

The influence of color in retail stores on customer purchasing in the municipality of Grude

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University of Zagreb
Faculty of Economics & Business
Graduate study programme
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**THE INFLUENCE OF COLOR IN RETAIL STORES ON
CUSTOMER PURCHASING IN THE MUNICIPALITY OF
GRUDE**

Master thesis

Luka Kolobarić

Zagreb, September 2020.

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GRUDE**

Master thesis

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STATEMENT ON THE ACADEMIC INTEGRITY

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SUMMARY

Although the process of retail dates back to ancient time, to this day scientists and researchers are trying to find out more about all of the aspects and strategies that go on while shopping in retail. One of the ways to influence consumers is the adequate use of color. Color can have different meaning and symbolism for people all around the world. So, from a scientific point of view, it would be useful to examine the impact of color in Grude, as it is one of the most developed municipalities in Bosnia and Herzegovina, with little or no research in retail habits of its citizens.

The subject of this thesis is the influence of color in retail stores on customer purchasing in the municipality of Grude. The aim of this thesis was to examine how colors impact consumers in Grude and what associations do consumers have with colors. The research was conducted via an online survey on 112 participants.

The participants agreed that they pay attention to the way the colors of the products in the store, shelves, entrances and other parts of the store are arranged, associate healthy products in the store with green color, associate black and gray with technological products in the store, white color with dairy products in the store, red color with products on sale at the store, golden color with products that are more expensive than others in the store, that colors and the way the colors of the products in the store are assembled affect their shopping habits when buying everyday goods. According to the color of the product or group of products, the participants guess what type of product it is.

There is a strong impact of color in retail present among the citizens of Grude which impacts their daily retail shopping habits.

Keywords: color, influence, retail, Bosnia and Herzegovina, Grude

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1. INTRODUCTION

1.1. Thesis subject and objectives

The subject of this thesis is an insight into the influence of color in retail stores on the purchasing habits of the citizens in the municipality of Grude, Bosnia and Herzegovina. Color is a characteristic of visual perception which can be described by associating it with certain words/names, such as red, orange, yellow, green etc. Some colors have a variety of cultural associations such as national colors (national color symbolism) and people tend to associate colors with different things in different cultures and parts of the world (Wyszecki, 1982). Color can be used in different areas of human life; from design, architecture, and art to marketing (Berlin & Kay, 1969). One of the uses of color is in retail, where retailers use various ways to track the consumption of their customers and thus draw various conclusions related to sales improvement. Color and the arrangement of color is used in retail for monitoring consumer habits, but also for stimulating sales. The goal of retailers is to use different colors in order to increase customer consumption (Tantanatewin and Inkarojrit, 2016).

The municipality of Grude is one of the most economically developed municipalities in Bosnia and Herzegovina (Federal Institute for Development Programming, 2018), and it is to be assumed that customers in this area are more prone to higher consumption compared to other parts of Bosnia and Herzegovina, due to their higher purchasing power. According to the authors, no research has been done so far on the impact of colors in retail in the municipality of Grude. So, this research is important to receive an insight to the purchasing habits and the color influence in retail stores in this part of Bosnia and Herzegovina.

The main goal of this thesis is to show the impact of product color in retail on customer decisions in the municipality of Grude through a survey. In addition, the aim of the thesis is to provide an overview of current knowledge on the use of color in retail around the world, and in Bosnia and Herzegovina and neighboring countries.

1.2. Research methodology

We used primary and secondary sources as research methods. Primary sources refer to the processed surveys conducted on a sample of at least 100 respondents, of different

ages, employment status and education. The survey was conducted online, among the citizens of the municipality of Grude in the period from August 1st, 2020 to August 15th, 2020.

Secondary sources consist of literature used in the preparation of the thesis, and these include books, articles and professional journals in Croatian and English, as well as online sources.

The thesis consists of six chapters. In the first chapter, the basic problem is defined, the objectives of the thesis, the basic data sources, the methods of collection, as well as the structure of the thesis. In the second part the importance of color in retailing is described, as well as the history of retail, today's use the theory of color in retail and the impact of colors in consumer purchasing. The third chapter deals with the market description, the retail market description of Bosnia and Herzegovina and the municipality of Grude, as well as the consumers' consumption habits in Grude retail market. The fourth part shows the results of the survey, as well as the research sample, discussion and research limitations. In the fifth part the overview of literature in on color influence between Croatian and Bosnian & Herzegovinian consumers as well as examining the existing researches and implications for retailers. The thesis ends with the sixth part – a conclusion on the thesis topic.

