketers to utilize and leverage social media in order to gain a competitive advantage and deliver superior performance as the role of social media has gradually changed from that of a single marketing device to that of an origin of advertising intellect (where businesses can surmise, evaluate, and anticipate customer behaviors) (Lamberton & Stephen, 2016).

Although there are several studies of the social media phenomena accessible (Salo, 2017), there has not yet been an integrated evaluation effort that focuses on social media from a strategic marketing viewpoint. This is due to the fact that social media literature incorporates ideas from a variety of different disciplines, including marketing, management, consumer psychology, and computer science (Aral et al., 2013). Despite the fact that the phrase "social media marketing strategy" has been used frequently in research, the authors offer a precise definition. Notwithstanding the the emergence of many similar terms in the past, such as "social

media presence" (Effing & Spil 2016), "internet marketing strategic plan" (Micu et al., 2017), and "tactical social media advertising" (Felix et al., 2017), these either abuse important marketing strategy problems or struggle to taking into account various social media functions and characteristics. A comprehensive definition of social media marketing strategies is needed, one that includes two essential components like social media and marketing strategy.

Social media are seen as platforms in the marketing world where individuals can connect with one another, exchange ideas, and express themselves (Kaplan & Haenlein, 2010). Social media has caused three significant changes in the market due to their unique character as "dynamic, networked, egalitarian, and interactive organisms" (Peters et al. 2013). Social media make it feasible for businesses and customers to interact in ways that weren't before conceivable. These connections are made possible through a variety of platforms, including social networking websites, microblogging platforms (like twitter), and content communities (like youtube), which enable social networks to grow out of shared values and interests. According to Muller and Peres (2019), "social connection" has been referred to as "social links," and the size and length of these relationships define whether they are strong or weak. Tie strength is a crucial factor in determining consumer referral behaviors, according to earlier studies (Verlegh et al., 2013).

Social media has changed way businesses and customers communicate with and influence one another. Social contact entails "actions," whether through inactive observation or spoken discussion that affects decisions and consumption patterns of others. Such social contacts are referred to as "word-of-mouth (WOM) effect" or "contagion effects" by Nair et al. (2010). According to Muller and Peres (2019), social interactions are dependent on social network structure and give businesses quantifiable value. Researchers have long acknowledged significance of social influence in influencing consumer choices, and recent study has demonstrated that people's connection habits and social relationships might indicate intensity of social relationships (Aral & Walker, 2014).

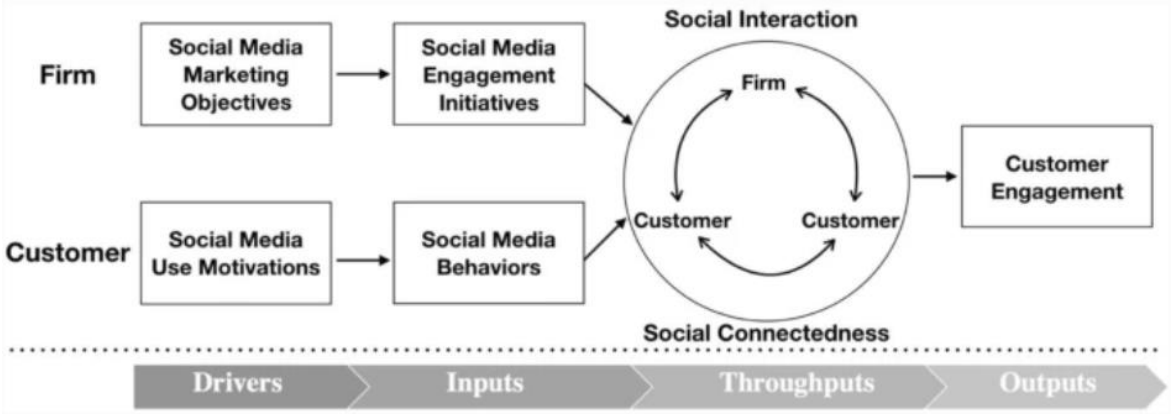
Along with this, the explosion of social media data has allowed businesses to improve decision-making and manage client interactions (Libai et al., 2010). The 3Vs (volume, variety, and velocity), which allude to the large amount of data, diverse sources of data, and expanding real-time data, are frequently used to describe social media data as well as other digital data.

With the assistance of contemporary information technology, a vast quantity of social media data obtained from numerous venues and in various formats can be simply retrieved and productively used (Moe & Schweidel, 2017). As a result, social media data may be a valuable source for market research, consumer analysis, and crowd sourced new ideas, and creation of a new strategic asset through social media data collection and value creation can enhance marketing outcomes (Gnizy, 2019).

Consumer involvement concept, which contends that businesses must take purposeful actions to inspire and encourage consumers in order to optimize their engagement value and provide superior marketing outcomes, serves as intellectual foundation for process of establishing SMMs. Customer referral value, customer lifetime value, customer knowledge value, and customer influence value are four different characteristics of customer engagement value that Kumar et al. (2010) separate out. This statistic has given marketers a fresh method for valuing consumers, which they can use to make more sensible strategic choices that will benefit customers in the long run. This customer engagement value allows businesses to use important consumer resources in social media space such as network assets, persuasive capital, knowledge repositories, and creativity, whose exploitation can provide them a long-term competitive advantage (Harmeling et al. 2017).

Identifying consumer motivations is crucial for businesses to create effective SMMSs, according to customer engagement theory, since diverse customer motivations coming from various attitudes and attachments can affect social media usage and SMMS results (Venkatesan 2017). It emphasizes the necessity of varied levels of interaction and interconnection in producing effective marketing outcomes, as well as the function of inputs from the company (i.e., social media engagement activities) and customers (i.e., social media behaviors) (Harmeling et al. 2017). Such client interaction may benefit businesses in both real (such as increased sales, market share, and profitability) and intangible (such as new ideas or feedback) ways (Li et al., 2021).

In accordance with concept of consumer involvement, we envision method of creating an SMMS as having four interconnected parts: (1) company's social media marketing goals, and (2) firm's social media involvement proposals, and (3) bandwidth, way firm links and comes into



contact with consumers to transfer assets and fulfill needs. Graph below depicts the growth of SMMS:

Figure 1: A conceptualization of establishing procedure of SMM strategies

Source: Li et al., 2021

2.3.1 Social Networking Conducts of Customers

Customers' use of social media results in a variety of behavioral expressions, from passive (for example, observing) to active (for instance, co-creation). Depending on the attitudes and information-processing techniques used by consumers during encounters, these customer social media behaviors can be either good (for example, sharing) or negative (for example, creating bad material). Customers who exhibit good behaviors are referred to be "pseudo marketers" by Harmeling et al. (2017) because they utilize their own resources to support a company's marketing efforts, whereas those who exhibit negative behaviors could convert firm-generated "hashtags" into "bashtags."

Social exchange theory, which contends that social interactions are transactions through which two parties obtain advantages, may be used to explain social connection and social engagement in context of social media (Blau, 1964). According to this idea, in order to create strong connections, such a social transaction entails a series of contacts between businesses and consumers that are interconnected and dependent on one another (Cropanzano & Mitchell, 2005). Successful interactions can therefore strengthen interpersonal bonds and have positive outcomes for the persons involved.

Social connectedness is amount of connections a person has on social networks; however Kumar et al. (2010) add other dimensions to definition of connectedness, such as quantity, quality, and location of connections. According to social media study, social influence is

impacted by connection. According to Hinz et al. (2011), leveraging "hubs" in viral marketing efforts can result in eight times more success than using less connected individuals. People interpret unclear information they obtain from strong relationships, according to Verlegh et al. (2013), who explore effect of tie strength on making recommendations in social media.

Social contact in the context of social media is highly sophisticated since it depicts information flows that are multidirectional and interrelated rather than just a firm's monologue (Li et al., 2021). This is due to fact that, on one hand, social media has enabled customers to participate equally in interactions with businesses through sharing, playing games, conveying themselves, and connectivity, and, on other hand, exchanges have grown to be a powerful force in market because they allow clients to impact one another's attitudes and behaviors. Peters et al. (2013) distinguish between two categories of social interactions: action- or behavior-based interactions and opinion- or preference-based interactions. Each category calls for a distinct set of tactical actions to be conducted. Chahine and Malhotra's (2018) research demonstrates that two-way contact tactics that permit reciprocity produce greater market reactions and more gratifying interactions.

2.4 Customer Segmentation via Use of Social Media Marketing

The Industrial Revolution created the foundation for the contemporary economy, which relied on the pursuit of self-interest and scientific rationality (Sundararaj & Rejeesh, 2021). With a focus on looking at sector assimilation, ripping down overall organisational functional silos via customer-centricity, opening up opportunities for collaboration even with contenders by embracing a co-opetition attitude, co-ownership of investments via franchise proprietors for scalable development with low concentrations of asset density, and trying to forge relationships with the new birth of interconnected customer relationships, digital has contributed to the advancement of an inductive story (Xevelonakis & Som, 2012). Today, businesses may make use of a wide range of technologies to offer seamless practice to their clients. As was mentioned in the last chapter, one of these tools is social media. Since consumers share a lot of information on social media accounts, businesses may take advantage of a number of social media offerings in addition to connecting with or educating customers.

Social media segment, known as customer segmentation using social media marketing, is a method of consumer segmentation based on customer data from social media (Moon et al., 2021). This technique involves breaking down main traits of user base of commercial institution into smaller parts, such as common interests, online activity, affinities, and dialogues. They are built using information from social media, including posts, conversations, followers, profile details, and relationships. Social media customer segments examine larger market rather than current customer base of business (Pridmore & Hämäläinen, 2017).

Traditional consumer segmentation depends on demographic information such as gender, age group, or family income levels, but this overlooks important aspects of what consumers truly are like and the type of content they are most likely to react to (Müller et al., 2018). Traditional client segmentation also excludes contextual information. As a consequence, a company's marketing division could find that women in the 30- to 35-year-old age range are greater consumers of diet products, but this information doesn't explain how the group defines itself or shows itself in the marketplace. Many questions remain unanswered, including: Is one of them attempting to lose weight? Do any of them care about the potential health benefits of the ketogenic diet? Ultimate goal of social media audience segmentation is to provide customers with a unique and special experience at every point of their journey (Moliner-Velázquez et al., 2021). Successful uses of social media to target particular client segments include following: Nespresso tried to communicate its sustainability message to subaudiences inside environmental movement. By sending them messages that were individually tailored to them, they increased their social media activity by 68 percent. Danone switched to using "tribes," which divide people into groups according to their shared interests. This technique resulted in a 40% boost in ad recall.