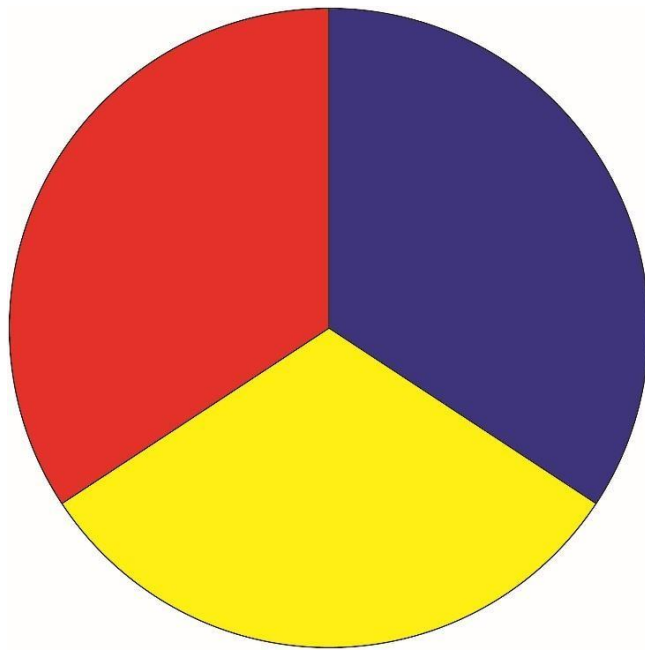
2. IMPORTANCE OF COLOR RETAILING

2.1. Colors as the element of store interior

Since the beginning of the retail process, retailers have searched for a way to increase their sales, either by thorough market or customer analysis or by the analysis and alteration of the environment of the retail process. One of the ways of manipulating the habits of buyers in retail stores is to use color as one of the ways for increasing sales. The use of color plays an important role in the retail environment which affects customers' recognition, including perception, impression, classification and interpretation by transmission of message and meaning. For example, color could create a positive image and reliability, while warm colors lead to excitement and longer time spent in a retail outlet. Some authors investigated color attributes in stores and consumers' affective and approach/avoidance behavior (Breneman, 2002). For example, a purple environment is more positively perceived than yellow in a café/restaurant environment. Warm color tones are more pleasant and lower priced than cool color tones, and different color hues (e.g., cream, lilac, and orange) on the walls of hairdressing salons affect customers' perceptions, with a lilac-colored space being more positive than others. Moreover, an interface color affects a customer's decision making in both the product and retail environment. In summary, it was concluded that spaces with cool color tones (e.g., blue, purple, green) have a more positive effect than warm color tones (e.g., red, orange, yellow).

A set of primary colors (Figure 1) is a set of colorants or colored lights that can be combined in varying amounts to produce a gamut of colors. Primary colors can be conceptual (not necessarily real colors), either as additive mathematical elements of a color space or as irreducible phenomenological categories in domains such as psychology and philosophy (Beran, 2008). People usually tend to consider the colors red, yellow, and blue to be primary colors, as these are the ones that cannot be made by mixing other colors or pigments together.

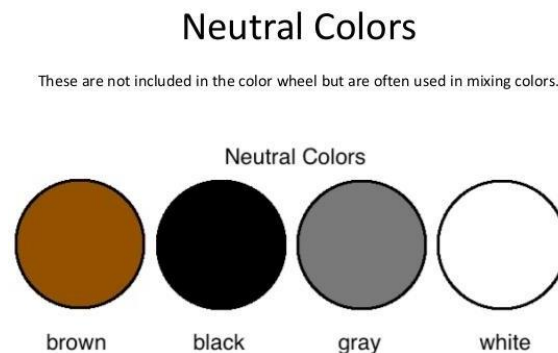
Figure 1. The three primary colors



Source: <https://www.pinterest.com/pin/564849978240610253/>, retrieved August 22nd 2020

However, the colors black and white cannot also be made by mixing other colors together, but they are rather considered as neutral colors and not primary colors (Figure 2). That is also the case for gray and sometimes brown.

Figure 2. The colors usually considered as neutral



Source: <https://pt.slideshare.net/bjholbeck/color-wheel-43193345/2>, retrieved August 22nd 2020

People tend to attach a lot of symbolism to colors (Gage, 1999). For example, in the psychological sense red has a lot of symbolism. It is often considered a symbol of energy, strength, warmth, impulse, dynamism, activity, courage, excitement, dominance, rebellion, sexuality, war and combat, love and so on. In nature we have a lot of references to red, like fire, blood, raw meat... In contemporary culture red is seen in traffic lights and signs, fire engines, hearts (e.g. Valentine's Day) and Christmas. In religion however it is often the symbol for the devil (Zevendesign, 2015). In marketing red is often used to draw attention especially on websites when you want to inspire action through something like a call-to-action or to uplift consumers for charities or other subjects that may otherwise cause someone to feel down. Also, red is often seen in stores and retail to draw attention of the customers on products that are on sale. Customers usually associate red with discounts and food (Singh, 2006).

We attach the color blue to the following psychological symbolism: spirituality, trust, truth, cleanliness, tranquility, contentment, passivity, understanding, masculinity, melancholy and security. In nature we often see blue in the skies, oceans and lakes, fish and so on. In contemporary culture it is present as denim (blue jeans) and police uniforms (Zevendesign, 2015). Blue is also often used in marketing and retail. There's a big difference

between types of blue (e.g. teal, *corporate blue* and baby blue) which means that there's a big difference between the emotions that each of those shades is going to make customers feel. Strategically using blue on a website will help tell visitors how to feel about the information being presented. A dark blue background can give a page visual weight and set a serious scene for any content on the page. In retail, we often see a striking bright blue against a lighter colored background. This is to help customers see the product more clearly, which attracts more customers to that product. Customers usually associate blue with home equipment products. (Singh, 2006).

Yellow is often the color of cheer, hope, vitality, luminosity, communication, expansion, optimism and egoism. It is very present in nature: in sunlight, sand, autumn leaves, lemons and other fruits, animal fur and so on. As red, in contemporary culture, it is also present on traffic lights, taxis, it is the color of caution (Zevendesign, 2015). In corporate branding, yellow is seen as fun, energetic, young, and attention-grabbing. Still, it's relatively uncommon compared to its primary color brethren. Yellow is not that much used in corporate branding. But we often see it in retail, where it is used to, once again, draw attention. Yellow is often used for products that are on discount, but when the discount is lower than some others present in the retail store. Usually, it is placed on a blue or dark surface to magnify its effect. In retail, people often combine the yellow color with food and food products. Also, in the case of gold, the association is often to products that are more expensive than others present in the retail store (Singh, 2006).

There is a lot of debate whether white is a color or not, where most scientists and experts claim that white is not a color, but something that is free of color. However, white is associated in the psychology color symbolism as pure, clean, a symbol of truth, innocence and sterility. In nature we see it in the snow, sea foam, clouds, teeth... White helps to establish contrast for all the other colors. There is no better background for a color to stand out and vice versa. There is no better color than white to stand out on a color. In retail, white is often associated with home appliances, kitchen and bathroom appliances, but also with milk and dairy products (Singh, 2006).

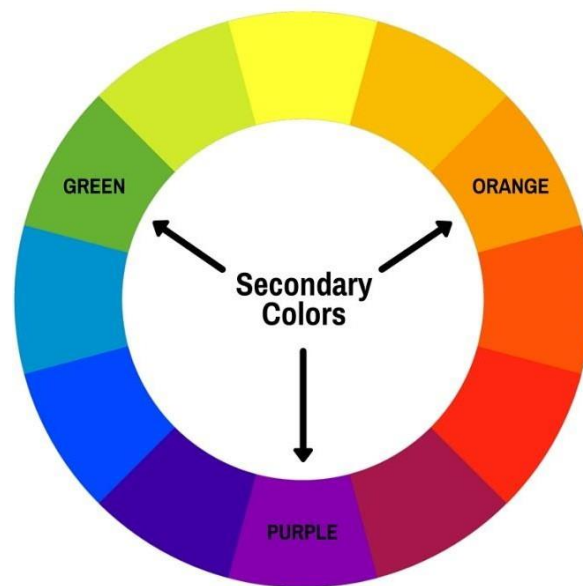
Gray is a safe color to use in many business applications. It is neutral and serious and can be combined with almost any other color to impart different messages and to reach different target markets. Surprisingly, gold can work well with gray to suggest professional and high quality. In psychology gray is considered neutral, associated with intelligence, futurism, modesty, technology, liberalism, sadness. In nature it is present as the color of