Every client in the upcoming digital era will be a part of their own distinct segment—a segment of one—regardless of their social or economic similarities. Due to increasing data available, social media marketing is allowing businesses to reach new heights in client segmentation (Moon et al., 2021). As a result, they are switching from a paradigm of broad targeting to one of fine segmentation. Due to the scarcity of additional statistics in the past, only a "handful" of segments could be determined using solely demographic information. Customers of today want shops to provide them with individualized service from the moment they first

contact them until the transaction is complete. Retailers are gradually grouping customers into several "hundred" groups based on the classification data such as: items purchased, prior buying history, time of purchase, context of acquisition, and route of acquisition, utilizing advanced statistical algorithms (Sundararaj & Rejeesh, 2021).

Retailers will be able to further tailor customer experience with help of growing social media advertising tools for client segmentation. This empowers retailers to offer individualized product selections, such as suggestions based on past viewing history, transactions, "likes," "comments," or "saves" on social networks, utilization, and current developments; categorization aids them in using individualized situational interactions and promos (Nash, 2019), such as "It's a rainy day, try our new hot chocolate."

Commercial institutions should gain knowledge about the demographic trends of each platform and make use of them in order to effectively use social media to reach out to particular client segments. For instance, LinkedIn platform is a place for social content related to careers, while TikTok attracts a younger audience. Secret is to select best channel for each section based on their characteristics and historical behavior. Social media platforms give businesses opportunity to target particular client segments. For instance, Facebook lets companies target customers based on their location, gender, age, and other characteristics. When a company chooses paid advertising, audience filtering choices are far more sophisticated, including lookalike audiences and omitting current customer list. Social media platforms include AI-driven algorithms that recommend certain company pages to clients who have used a service comparable to that of another firm (Moon et al., 2021).

Utilizing social media marketing to segment customers helps remove guesswork from marketing planning and forecasting. The more thoroughly a company understands its clientele, the more effectively it may modify its marketing approach to develop audience-segment-centric tactics. Businesses that employ social data get predictable results and find it much simpler to make decisions. While a generic marketing message ("Buy our product!") seldom sticks, customized advertising creates a sense of being seen and heard, which increases conversions while deepening relationships with customers and fostering loyalty among them (Xevelonakis & Som, 2012).

2.5 Customer Segmentation Analysis in Retail Sector

In contrast to wholesale, which involves selling to businesses or institutions, retail involves selling goods and services to consumers. A retailer makes a profit by buying products in bulk from manufacturers and selling them to customers in smaller quantities. The final link in the supply chain from manufacturers to consumers is retailer. A range of strategic level decisions are made by modern retailers, including choice of shop style, target market to serve, the best product assortment, customer service, ancillary services, and the placement of the store in the market. Following the creation of a strategic retail strategy, merchants create a retail mix that incorporates the following elements: product, price, site, promotion, staff, and presentation. In era of the internet, more and more merchants are trying to access bigger consumers by selling through various channels, such as traditional brick-and-mortar stores and online marketplaces. Consumer payment methods are evolving as a result of digital technology. Provision of financing, delivery services, consulting services, stylist services, and a variety of essential services are examples of retailing support services (Handa & Grover, 2012). Retail shops occur in a diverse range of types and in many different contexts – from strip shopping centers in residential streets through to large, indoor shopping malls. Shopping streets may restrict traffic to pedestrians. Sometimes a shopping street has a partial or full roof to create a more comfortable shopping environment – protecting customers from various types of weather conditions such as extreme temperatures, winds or precipitation. Forms of non-shop retailing include online retailing and mail order (De Vries, 2014).

Strategic retail analysis includes following elements:

- Market analysis, including market size, stage, competition, attractiveness, and trends.
- Customer analysis includes market segmentation, regional, demographic, and psychographic profiles, values and attitudes, purchasing patterns, brand preferences, needs and desires analysis, and media usage.
- Internal analysis - Additional capabilities, such as those related to human resources, technology, finances, economies of scope, scale economies trade connections, reputation, positioning, and prior performance.

- Competition analysis: presence of alternatives, strengths and weaknesses of competitors, perceptual mapping, and competitive trends.
- An examination of product mix, including sales per square foot, stock turnover rates, and profitability per product line. Review of distribution routes, including cost of distribution, cost effectiveness of middlemen, and lead times between order placement and delivery.
- Cost-benefit analysis of actions that are planned as part of strategy's economic evaluation (Lambda, 2008).

Retail marketers need to know which consumer groups will be focus of their marketing efforts at conclusion of retail study. Although not all factors are equal, demographics, purchasing goals, and expenditure influence customer behavior (Parker & Wenyu, 2019). According to studies on subject of retail, a store's placement and socioeconomic class of its patrons are strongly correlated (Fill, 1995). Additionally, client loyalty is correlated with retail strategy, which includes service quality (Yu-Jia, 2012). Targeted audience, demographics, and preferences of a business are all clearly outlined in a marketing plan. Retail approach provides long-term sustainability in a very competitive sector. It emphasizes value of added value and customer happiness and places a strong emphasis on how a store's positioning strategy relates to certain client demographics. It concentrates on consumer relations (Morschett et al., 2006).

Retail managers move on to more management components of planning after strategic plan is in place (Constantinides, 2006). For goal of coordinating daily tactical choices, a retail mix is developed. Six major decision layers that make up a retail marketing mix are: product, venue, promotion, pricing, people, and presentation. Retail mix is based on marketing mix but has been changed and enlarged to meet particular requirements of retail sector. Numerous academics have argued in favor of an enlarged marketing mix that includes two new Ps of personnel and presentation since they both play a significant role in distinctive retail experience that customers enjoy and serve as the foundation for retail distinction. Other academics contend that the retail format must be covered. The 6 Ps of retailing is a revised sales promotion mix that is frequently referenced in books (Goworek & McGoldrick, 2015).

The phrase "sum of acts and components that enable consumers to acquire what they require or want from retail institution" is used to describe customer service. Retailers must select whether to offer a complete service as in many shops and specialized stores, a limited service operation like no service in the case of vending machines, self-service with minimum sales help, or no service at all. Additionally, decisions need to be made by the store about sales assistance, including customer delivery and post-sale customer service (Mohammad, 2015).

The needs of retail consumers may be clearly understood by customer segmentation (Doan et al., 2018). Retail management and marketing staff may create plans to reach consumers with distinct requirements and preferences if they have a strong grasp of market segmentation (Bilgic et al., 2015). The literature on retail shopping behavior has sufficiently recognised the need of segmenting consumers. Importantly, it makes it easier to create powerful marketing tactics in the cutthroat industry of today (Walsh, et al., 2001; Martins 2012). The earliest empirical studies on the segmentation of retail consumers that used the post hoc viewpoint identified distinct groups of consumers based on their buying preferences. For instance, Stone (1954) divided metropolitan female customers into four homogenous categories: economic, personalizing, ethical, and apathetic. Because retail establishments offered things at lower prices, consumers on a budget purchased goods there. Customers who valued personalization bought goods from retailers who provided specialized assistance. Based on moral implications, ethical consumers made purchases from retail establishments. Few retail store purchases were made by apathetic customers. These four retail consumer types were validated by Darden and Reynolds (1971), who also noted how each differed noticeably in terms of product utilization rates. Three categories of older retail customers were put forth by Lumpkin (1985), including apathetic, economic, and active customers. These previous studies, meanwhile, have come under fire for using data that doesn't really help retail practitioners. For instance, Walsh et al. (2001) noted that categorizing a customer based on their orientations has little use since it ignores the growth of the "hybrid consumer," who is likely to employ a variety of decision-making methods. Similar to this, Wesley et al. (2006) discovered that rather than depending solely on one style, many customers adopt two or more styles. Examining research that have taken a post hoc approach makes it clear that there is no one best method for classifying retail customers into categories. As a result, subsequent studies have urged for studies that employ consumer decision-making

patterns as a foundation for segmenting consumers, which has led to an evolution in the study on retail market segmentation.

Only a small number of research have divided the general purchasing public into categories depending on how consumers make decisions. Excluding the study done by Walsh et al., the pattern among the available studies has been to depend on samples of younger shoppers or younger female shoppers (2001). For instance, Mitchell and Bates (1998) created four groups of younger British consumers. The groups were classified as cautious brand aficionados, trend setters, shopping avoiders, leisure quality seekers, and quality searchers. Fashion-conscious people appreciate keeping their wardrobes current and love shopping in general. Shopping avoiders did not like the experience and were more prone to rush through the purchasing process. Recreational quality seekers had pleasure in shopping and valued good quality highly while making selections about what to buy. People who were cautious brand loyals tended to be less impulsive, valued high quality, and were brand faithful. According to Walsh et al. (2001), there are six distinct types of shoppers in Germany: factual and value-oriented, demanding comparison, highly impulsive, emotionally dominated, brand-oriented and shopping-enthusiastic, as well as results-oriented and fashion-conscious buyers. Shoppers who prioritized facts and value did so more strongly. Perfectionism and variety seeking were far more prevalent than other kinds among the picky comparison consumers. Perfectionism and impulsiveness were used by very impulsive consumers. Shoppers who were emotionally controlled valued variety seeking, recreational hedonism, and perfectionism. All styles were highly utilized by brand-focused and enthusiastic shoppers, with the exception of impulsiveness. Although the former used novelty-fashion consciousness more, fashion aware results-oriented customers and factual and value-oriented consumers used styles in a comparable way. In addition, Bakewell and Mitchell (2003) classified younger female consumers in the UK into five categories: confused time/money savers, trend-setting loyalists, recreational quality searchers, recreational discount seekers, and disinterested in shopping and fashion. Perfectionism, leisure/hedonism, and brand consciousness were more prevalent in those who sought out recreational quality. Recreational bargain consumers are different from recreational quality searchers in that they are more concerned with price than than brand. The high usage of time and energy conservation, as well as price and value sensitivity, was linked to a lack of interest in fashion and shopping. Brand loyalty and fashion

consciousness were highly used by trend-setting loyal. Confused time/money conservation shown significant levels of choice-confusion and price-value awareness.

Six groups of customers from a developing nation were identified in a research that focused on younger female shoppers in Iran (Hanzaee & Aghasibeig, 2010). Younger female buyers were shown to exhibit a variety of decision-making approaches among clusters, despite the fact that the clusters were not given names as is the case in previous relevant studies. In instance, recreational quality buyers who were brand sensitive and impulsive were female customers in cluster 1. Consumers in cluster 2 were discerning buyers who cared about getting the best deal. The largest cluster, Cluster 3, was made up of devoted trend setters who were seeking top quality at affordable pricing. Strong usage of high quality awareness, price-value consciousness, novelty-fashion consciousness, and habitual, brand loyalty was a distinctive feature of this group. Cluster 4 represented time-conscious trend-setters who delighted in the fun of high-end shopping. Loyal trend setters were also present in cluster 5, but they were brand concerned, perfectionistic, and liked the enjoyment of buying, as opposed to those in cluster 3. Cluster 6 was for novelty-seeking bargain hunters. In China, six categories of younger consumers were also found (Yu & Zhou, 2009). Categories were typical consumers, practical shoppers, shoppers who love to buy, shoppers who prioritize quality and value for money, hesitant shoppers, and unorthodox shoppers. Largest section of consumers was typical consumers, and most of them utilized all the styles in a modest way. Customers who were practical were more inclined to employ quality consciousness. High quality consciousness, recreational-hedonism, and patience for buying are three unique styles used by shoppers. Customers that prioritize quality over price and value while buying frequently display these traits. With exception of a considerable usage of high-quality consciousness and patience for buying, hesitant customers were to apply all decision-making methods. Nonconformist shopper did not follow any one fashion.

Fact that consumer decision-making patterns are constant over time makes them a good foundation for segmenting retail customers. Styles make it easier to distinguish between numerous segments that could appear before or after different segmentation bases (Walsh et al., 2001). They predict fundamental product preferences and are connected to purchasing patterns and sales (Mitchell & Walsh, 2004). These traits boost the possibility of discovering segments

that are measurable, distinguishable, available, important, and implementable. Due to importance of these criteria as a segmentation basis, consumer decision-making patterns were integrated with demographic variables and overall pleasure in a recent research. Therefore, embracing a hybrid segmentation strategy that integrates the utilization of customer decision patterns will improve total satisfaction and demographic forecasts about affiliation in a segment, which will improve marketing choices regarding which appealing segments, could be sought by retailers. By offering a purchasing experience that corresponds with consumer expectations, it is possible to raise customer happiness. By creating pertinent data bases that may be utilized in conjunction with one another when segmenting retail customers, this strategy also advances literature (Makgosa & Sangodoyin, 2017).

3. RESEARCH METHODOLOGY

This section describes the approaches and actions taken for discovering and examining information on customer segmentation analysis with implementation of social media in retail sector in Azerbaijan.

3.1 Research Approach

In a vast, diverse field, research may be conducted using a number of approaches. Research strategy is a comprehensive plan and method for doing investigation. As shown below, there are four fundamental study methodologies: deductive, inductive, reproductive, and abductive (Malhotra, 2017).

Making limited generalizations about distribution of observable or assessed characteristics of people and social processes, as well as generalizations about relationships between them, is goal of the inductive study technique (Kennedy & Thornberg, 2018). Generalizations are produced through inductive approach of analysis from observations of specific cases (Douglas, 2003). Single or focused statements are made in beginning, while wide or collective plans are made at end (Azungah, 2018). This method assumes that explanations of how universe functions must be supported by data derived from unbiased, pure observation, rather than preconceived notions (Mitchell, 2018).

Deductive research technique begins right away with a preliminary hypothesis or set of assumptions that develops a theory, which may provide a plausible solution or explanation for a particular circumstance, and continues to extensively analyze the hypotheses using evidence (Malhotra, 2017). A general or extensive statement must be included in at least one of premises for the deductive reason to proceed to its conclusion, which is a particular argument (Pearse, 2019). Deductive claims are structured from conceptual to empirical, from abstraction to empirical, in that sequence (Bryman & Bell, 2015).

The goal of the reproductive research technique is to identify underlying structures that, from certain viewpoints, define the consistencies under investigation (Malhotra, 2017). The process of creating fictitious systems and structures that are intended to produce empirical facts is known as reasoning of reproduction. Going backward from the actual statistics to a possible rationale is required (Malhotra, 2017).

Development of hypotheses based on language, implications, and narratives of social actors in context of everyday behaviors is a component of abductive research technique (Kennedy & Thornberg, 2018). This type of research begins by identifying these behaviors and meanings, then extrapolating categories and ideas from them that might serve as basis for an understanding of issue at hand (Awuzie & McDermott, 2017).

Since similar studies on social media activity in retail business and conducting customer segmentation analysis based on social network usage already exist, this study adopts a deductive research technique. This study has a clear purpose, evaluates body of prior research, and conducts novel study to address the research issues.

3.2 Research Methods

When doing research, there are two main approaches that may be used (or a hybrid of both), depending on whether a qualitative or quantitative study is being conducted. These approaches are covered below.

Being an unstructured, exploratory study method, qualitative research offers visions and insight into the problem backdrop and analyzes more complex phenomena that are impossible to understand with the aid of quantitative methods (Bryman & Bell, 2015). This strategy is used to

gain a full understanding of human activities, practice, methods, aims, and reasons. It is based on observation and explanation (Williams, 2007). This is a form of research methodology where the researcher gives the participants' opinions more weigh (Chambers, 2007).

In order to comprehend how social media usage acts on customers' buying channels, choices in Azerbaijani retail sector, this research will be mostly determined by quantitative research approach, i.e., a close-ended question survey. Survey method was chosen because it is a useful tool for characterizing the characteristics of a big population (Jones et al., 2013). A survey-based study method provides thorough capabilities, ensuring a more exact sample to collect targeted outcomes in order to draw findings and make meaningful judgments (Groves et al., 2009).

With goal of identifying how social media usage affects customer buying channels and decisions of customers in Azerbaijani retail sector, the research will be determined by quantitative research approach, i.e., close-end question survey. Because this form of study is useful for characterizing characteristics of a big population, survey method was chosen (Jones et al., 2013). Complete capability of a survey-based study approach ensures a more exact sample to gather targeted outcomes in order to form conclusions and render meaningful judgments (Groves et al., 2009).

3.3 Data Collection

Books, academic publications, conference papers, etc. are used to gather knowledge about theory and preexisting conceptual framework. Information is gathered through online inquiry form with intention of conducting original research, and it is distributed to chosen study participants via email and the professional LinkedIn site. Target audience for this study consists of Azerbaijani shoppers in supermarkets, clothing boutiques, electronics retailers, etc. 200 people from general public who are between ages of 18 and 55 make up sample for this study, since they make up bulk of users of social networking sites in this demographic. In a survey study, getting a sufficient sample of people who accurately reflect population is goal of person selection process (Draugalis & Plaza, 2009). A subset or sample of population is used to assess public's reactions since it is not feasible to collect data from whole population of interest (Stuart et al., 2018). Likelihood that sample's results accurately reflect total population increases with size of

non-probability sample. Sample should include people who share population's characteristics in order to make accurate inferences about it (Asiamah et al., 2017). Non-probability selection is used in this research since population of interest samples were selected based on researcher's personal assessment (Vehovar et al., 2016).

It is important to remember that there are 10.1 million people living in Republic of Azerbaijan (World Bank, 2021). According to Datareportal's statistics data, there were 8.26 million active social media users in nation as of January 2021, an increase of 202,000 subscribers (an increase of 2.5%) from prior years. In nation, 81.1 percent of people have access to internet in 2021. As of January 2021, there were 4.30 million users of social networking sites in Azerbaijan. This figure shows an increment of 600 000 users, or a 16 % rise from previous year. Estimated number of social networking users in nation was 42.2 percent of total population. Additionally, during that time there were 11.30 million mobile subscriptions in nation. This number increased by 92 thousand, or 0.8%, over same time last year (Datareportal, 2021). According to StatCounter, composition of most popular social media platforms in Azerbaijan in April 2022 is as follows:

- Facebook - 27.52 percent
- YouTube - 20.66 percent
- Pinterest - 17.64 percent
- Instagram - 17.54 percent
- Twitter - 7.73 percent
- VKontakte - 3.94 percent (StatCounter, 2022)

In keeping with Start.io, the age breakdown of social media users in Azerbaijan is as below:

- 55 years and above - 0.3 percent
- 45-54 years - 0.4 percent
- 35-44 years - 1.8 percent
- 25-34 years - 31.8 percent
- 18-24 years - 65.8 percent (Start.io, 2022).

In course of this research, data was gathered, summarized, and visualized using an online application with a Google Forms-like structure. This is a Google-created online tool that enables researchers to compile data from web surveys and save findings in a Google Sheet file. Key feature of this online tool is that it makes it simple for a large number of people to provide data, allowing researcher to collect it all in one location (Simanjuntak & Limbong, 2018). Information gathered can then be analyzed. A link to Google Form enquiry form was sent to research participants who gave their agreement to participate.

4. RESULTS OF RESEARCH

4.1 Survey Results

This research has carried out original study, in form of a survey, distributed with Azerbaijani consumers through social networking sites, in order to obtain responses to our study questions. Our goal in utilizing this closed-ended survey was to investigate and speculate on ways that social media usage is influencing customers' online shopping habits and decisions in Azerbaijani retail sector. This study approach was selected because it is useful for characterizing more significant characteristics of a big population in more depth based on first-hand qualitative and quantitative data, which is crucial for regression analysis shown below.

In July and August 2022, we sent links to our online survey to people via emails and social media websites. Our survey questionnaire was produced using Google Forms web tool. On Appendix 1 of this study, all questions and survey results are shown. 53 people (research participants) in total participated in our survey study, with the bulk of them being in the age range of 24-34 years (41%) followed by 18-24 years (28%) 35-44 years (21%) 45-54 years (6%) and 55 years and older (4 percent). 57 percent of people that participate in our research are female, whereas 43 percent are men.

It's interesting to note that more research participants use Instagram than any other social media site, with Facebook and TikTok coming in second and third. Since message applications provide fewer capabilities for companies to target clients, several chat apps (such as WhatsApp, Messenger, Line, etc.) were not included as possibilities. Here are some examples of how study subjects were used:

- Facebook - 23 percent
- Instagram - 37 percent
- Twitter - 11 percent
- YouTube - 8 percent
- LinkedIn - 3 percent
- TikTok - 18 percent.

When asked how much time they spend each day on social networking sites for business or pleasure, the overwhelming majority of our survey respondents—39% of the 47 participants—said they spend 1-2 hours on these sites. 33 people, or 28% of the study participants, spend between three and four hours each day on social networking sites, while 12 people, or 10%, spend more than five hours per day. 23 percent of respondents spend less than an hour on these websites, and the people who selected this response mostly fall into the 45 and older age bracket. According to survey's findings, women spend more time on social media than men do.

This literature review found that customers are eager to share information on their social media profiles. Survey's respondents were questioned about whether they disclose personal information (such as age, gender, marital status, interests, and so on) on social networking websites in order to assess how this issue is handled in practice. 33 percent of participant's decline to disclose their personal information on social media, while 68 percent do so. Findings show that men and younger age groups (18–34) make up majority of those who do reveal their personal information.