rocks, clouds, smoke (Zevendesign, 2015). In retail, gray can be associated with technological products and kitchen appliances (Singh, 2006).

Just as white, there is a lot of debates wheatear black is a color or not. According to physicists, black is not a color because it doesn't have its own specific wavelength in terms of visible light. Each color on the spectrum has its own specific wavelength, black does not have a wavelength because it is considered the absence of all light. We tend to associate black with power, sophistication, death and the unknown. It is present in nature in the darkness of night, rocks and some animals (Zevendesign, 2015). Black is most regarded for its very functional design aesthetic. It's often used in situations where high-contrast and legibility are the most important factors. In retail, black is often associated with technology products and kitchen appliances (Singh, 2006).

Secondary colors are colors made by mixing of two primary colors in a given color space (Figure 3). For the human eye, good primary colors of light are red, green, and blue. Combining lights of these colors produces a large range of visible colors. For example, purple can be achieved by mixing blue and red; orange is created usually by mixing red and yellow; and green can be achieved by mixing blue and yellow (Morton, 2019).

Figure 3. Colors usually considered as secondary colors



Source: <https://blog.thepapermillstore.com/color-theory-introduction-color-wheel/secondary-colors/>, retrieved September 7th, 2020

Purple is in psychology associated with spirituality, mysticism, magic, faith, dignity, passion and pomposity. In nature we see it a little bit in orchids, irises, some vegetables and fruits. There is little reference for purple in the contemporary culture, but it was the imperial color of the ancient Roman state (Zevendesign, 2015). At that time, it was necessary to use up to 10 000 shellfish to extract the amount of purple used to dye a Roman toga. Purple was then worth more than its weight in gold. Because of the limited resources, the color was associated with the extremely wealthy and powerful, and emperors, kings, and queens quickly adopted purple as a color that represented nobility. Even though purple is available to the masses today, the color still carries a deep association with royalty and luxury (Singh, 2006).

Orange is the symbol of energy, cheer, activity, excitement and warmth. In nature we see it a lot; in fire, sunsets, oranges and other fruits. For example, in contemporary culture, it is the national color of the Netherlands, where it is considered the royal color (Zevendesign, 2015). In the marketing world, orange is often used to portray youth, playfulness, and being

bold. Orange is usually seen as healthy, energizing, and attention-grabbing. In retail, it doesn't possess the same attention-grabbing abilities as yellow and red when it comes to discounts, but we tend to associate orange with food and food products (Singh, 2006).

Green is one of the colors that symbolizes nature, growth, youth, good luck, coolness and peace. It is one of the most present colors in nature, where it is shown on all vegetation, lakes and other inland waters. So, the human eye is very used to the color green. In contemporary culture it is mostly a color that represents approval (e.g. traffic lights where it means *Go*, ecology and conservation) (Zevendesign, 2015). Some major global companies use this color to promote a sense of relaxation in its cafes, inviting customers to come in for a coffee break during a stressful day. Other companies use green to associate their products with farming and agriculture. In retail, green is often associated with health and healthy products (Singh, 2006).

Different associations that we give to colors tend to differ among nations, regions and parts of the world. Some colors that are considered innocent in the West are often considered as something else on the East part of the world. So, there is a growing scientific need to examine how colors affect people, mainly customers in different parts of the world.