They were questioned about how frequently they publish posts and photos on their social media profile in order to determine how study participants use social networking websites for posting posts. Results show that majority of them publish posts and/or photographs 2-3 times per week, while 22 percent share them 4-5 times each week. While 16 percent of participants post on social media, 12 percent post seldom, and 14 percent post once a week.

While the percentages are close to one another, just 52% of the participants have made an online purchase while only 48% haven't. The majority of those who have made purchases through social networking sites are women. When asked about the nature of the products they purchased, a larger percentage of study participants (34 percent of those who actually completed

the transaction) stated that they had bought clothing items (such as clothes, bags, and shoes) through social media. The respondents also bought books (19%), souvenirs/gifts (10%), gadgets (8%) and pharmaceuticals, in addition to cosmetics and beauty goods (21%) and books (19%). These outcomes are shown in this Figure 2. Survey findings show that Instagram dominates social media sites when it comes to most popular social networking site for making purchases or browsing for items. Instagram is used by 69 percent of people, compared to 28 percent of respondents using Facebook and 3 percent using Twitter for aforementioned reason (83 participants).

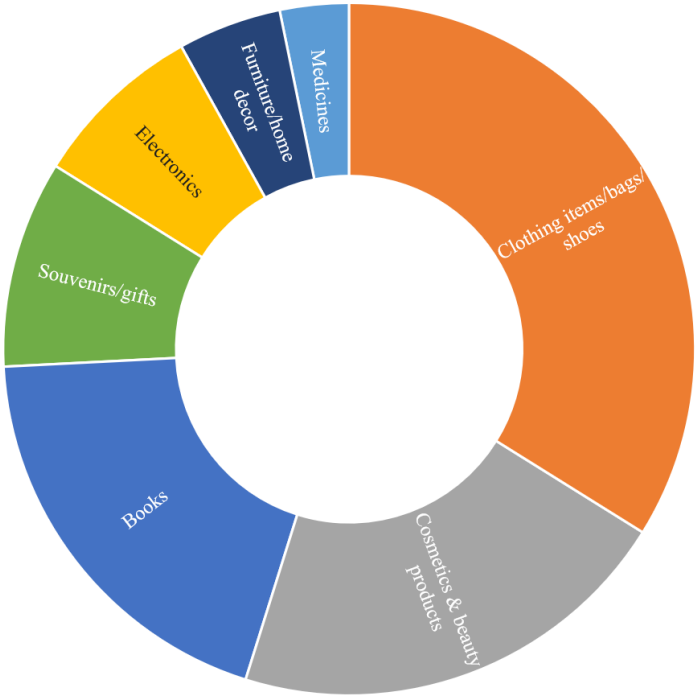


Figure 2: Breakdown of items that were purchased using social networking sites

Source: Survey Outcomes

Most of questionnaire participants - 43 % stated that, in last 6 months, they have purchased or searched for items using social media more than 10 times. While 27 % of respondents carried out this action 6 to 10 times and 19 % of them 1 to 5 times, 11 % of questionnaire participants neither purchased nor searched for products using social networking. Majority of people who have not carried out this action are males, belonging to age group of 45 and above.

Retail businesses, such as supermarkets, clothing stores, etc. are followed on social media by 60 % of respondents. Majority of retail businesses that are more attentively followed are fashion stores (41 %) and hyper/supermarkets (28 %). Moreover, cosmetics & beauty stores (17 %), electronics stores (8 %), book stores (3 %), drug stores (3 %) and furniture/home décor stores (2 %) are followed by survey participants.

Survey research puts forward interesting outcomes, as it reveals that, majority of respondents does not in fact pay attention to social media ads, when they do not need advertised product, or when advertised product is not from their favorite brand. As such, 48 % of our survey participants indicated that, they skip ads as soon as they pop up, 36 % pay attention to ads when those ads represent something that they need, and 16 % pay attention when advertised item is from their favorite brand. Furthermore, even though there is not a drastic difference amid responds, when asked if they would like targeted ads / personalization of services through usage of their personal data, 58 % of respondents agreed, and 42 % of them disagreed.

Finally, Azerbaijan has a large number of active social networking users who like sharing messages, photographs, and personal information on these sites. Besides from sharing, these people use social networking sites to look for and buy things. According to the findings of this survey, the most popular social media site among Azerbaijani consumers for searching for and purchasing things is Instagram, which is used by female users. Majority of people follow retail brand company pages on social media networks. Clothing (apparel, bags, and shoes) and cosmetics and beauty goods are the most bought commodities on social networking sites. As a result, a majority of our customers is following style and cosmetic retail establishments on social networking sites. These findings may assist retail firms with their next social media advertising, since they may focus on females more specifically when utilizing social media advertisements, as females are more likely to purchase things through this channel. Age issue plays a significant influence, since younger generation is more engaged in purchasing through social networking sites. This may assist retail firms in selecting this age group when putting their next advert on social media sites. Furthermore, Instagram platform is more to be profitable when deciding where to position adverts. Following a rigorous consumer segmentation research, retail firms in Azerbaijan can examine these factors when creating their subsequent digital media advertising initiatives.

According to survey results, large percentage of consumers do not give close attention to advertisements on social media when they do not want advertised products or when promoted brand is not manufactured by their preferred brand. This fact illustrates fact that retail organizations in Azerbaijan should conduct extensive customer segmentation study in order to foresee demands and preferred brands of clients in a way that their targeted advertisements will serve business well.

4.1 Regression Analysis

I employed a method of linear regression model to examine a relationship between independent variables of this study such as use of social media, time spent on social media, sharing personal information on social media accounts, frequency of posts that users publish on social media accounts, and following retail companies on social media accounts on our dependent variables such as frequency of online purchase decisions of our survey participants, frequency of personalized social media ads, and frequency of overall social media ads. I used a 95 percent confidence interval for our study, setting 0.05 significance threshold. For three categories, I performed three separate analyses between our dependent variables and independent variables. I carried out a simultaneous regression analysis that included each independent individual variable as well as a few of controlling factors. Our regression analyses' specifics and their actual findings. Following is a discussion of our regression findings.

```
. summarize
```

Variable	Obs	Mean	Std. Dev.	Min	Max
gencodes	53	1.471698	.5039755	1	2
shaperinfo~s	53	1.679245	.4712334	1	2
somedforbu~s	53	1	0	1	1
frequofpos~s	53	3.641509	2.193472	1	7
timspentco~s	53	4.207547	2.221906	1	9
folretcodes	53	4.660377	2.165671	1	11
adspurcodes	53	4.490566	1.846229	1	8
freofonlpu~s	53	4.471698	2.83931	1	10

One of independent and numerical variables in our dataset is **gencodes** (gender) as given above. Our gender variable does not have any missing values according to results. One of

categorical variables used in our research's analysis is gender. Our gender variable is a single dummy variable, which implies that its values may fall between two categories: male and female. In other words, there is no average, standard deviation, minimum value, or maximum value for gender variable based on a simple logic. Although mean, minimum, and maximum values, standard deviation, for gender are shown in a table given above, they are not valid values for gender because of its character as a dummy variable.

Our next important variable is **shaperinfocodes** (sharing personal information on social media accounts). It is coded as a categorical value in our dataset, and there is no missing variable. This variable is ranging between 2 values: yes, and no, by implying that 1 shows that respondents are sharing their personal information on their social media accounts, while 2 indicates that they do not share their personal information on their social media accounts. An average mean of this variable is estimated to be 1.67 which means that our participants share their personal information on a social media at a value of mean of 1.67. Standard deviation is 0.47 revealing dispersion of sharing personal information on social media by our survey participants in our dataset from an average mean indicated above.

Our dataset's first row contains variable **somedforbuycodes** (use of social media accounts by our survey participants for purchasing things online), which is coded as a another categorical variable of our dataset. There is no value missing in our dataset for this variable. As all of our survey respondents have noted that all are using instagram as a social media platform for purchasing goods online, this variable has a zero standard deviation. In a similar way, it has a mean of 1 for this same reason as all respondents have said that they use instagram as a social media platform for using goods and services online.

One of independent and numerical variables in our dataset is **shaperinfocodes** (sharing personal information on a social media account) as given above. Our shaperinfocodes variable does not have any missing values according to results. One of categorical variables used in our research's analysis is shaperinfocodes. Our shaperinfocodes variable is a single dummy variable, which implies that its values may fall between two categories: yes and no. In other words, there is no average, standard deviation, minimum value, or maximum value for gender variable based on a simple logic. Although mean, standard deviation, minimum, and maximum values for

gender are shown in a table given above, they are not valid values for shaperinfocodes because of its character as a dummy variable.

Another independent variable is **freofpostscodes** (frequency of posting information on social media by our survey participants). It is a numeric value and we have not identified any missing value for this variable which means that all questions have been answered by respondents throughout survey. It should be noted that a mean age of our sample observation which is 3.64 and elaborates that an average quantity of our survey population posts on their social media accounts is between 1 and 7 times a week. A minimum value of this variable for our respondents is 1, once a week, while a maximum amount of posts noted by our survey participants is 7 times a week, which means every day. A standard deviation of average age variable is 2.19 and it refers to an average spread of our observations from a mean of freofpostscodes variable and it being above 1 means that variation between mean and frequency of posts of our survey respondents on social media is great.

Our respondents are following retail companies on a social media, **folretcomcodes** variable is another independent and categorical variable in our dataset referring to a number of retail companies and businesses on a social media. There is no missing value in folretcomcodes variable. Folretcomcodes variable is a variable included as a numerical variable in conduction of our research. According to a table above, our respondents are following a minimum number of 1 retail companies on average while our respondents are following a maximum number of 11 retail companies on average as survey participants confirmed. In addition, standard deviation for this variable is 2.16 meaning that our observation varies from average mean indicated above by this value. A mean for this variable is 4.66 which means that our respondent at total follow an average number of 4.66 retail companies on their social media accounts.

Another independent variable with a documented numerical value is **timespentcodes** in our dataset, which is referring to amount of time that our respondents spend on using their social media accounts. Out of a total of 53 observations, our variable has no missing value. Students spend 4.2 hours each day on an average perusing web, which is a mean value for this variable in our regression analysis. A smallest amount of time spent on social media is 1 hour, while greatest amount is 9 hours a day amongst our respondents according to summary of results of our online

survey. A average dispersion of observations from the mean for social media is 2.22, which is a standard deviation value indicating that an average number of hours spent will grow or fall by 2.22 hours.

One of dependent variables of our research is **adspurcodes**, referring to a number of goods and services purchased by our respondents due as a consequence of ads on social media get their attention, and this variable is one of variables included as a numerical value in our dataset. There has not been recorded any missing value regarding this variable. This variable is a numeric variable. A maximum value for this variable is 8 while a minimum value is 1 online purchase realized due to online ads on social media accounts of our respondents. As a table demonstrates, a mean average for this variable is 4.5 which means that our respondents have bought goods and services for social media ads and promotions between 4 and 5 on average. Further, a standard deviation indicator for this variable is 1.85 which shows a dispersion of number of goods and services purchased by our respondents from an indicated mean average demonstrated in our regression analysis table given above.

One of dependent variables included as a numerical value in our dataset is **freqofonlpurcodes**, which is referring to a number of online purchases made by our respondents per month. Regarding this variable, no missing values have been noted. This variable is a numerical variable, which indicates an approximate amount of online purchases of our respondents. A mean for this variable as shown in our table is 4.47, which means that our respondents buy goods and services between 4 and 5. A minimum value for this variable is 1 while a maximum value is 10 meaning that more than 10 goods and services were not bought by our respondents per month. In addition, standard deviation for this variable is 2.83 which means that number of goods and services purchased by our respondents deviates from a mean average by this amount, which is 1.7.

```
. regress adspurcodes shaperinfocodes  socmedforbuycodes frequofpostcodes timspentcodes folretcodes
```

Source	SS	df	MS	Number of obs	=	53
				F(5, 47)	=	0.24
Model	4.35158523	5	.870317047	Prob > F	=	0.9444
Residual	172.893698	47	3.67858931	R-squared	=	0. 46
				Adj R-squared	=	0. 92
Total	177.245283	52	3.40856313	Root MSE	=	1.918

adspurcodes	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
shaperinfocodes	.2492052	.6004079	0.42	0.680	-.9586598	1.45707
socmedforbuycodes	.2085806	.219419	0.95	0.347	-.6499947	.2328335
frequofpostcodes	.0184281	.1251165	0.15	0.884	-.2332738	.2701299
timspentcodes	.0045865	.1238518	0.04	0.971	-.2445713	.2537442
folretcodes	.0564562	.1255788	0.45	0.655	-.1961757	.309088
_cons	4.324708	1.631918	2.65	0.011	1.041711	7.607704

Some associations between our independent variables and amount of online purchase of our respondents, which is used to refer to purchases made for personalized social media ads, was more examined with an assistance of more sophisticated and statistical approach of multiple linear regression analysis, which shows relationships between independent variables and one dependent variable.

With variables such as gender, sharing personal information on a social media account, frequency of posts made on a social media account of our respondents, average time spent on social media accounts, and following retail companies on their social media accounts, we have estimated their relationships with our dependent variables such as adspurchcodes, which is online purchases made due to social media ads, and such as frequency of overall online purchases per month by our respondents, and adspurchcodes was used in first step of our multiple linear regression analysis. An adjusted R-square for this analytical model was 0.92, indicating that our aforementioned independent variables may account for 92 percent of variation in our dependent variable called adspurchcodes in this particular regression analysis.

A multiple linear regression analysis was once again carried out, this time simply using our control variable of gender together with our independent variables and adspurchcodes as a dependent variable in a second stage once again in order to see a which percentage of this variance is attributable to effect of our control variable. A modified R squared for this second study model dropped to 0.89. In other words, our independent variables together with our control variable, gender in this case, account for 89 percent of variation in purchases made by our

respondents due to social media promotions and advertisements which have grabbed their attention and encouraged them to buy those advertised goods and services.

```
. regress adspurcodes gencodes shaperinfocodes  socmedforbuycodes frequofpostcodes timspentcodes folretcodes
```

Source	SS	df	MS	Number of obs	=	53
				F(6, 46)	=	0.15
Model	3.38338998	6	.56389833	Prob > F	=	0.9883
Residual	173.861893	46	3.77960637	R-squared	=	0. 91
				Adj R-squared	=	0. 89
Total	177.245283	52	3.40856313	Root MSE	=	1.9441

adspurcodes	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
gencodes	.1567083	.5511019	0.28	0.777	-.9526023	1.266019
shaperinfocodes	.2164965	.6148363	0.35	0.726	-1.021105	1.454098
socmedforbuycodes	.1680077	.2302264	0.73	0.469	-.6314293	.295414
frequofpostcodes	.0106391	.126653	0.08	0.933	-.2443002	.2655784
timspentcodes	.0089026	.1279647	0.07	0.945	-.2664822	.248677
folretcodes	.0599163	.1276349	0.47	0.641	-.1969993	.316832
_cons	4.107214	1.770108	2.32	0.025	.544172	7.670256

In addition, we are presenting correlation coefficients between our dependent and independent variables, which are presented in a table.

```
. correlate gencodes shaperinfocodes frequofpostcodes timspentcodes folretcodes socmedforbuycodes adspurcodes freofonlpurchcodes
(obs=53)
```

	gencodes	shaper~s	frequo~s	timspe~s	folret~s	socmed~s	adspur~s	freofo~s
gencodes	1.0000							
shaperinfo~s	0.0825	1.0000						
frequofpos~s	0.0341	-0.1506	1.0000					
timspentco~s	0.1857	-0.1740	-0.0515	1.0000				
folretcodes	-0.0971	-0.1653	-0.0949	0.0029	1.0000			
socmedforb~s	0.0280	0.1595	0.0695	0.1136	-0.0542	1.0000		
adspurcodes	0.0359	0.0296	0.0080	0.0253	0.0617	0.1039	1.0000	
freofonlpu~s	0.0162	0.3021	0.0711	0.1134	0.2080	0.2308	0.1164	1.0000

As you can see from our table, all of our independent and dependent variables have been examined to determine their strength of correlation and determine extent to which they are influencing one another. First, gender, which is our independent control variable, is shown to have a positive as well as a weak correlation with a variable of shaperinfocodes which determines whether our respondents are sharing their personal information on their social media accounts. In addition, our variable frequofpostcodes variable which refers to frequency that our respondents post on their social media account has a positive and weak correlation with our gender variable while it is in a negative and weak relationship with a variable of

shaperinfocodes. Furthermore, another independent variable called timspentcodes variable, which refers to amount of time spent on social media by our survey respondents, has a positive and weak correlation with our control variable, gender, and has a negative and weak relationship with variables such as shaperinfocodes and freofpostscodes. In addition, another independent variable, folretcodes, has a negative and weak correlation with variables such as gender, shaperinfocodes, and freofpostscodes while it is in a positive and weak relationship with a variable of timspentcodes. Further, socmedforbuycodes has a positive and weak correlation with all variables such as gender, shaperinfocodes, freofpostscodes, and timspentcodes while it is in a negative and weak relationship with a variable called folretcodes. In addition, adspurchcodes variable has a positive and weak correlation with variables of gencodes, shaperinfocodes, and folretcodes while it has a negative and weak relationship with variables of freofpostscodes, timspentcodes, and socmedforbuycodes.

When it comes to our dependent variables, our dependent variable adspurcodes, which represents all online purchases made by our respondents due to social media advertisements, has a positive, however, weak correlation with all variables such as gencodes, shaperinfocodes, folretcodes, and freofpostscodes. In addition, our another dependent variable freqofonlpurcodes which represents amount of online purchases made by our respondents per month has a positive, however, weak correlation with all variables such as gencodes, shaperinfocodes, folretcodes, and freofpostscodes.

4.1.1 Hypothesis Testing

We shall start hypothesis testing by considering our alternative and null hypotheses for this research.

Null Hypothesis: H0: b1 = b2 = b3 = b4 = b5 = b5 = b6 = 0, which is null hypothesis, will be tested in accordance with requirements of this research. It demonstrates that there is no link between our independent and dependent factors and that our dependent variables of adspurcodes and freqofonlpurcodes are unaffected by our independent variables. In other words, adspurcodes and freqofonlpurcodes are unaffected by factors such as gencodes, shaperinfocodes, folretcodes, and freofpostscodes.

Alternative Hypothesis: H1: b1 /= b2 /= b3 /= b4 /= b5 /= b6 /=0 is an alternative. It is indicating that changes in aforementioned dependent variables are reliant on our dependent variables of adspurcodes and freqofonlpurcodes. However, depending on circumstances, relationships between these variables can be positive or negative.

We will utilize Z test to conduct our test and determine which of our hypotheses—the null or alternative one—is true. A conclusion that there is no substantial influence of our independent variables on our dependent variable would be reached if results of our testing support our null hypothesis (Z is between our negative Z crit and positive Z crit). However, if our alternative hypothesis is accepted and our null hypothesis is disproved, we might conclude that our factors have a substantial impact on our dependent variables, which are adspurcodes and freqofonlpurcodes.

Regression equations:

Population equation I: adspurcodes = B0 + B1 gencodes + B2 shaperinfocodes + B3 folretcodes + B4 freofpostscodes + B5 timspentcodes + e

Population equation II: freqofonlpurcodes = B0 + B1 gencodes + B2 shaperinfocodes + B3 folretcodes + B4 freofpostscodes + B5 timspentcodes + e

Sample Equation: freqofonlpurcodes = b0 + b1 gencodes + b2 shaperinfocodes + b3 folretcodes + b4 freofpostscodes + b5 timspentcodes

Regression analysis is a method used to calculate or ascertain correlation coefficients and standard errors between dependent variables and independent variables. Regression analysis presents error terms as total of deviations inside regression line, which is illustrates ways that our model's predictions differ from actual findings that were observed. We can thus infer that there is no error term in our data set since we have a real link between our dependent and independent variables, and because we have gathered adequate data about all variables one by one and have included in a program for calculation. In other words, because sample equation does not contain aforementioned error components, its output will be consistent with that of genuine equation.