2.2. The use of Theory of colors in retailing

For the design of a retail environment, many techniques have been used to create a pleasant and unique consumer's experience with the ultimate goal to motivate a customer's buying behavior. The theory of colors is based on the assumption that the nature of colors has an impact on people, or in this case on consumers and their purchasing options. In that case, retailers are advised to use colors in order to increase the number of their customers, sales and profits. Colors can be everything to a fruitful store if the palettes function admirably over the entire shop and supplement different components, for example, displays and light. The point, particularly for retailers, isn't tied in with making the shop more attractive or modern by using color, but to use colors generally in a way that is proven to increase sales and interest in the store (POPAI, 1988). Color is vital to intelligibility since we respond naturally to it; human brains are designed to react to color and, for current retailers, the secret to utilizing color is to comprehend both the mental and physiological impacts of color (Kutlu, Kilanc and Manav, 2013). It carries meaning through association as well as stimulating the shopper's physiological response. As humans we originally link the color spectrum to our responses. The determination of a color palette in a store ought to be made to help the total picture and

design subject. In store plan, there are three essential ways to deal with the arrangement of shading (POPAI, 1988). :

Monochromatic – A monochromatic color plan comprises of various qualities (tints and shades) of one single color. These shading plans are anything but difficult to get right and can be exceptionally successful, soothing, and authoritative. However, they are less vibrant and are missing some diversity.

Harmonic – harmonic colors are the combinations of two or more colors that the human eye finds pleasant and soothing. However, these colors have to be in a specific relationship. Harmonic colors are defined by their positions around the color wheel and the degrees of area around the HSV (hue, saturation, and value) and their angle or angles of separation.

Contrasting – contrasting can be used in highlighting the difference between two colors. Color theorist define the many differences in which color contrast can be used; contrast in color, hue, value and saturation. They venture a striking, dynamic, and sensational scheme

2.3. Impact of colors on consumer purchasing

The design of interior elements such as lay out, sound, lighting and color can influence on customer's emotion and behavior (Kotler, 1974). Color and light have been appraised as key interior design elements that affect space perception and emotion. For example, the use of color and light was suggested that it can enhance brand awareness, recognition and quality perception (Belizzi, 1983). Color can make a powerful impact on the buyer's decision to enter the store, as well as it can make some products appear more or less appealing. Also, there is more and more evidence that buyer's identify certain products with certain colors and can manage their way in the store more easily (Tantanatewin and Inkarojrit, 2016). Research that deals with the effect of color in retail stores in the world is mainly done and conducted in more developed countries, where market and retail research is considered necessary not only for scientists in the field of economy and social studies, but for many entrepreneurs who want to do a thorough market research. For the purpose of this paper a detailed literature research was done using primary literature sources and available internet databases, such as Google Scholar and Web of Science. Using key words such as: "retail", "color", "influence" and "customer" in the search engine of Google Scholar gave a more than

110 000 results. But we must take into consideration that these search results are not all in the field of social and business studies, that most of these studies deal with psychology and marketing issues and other problematics. A similar research done in Web of Science retrieved 31 scientific articles that could be used for these purposes.

Most scientific articles suggest that elements of the selling atmosphere create the interaction between the store area and people in that area. Pleasant store experiences, such as the adequate use of color, prompted by retail store environment entice the consumers to spend more time in the store and spend more money than they originally planned (Donovan, 1994). Generally, most authors agree that customer purchasing and decision are under the influence of color. This influence is present either through pleasant feelings during the shopping experience or a physical attraction to the store. Customers often tend to create opinions and assessments about the product itself based on color (Crowley, 1993). There are major differences when it comes to color preferences among different genders. People of both genders generally prefer the blue color spectrum (Ellis, 2001). Besides color, there are other elements that affect purchasing decisions of customers, such as the store environment and the way that products are arranged in the retail store. Customers usually prefer a logical order in retail stores, where color is used to associate products with their purpose (Mohan, Sivakumaran and Sharma, 2013). But it is necessary to understand that, due to various meanings we attach to colors all around the world, not all colors used in retail store space affect the customers shopping intention in the same way in different parts of the world. In the Western part of the world and the countries that mostly relate to the Western cultural cycle (Americas, Europe, Australasia) there are some research done on the effect of color in retail. Yüksel and Dawes (2009) showed that there is an impact of color on the shopping experience based on the color of a retail exterior. Participants exposed to a crowd in the blue-colored exterior condition reported more favorable shopping intentions versus an orange-colored exterior. Other studies show that participants exposed to the high-luxury retail atmosphere condition (of high-luxury colors) report a higher level of perceived store luxury than do the participants exposed to the low-luxury retail atmosphere condition (of low-luxury colors) (Cho and Lee, 2016). For fashion-oriented stores, blue interiors are associated with more favorable evaluations, marginally greater excitement, higher store patronage intentions, and higher purchase intentions than are orange interiors. However, the results change substantially when the effect of lighting in combination with color is considered. The use of soft lights with