In order to assess correlations between eight variables we have chosen, which include a mix of independent and dependent variables, regression analysis will be used to evaluate them. An issue is that there were errors when I have run a regression test in Stata. Regarding our categorical variable of gencodes and shaperinfocodes, there were some estimate issues, but none were caused by other numerical factors. This is because I saw an urgent necessity to first transform a string value of these categorical variables into a numerical one by labeling, and this made possible that regression analysis could be performed while taking gender and shaperinfocodes variables into account.

```
. regress adspurcodes shaperinfocodes  socmedforbuycodes frequofpostcodes timspentcodes folretcodes
```

Source	SS	df	MS	Number of obs	=	53
				F(5, 47)	=	0.24
Model	4.35158523	5	.870317047	Prob > F	=	0. 44
Residual	172.893698	47	3.67858931	R-squared	=	0. 46
				Adj R-squared	=	0. 92
Total	177.245283	52	3.40856313	Root MSE	=	1.918

adspurcodes	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
shaperinfocodes	.2492052	.6004079	0.42	0.680	-.9586598	1.45707
socmedforbuycodes	.2085806	.219419	0.95	0.347	-.6499947	.2328335
frequofpostcodes	.0184281	.1251165	0.15	0.884	-.2332738	.2701299
timspentcodes	.0045865	.1238518	0.04	0.971	-.2445713	.2537442
folretcodes	.0564562	.1255788	0.45	0.655	-.1961757	.309088
_cons	4.324708	1.631918	2.65	0.011	1.041711	7.607704

I believe it is a right and appropriate time to begin interpreting our data and results from Stata regression analysis that we have received and described above. First, by denying or verifying our null or alternative hypothesis, we must determine significance level in order to comprehend correlations between our dependent and independent variables. Our p-value, which is value to be utilized to assess significance level of our variables, is shown in a table as being p > |t|. Our first method is involving applying conventional strategy and comparing p value with significance level (5 percent because of 95 percent confidence interval).

Examining our table, we can observe that a p-value for one independent variable in our dataset, which is socmedforbuycodes, from total is less than **α** of 5 percent, while a p-value for

remaining variables of shaperinfocodes, frequofpostcodes, timspentcodes, and folretcodes is greater than **α** of 5 percent, which is making them negligible in terms of influencing our dependent variables of adspurcodes and freqofonlpurcodes. F-test, which is measuring dispersion of data throughout our dataset by ratio of two variances, is a second method of determining significance level of our independent variables. This approach is used to assess joint significance, which is illustrating interaction of many factors affects percentages of our dependent variables. A simplest method for determining p-value of a F test is to simply compare them to a significance level of to determine how much p-value of a F test is assuming that our null hypothesis is true or false.

A set of our independent variables combined have an influence on dependent variables, or in other words, these independent variables are joint significant and these variables have an impact on dependent variables of this study, if p value of F test is discovered to exhibit decreased rates from significance threshold of **α** of 5 percent. In our test, p value of F test is calculated as 0.44, which is lower than 0.05, **α** of 5 percent, and this means that our independent variables are significant and at least one independent variable is related to our dependent variable of adspurcodes in our first regression analysis of first dependent variable. As a result, Ho is rejected, and a conclusion is reached that all of the independent variables had a significant combined impact on ranges of our dependent variables of adspurcodes and freqofonlpurcodes.

Aditionally, we have R-squared and adjusted R-squared, which are presupposing that each independent variable in our dataset would be accounting for variations in our dependent variables. However, they have distinct implications. For example, whereas adjusted R-squared is rising when more pointless variables are included to our model, R-squared is rising if we are adding or removing any variable from our dataset. In other words, better a model is matching our data, higher R-squared number would become. R-squared of 0 indicates that our independent variable does not explain any variability in our dependent variable, while 100 indicates opposite meaning that our independent variables are explaining variations and variability in our dependent variables. Our dataset's R-squared and adjusted R-squared values are 46 and 92 for our first dependent variable in a table illustrated above, in a respective order, which is illustrating how much our independent factors contribute to explanation of our dependent variables.

In order to boost authenticity level of our estimates and obtain results that are much closer to those of real population estimates, we must classify significance level of each individual independent variable and eliminate those variables that are less significant. However, eliminating all insignificant variables does not produce desired outcomes in all cases. Therefore, it seems sense to simply omit variables that have highest level of insignificance, which is socmedforbuycodes variable, which accounts for 34 percent of variance. Remaining independent variables have favorable and significant correlations with our dependent variable of adspurcodes once socmedforbuycodes is removed from equation. However, removing this variable can jeopardize results of regression analysis for our survey data because this is important.

I think a right moment has come to determine whether we have a multicollinearity issue with our dataset, which is happening when independent variables in our regression sample are associated with one another. According to statistics standards, we do not have multicollinearity problem when correlation coefficient is between + 0.7 and - 0.7, but when it is more than + 0.7 or lower than - 0.7, we do. Therefore, a fact that we were unable to identify any multicollinearity issues in our dataset is encouraging since it is suggesting that our independent variables are not strongly correlated, making it viable to search for their pure effects on our dependent variable. For all of our independent variables, correlation coefficients as shown in a table above are positive values and they all are below + 0.7.

In addition, as we are done with our first dependent variable, we can switch to our send dependent variable, which is freqofonlpurcodes.

```
. regress freofonlpurchcodes gencodes shaperinfocodes frequofpostcodes timspentcodes folretcodes socmedforbuycodes
```

Source	SS	df	MS	Number of obs	=	53
				F(6, 46)	=	1.52
Model	59.2800828	6	9.8800138	Prob > F	=	0.36
Residual	299.436898	46	6.50949779	R-squared	=	0.53
				Adj R-squared	=	0.64
Total	358.716981	52	6.89840348	Root MSE	=	2.14

freofonlpurchco~s	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
gencodes	.240379	.7229191	0.33	0.741	-1.69554	1.214782
shaperinfocodes	1.649979	.8103868	2.04	0.048	.0187551	3.281203
frequofpostcodes	.182847	.1712646	1.07	0.291	-.5275848	.1618908
timspentcodes	.1209007	.1769379	0.68	0.498	-.2352567	.4770581
folretcodes	.0848241	.1760464	0.48	0.632	-.4391872	.2695389
socmedforbuycodes	.4836824	.3023604	1.60	0.117	-1.092302	.1249376
_cons	3.773752	2.337806	1.61	0.113	-.9320081	8.479512

For our second dependent variable, freofonlpurchcodes, which refers to the total amount of online purchase activities of our respondents, we will begin analyzing and interpreting the Stata regression findings. To accept or reject the alternative or null hypothesis that we have stated at the beginning of this part of regression analysis in this research, correlations between our independent and dependent variables in our dataset must first be analyzed. To do this, we will use the p-value to assess the significance level of our dependent and independent variables, looking at values for $p > |t|$, just as we did for our first dependent variable. Our first method of evaluating significance level of our variables is comparing it to a significance level of 5 percent or 0.05. Looking at our regression table for our second dependent variable, we can observe that a p-value for one independent variables in our dataset, which is shaperinfocodes variable, is shown to be less than **α** of 5 percent or 0.05, while a p-value for remaining variables of gencodes, socmedforbuycodes, frequofpostcodes, timspentcodes, and folretcodes is greater than **α** of 5 percent, which is making them less significant in terms of influencing our dependent variable of freqofonlpurcodes.

In addition, F-test, which is measuring dispersion of data throughout our dataset by ratio of two variances, is a second method of determining significance level of our independent variables. This approach is used to assess joint significance, which is illustrating interaction of many factors affects percentages of variations in our dependent variable. A usual method employed for finding out p-value of F-test is comparing them to a significance level which is 5 percent or 0.05, and this can help us conclude whether our null or alternative hypothesis is true or false.

All of our independent variables together can be said to have a joint significance on our dependent variable of freofonlpurchcodes. When p-value of F test is below **α** of 5 percent or 0.05, it means that these variables have a joint significance. In this case, p-value is 0.04, which is below 0.05, and it means that these variables do have a joint significance and they have a significant impact on our dependent variable. So the result, Ho is rejected, and a conclusion is reached that all of independent variables had a significant combined affect on ranges of our dependent variable of freqofonlpurcodes.

In addition, as we said above, whereas adjusted R-squared is rising when more pointless variables are included to our model, R-squared is rising when we are adding or removing any variable from our dataset. R-squared of 0 indicates that our independent variable does not explain any variability in our dependent variable, while 100 indicates opposite meaning that our independent variables are explaining variations and variability in our dependent variables. Our dataset's R-squared and adjusted R-squared values are 53 and 64 for our second dependent variable in a table illustrated above, in a respective order, which is illustrating how much our independent factors contribute to explanation of our dependent variables.

Further, we need to look at multicollinearity problem of regression of analysis for this particular dependent variable. According to statistics standards, we do not have multicollinearity problem when correlation coefficient is between + 0.7 and - 0.7, but when it is more than + 0.7 or lower than - 0.7, we do. Applying this to our model, we can see that a correlation coefficient of one independent variable, shaperinfocodes, is above + 0.7 while correlation coefficient for all remaining variables is below + 0.7. This means that we have a small multicollinearity problem in our dataset regarding our second dependent variable.

In addition, even though there is no issue with multicollinearity among our independent variables, I saw a necessity that VIF test is needed to be added to our study. It is used to assess severity of multicollinearity issue in our dataset. If it is rising beyond 10, we have a major multicollinearity issue, above 5 is moderate, and below or equal to 5 is not. An equation for this is $1 / (1 - R_j^2)$. As seen in our table below, VIF for all variables is below 5 meaning that there is not a serious multicollinearity problem in our dataset, and this is an indicator for reliability of our research results and conclusions that I will be drawing from all these.

```
. vif
```

Variable	VIF	1/VIF
timspentco~s	1.24	0.804252
folretcodes	1.18	0.849668
socmedforb~s	1.17	0.856260
shaperinfo~s	1.15	0.872048
frequofpos~s	1.06	0.944390
gencodes	1.05	0.949425
Mean VIF	1.14	

In conclusion, we sought to ascertain degree and quality of correlations between independent and dependent variables throughout this work. Since all independent factors, with the exception of shaperinfocodes, have a significant impact on our dependent variables, we feel that our results are closer to actual estimation results.

These are some outcomes. Our dependent variables of adspurchcodes and freofonlpurchcodes are influenced by gender, however, it would be illogical to claim that gender alone can account for variances in our dependent variables. It has been demonstrated that changes in amounts of time spent on social media, type of social media platform, following retail company profiles on social media accounts, and frequency of posts customers make have a major impact on frequency of online purchases and online purchases for social media advertisements. It is fortunate that we were unable to identify any issues with multicollinearity between our independent variables, demonstrating that independent variables describe dependent factors better than they explain each other. Shaperinfocodes, which represents sharing personal information on social media account, was variable with highest level of insignificance, however, it was not removed from our dataset to try and achieve more realistic findings. We did not have variables that have negative impacts on our dependent variables.

Based on these results we can argue whether our original hypothesis above was correct.

First, Hypothesis I (I assume that time spent on social media accounts by customers might have a positive impact on online purchase activities of customers) has been confirmed by a positive relationship between onlpuchcodes and timspentcodes variables.

Second, Hypothesis II (I assume that number of retail companies followed by customers might have a positive impact on online purchase activities of customers) has been confirmed by regression results that more retail companies followed means more online purchases made.

Third, Hypothesis III (I assume that more posts made can result in more ads appearing for customers and more online purchases for those companies) has been confirmed by regression results as discussed above.

Fourth, Hypothesis IV (I assume that more people share their personal information on their social media accounts means more advertising targeted sales for companies and more online purchases) has been rejected by regression results as shaperinfocodes variable did not have a significant impact on online purchase activities of customers.

Fifth, Hypothesis V (I assume that gender of customers is playing a significant role in frequency of online sales made by companies) has been rejected by regression results because gender has a significant impact together with remaining variables.

In addition, based on these results, we can provide positive answers for our 3rd and 4th research questions. We can conclude that use of social media can have a positive impact on customer segmentation of retail companies in Azerbaijan as regression results demonstrate. Further, we can answer fourth question that social media usage has a positive impact on customer purchase channels in Azerbaijan as regression results show.

All these mean that companies and businesses are segmenting their customers based on their social media activities. People using social media accounts more being more active, using social media platforms such as Instagram more, and following retail companies on social media platforms help businesses create personalized advertisements and increase their sales. In other words, we can conclude that businesses and companies segment their customers based on their social media activities and arrange their corporate activities in accordance with those activities.

5. CONCLUSION AND RECOMMENDATIONS

This research intended to examine usage of social networking by retail businesses and the execution of customer segmentation analysis through the help of social networking sites. That being the case, the major objective of this study was to carry out inclusive research to comprehend the use of social media in the retail sector of Azerbaijan aimed at performing customer segmentation analysis. In reaching the research objectives, comprehensive literature research was carried out, in the form of books, scholarly studies, academic research and conference papers. Along with this, the primary research was mainly grounded on the quantitative research method, i.e., survey, comprising closed ended question with the intention of understanding the ways social media usage affect customer purchase channel and decisions of the consumers in Azerbaijani retail sector. The survey method is chosen, because this means of research is valuable in describing the features of a large population.

Internet, social networking, mobile applications, and digital communication tools have turned out to be a part of daily life for billions of individuals on a global scale. The social networking use has turned out to be an essential component of the lives of countless persons worldwide, which enables businesses to accomplish their marketing aims at rather low costs. Individuals spend a growing amount of time online looking for data, on goods and services interacting with other customers (i.e., sharing reviews) on their experiences and communicating with the businesses. Retail businesses have reacted to the alteration in customer behavior through building digital presence and making social networking an indispensable and fundamental constituent of their marketing strategies. An effectual way is to plan channel stratagems grounded on customer segmentation, which is an exercise of separating a business's customers to groups that reflect likeness amongst clienteles in every group. The aim of this process is deciding the ways to be in connection with clienteles in every segment with the intention of maximizing the value of every customer for the organization. Precise customer segmentation enables retail businesses to reckon every customer in the most operative means. Customer segmentation possesses the prospects to enable retail businesses to address every customer predominantly through the help of the social networking channel. As such, by means of the enormous data accessible on clients (also potential clienteles), this analysis enables businesses to recognize

separate groups of clients with a high extent of correctness grounded on demographic, behavioral and further indicators.

It is an irrefutable fact that, goods and services possess no worth for buyers till they are obtained and utilized by the consumers. Retail businesses obtain goods and services by diverse sites and categorize them at a sole place in accordance with the requirements of the customers and therefore ease the purchasers' access. Moreover, retail businesses breakbulk and provide the goods in numbers and sizes as wanted by the purchaser. These retail firms help customers through delivering proper goods, services, and guidance in the sorting and amounts preferred by them. A successful retail firm helps customers by way of delivering a variety of manufactured goods and services in a professional way. This process can be accomplished in either static sites or online. Retail process comprises subordinated facilities, for instance delivery. Furthermore, the name "retailer" is utilized where a facility deliverer services the wants of a huge quantity of persons, for instance a public utility as electrical energy. The retailing process also aids to improve living standards and allow purchasers to own a variety of products, services, and utilities.

In order to better understand their components, commercial businesses, specifically retail businesses, need to have detailed knowledge of their customers' characteristics, behaviors, and demographics. This will allow them to classify them appropriately with detailed models and algorithms. With the aid of these models and algorithms, businesses have pure insight about their customers, and they can establish personalized strategies aimed at targeting the customers according to their data. Retail companies need to segment their customers better. It allows companies to better understand their target market by grouping customers with similar needs, wants, and behaviors. By doing so, it could customize marketing campaigns, regulate prices, and run promotions, increase customer touchpoints, etc.

According to the findings of this study, most widespread social media site amid Azerbaijani users to search for products and acquire them is Instagram, which is predominantly utilized by female users. Majority of individuals follow business pages of retail brands on social media sites. Most purchased/searched items on social networking sites are clothing items (apparel, bags, shoes) and Cosmetics & beauty products. Accordingly, people generally follow

fashion retail stores and the cosmetics retail shops on the social networking sites. These results are able to help retail companies with their next social media campaign, as they might target females more while using social media ads, since females are more keen on purchasing items through this channel. Age factor plays a substantial role as well, since the younger generation are more interested in making purchases through the social networks. This might help retail companies to choose this age groups while positioning next advertisement on social networking sites. In addition, the Instagram platform is more likely to be productive while choosing on the appropriate platform to place the ads. Retail businesses functioning in Azerbaijan should take these aspects into consideration, while designing their next social media-based marketing campaigns, upon carrying out a detailed customer segmentation analysis. The survey outcomes reveal that, majority of customers does not actually pay attention to social media ads if they do not need the advertised product, or if the advertised product is not from their favorite brand. This fact again highlights the fact that, the retail businesses functioning in Azerbaijan must carry out comprehensive customer segmentation analysis, with a view to predicting the needs and desired brands of customers, so that their targeted ads will serve the business in the right way.

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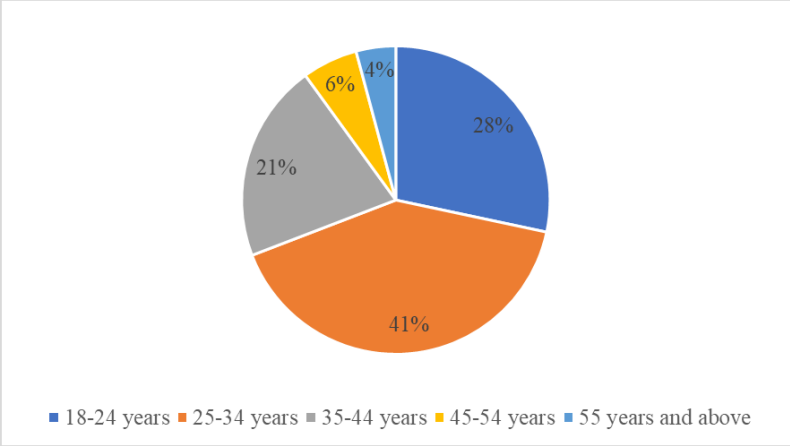
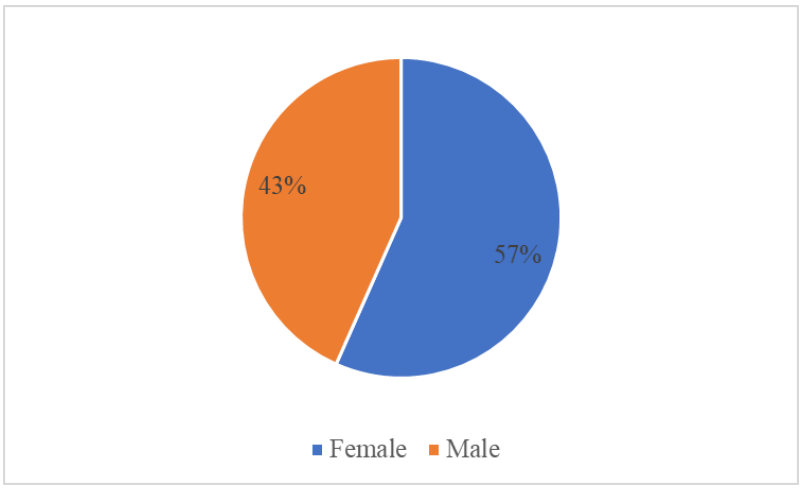
APPENDICES

Appendix 1: Survey Questions and Illustrated Results

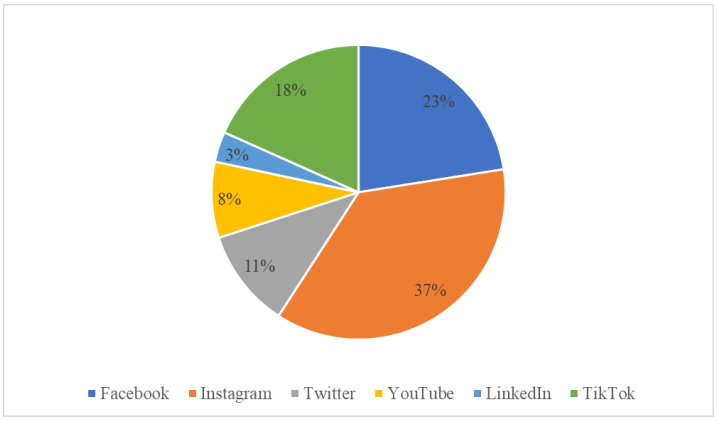
1. Please select your age:
   - 18-24 years
   - 25-34 years
   - 35-44 years
   - 45-54 years
   - 55 years and above



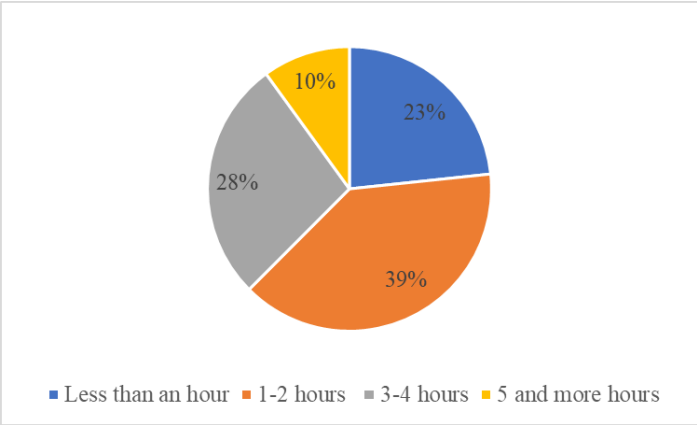
2. Please select your gender:
   - Female
   - Male



3. What social networking sites do you use most for online purchases?
   - Facebook
   - Instagram
   - Twitter
   - YouTube
   - LinkedIn
   - TikTok

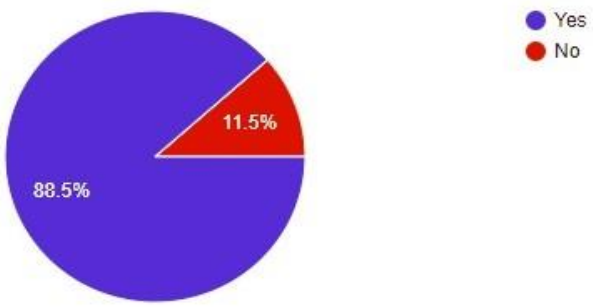


4. How much time do you spend on social networking sites a day?
   - 1-2 hours
   - 3-4 hours
   - 5-6 hours
   - 6-7 hours



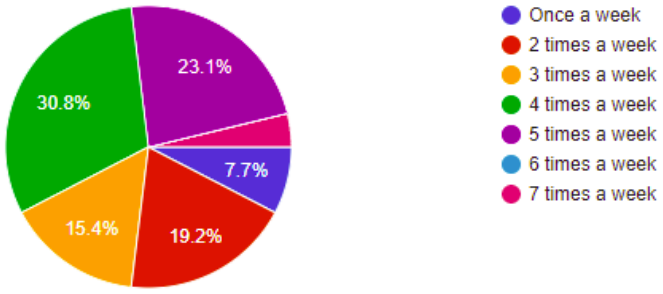
5. Do you share your personal information (e.g., age, gender, marital status, hobbies) on social networking sites?

- Yes
- No

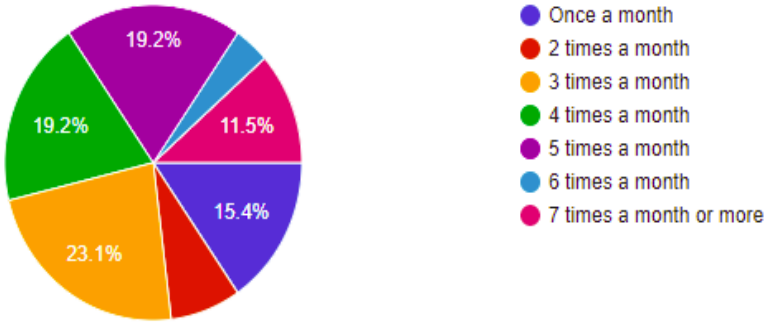


6. How often do you share personal information, posts, and pictures on your social media account?

- Once a week
- 2 times a week
- 3 times a week
- 4 times a week
- 5 times a week
- 6 times a week
- 7 times a week

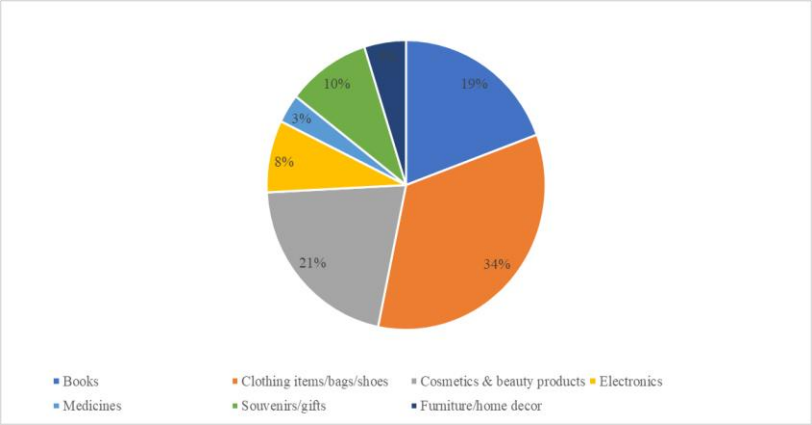


7. What is frequency of your online purchases?
   - Once a month
   - 2 times a month
   - 3 times a month
   - 4 times a month
   - 5 times a month
   - 6 times a month
   - 7 times a month or more



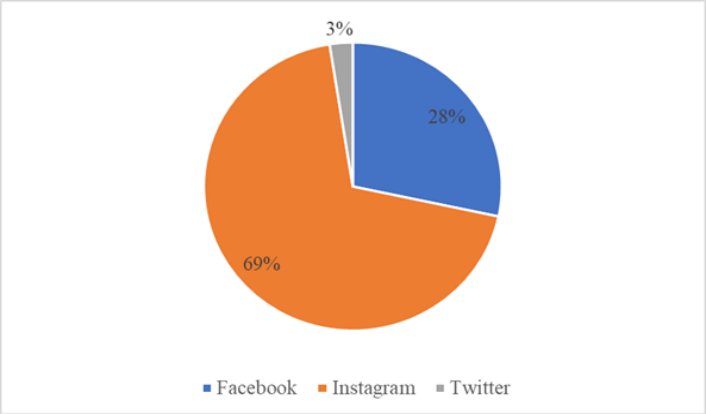
8. Which items have you purchased using social networking sites?
   - Books
   - Clothing items/bags/shoes
   - Cosmetics & beauty products
   - Electronics

- Medicines
- Souvenirs/gifts
- Furniture/home décor



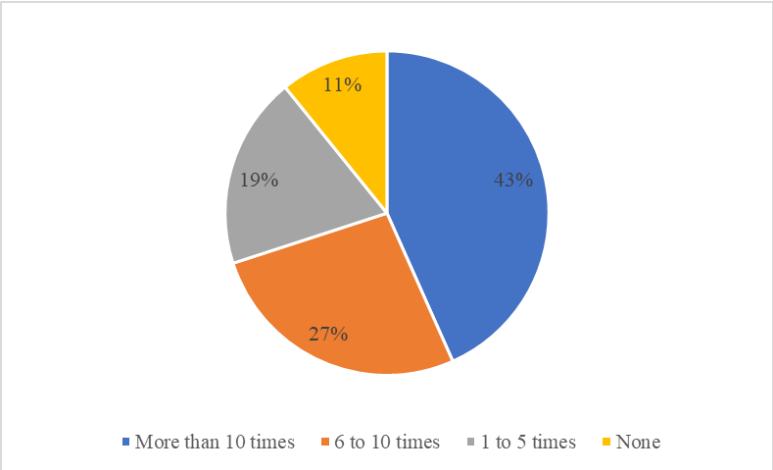
9. Which social media site you use/have used for purchasing, checking for products?

- Facebook
- Instagram
- Telegram
- Twitter



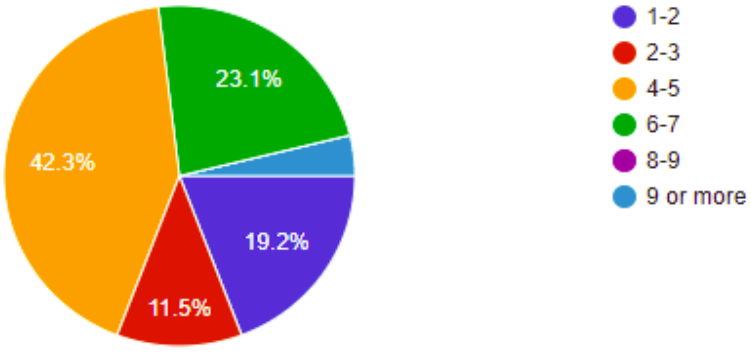
10. In last 6 months, how many times you purchased/searched for items from social media pages?

- More than 10 times
- 6 to 10 times
- 1 to 5 times
- None



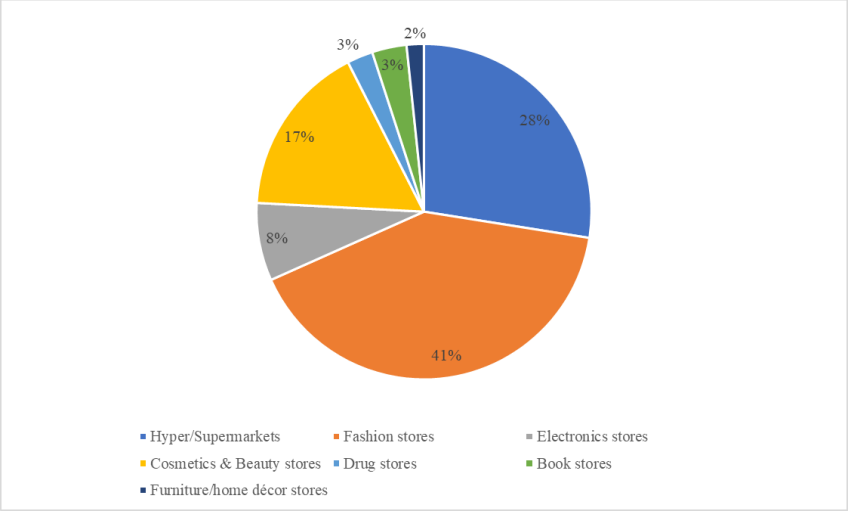
11. How many social media accounts of retail companies (supermarkets, clothing stores, etc.) you follow?

- 1-2
- 2-3
- 4-5
- 6-7
- 8-9
- 9 or more



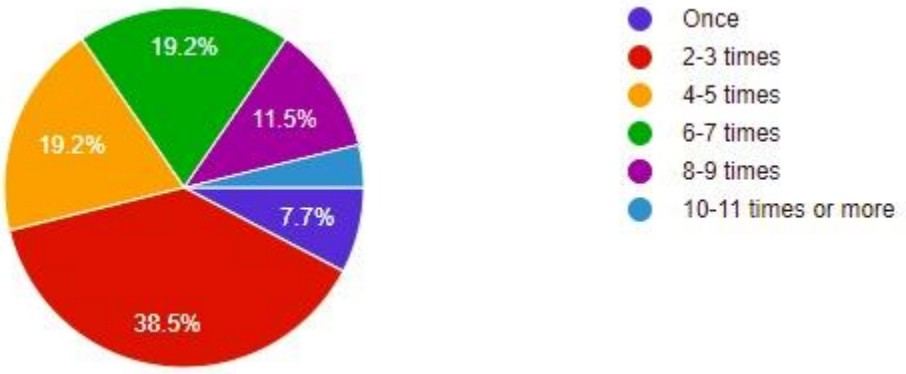
12. Which retail stores do you follow more?

- Hyper/Supermarkets
- Fashion stores
- Electronics stores
- Cosmetics & Beauty stores
- Drug stores
- Book stores
- Furniture/home décor stores
- Other



13. How many products or services you have purchased for social media advertisements that have grabbed your attention this year?

- Once
- 2-3 times
- 4-5 times
- 6-7 times
- 8-9 times
- 10-11 times or more



14. Do you like targeted ads / personalization of services through usage of your personal data?

- Yes
- No