an orange interior generally nullifies the ill effects of orange and produces the highest level of perceived price fairness while controlling for price (Babin and Hardesty, 2003).

The part of the world that we usually don't consider as part of the Western society (Asia, Africa) there is less research conducted on the topic of color influence in retail stores. Although, there are some studies from Japan and Thailand that, similar to other studies, suggest that color has a great impact on consumer behavior. Tantanatewin and Inkarojrit (2016) showed that different color and lighting conditions significantly affect both the impression of space and perception of retail identity. Their study indicates that bank sub-branch space with chromatic conditions, especially space with warm color tone and colored-light, received a higher positive score of impression and identity. To fully understand the effect of color and lighting on space perception and retail identity, this study suggests that other color properties should be examined (Tantanatewin and Inkarojrit, 2016). Warm colors, red and yellow, will attract people to a store, while cool colors (blue and green) encourage more contemplation and less avoidance of the environment. Interestingly, the two types of colors were not related to price or quality perceptions of the store (Langrehr, 1991).

Also, warm colors are preferred more than cool colors in general. In addition to that, in some studies color affected the price of judgments of individuals. When participants choose colors, they mostly referred to their personal opinions and selected both structural and nonstructural areas for applying their preferred color. But, color is not found to be an effective factor on the time spent in retail stores. Contrary to the expectations, there were not any significant relationships between gender and color preferences, gender and price, gender and time spent (Söker, 2009).

Color preferences of individuals are regarded as linked with subjectivity, so that subjective criteria of individuals such as cultural and individual differences lead to their judgments on color preferences. In addition to culture, demographic variables of individuals such as age and gender could have an impact on their responses to color. According to these findings, color preferences are examined in relation to the effects of cultural and demographic variables (Ekici, Yener and Camgöz, 2006).

Just like the effect of culture, gender is also a controversial issue. Relation between gender and color preferences is displayed by some experiments; on the other hand, the results of other researches do not verify this relation. Although there are several studies about gender, the nature of relationship between gender and color preferences is not clearly

stated. Different experiments indicate different relations between gender and color preference (Söker, 2009).

Lange and Rentfrow (2007) claim that gender differences in color preferences exist since females prefer yellow color more than males. Also, there is a significant difference in color preferences of male and female subjects; males prefer blue and females prefer green. Females look like better prepared to handle color selection and preference than males during the decision making process.

There is also research conducted on the influence of color and lightning on the impact of customers and their purchasing decision. These often investigate the influence of the color of light on readability by figure to background value contrast, color perception, and overall room-light estimation. There can often be differences in the perception of color between young and older participants. Usually higher color-rendering light sources provide better readability (Park and Farr, 2009).

3. DESCRIPTION OF GRUDE RETAIL MARKET

3.1. Overview of municipality of Grude

Bosnia and Herzegovina (B&H) is a country in South and Southeast Europe located within the Balkan region (Figure 4). Bosnia and Herzegovina consists of two entities, the Federation of Bosnia and Herzegovina and the Republika Srpska. There is also a third part called the Brčko District, which operates as a separate administration. The Federation of Bosnia and Herzegovina is further divided into ten cantons, each with its own government and responsibilities. Both entities and the Brčko district are comprised of municipalities. As a result, Bosnia and Herzegovina has a multi-tiered legal and regulatory framework that is often duplicative and contradictory. It is assumed that all of this makes place for corruption to happen (Belloni and Strazzari, 2014).

Figure 4. Location of Bosnia of Herzegovina



Source: Britannica, retrieved August 23rd, 2020

Table 1. Basic economic facts about B&H

Population	3,492,018
GDP	19,490,235,765.00 EUR
GDP rank	111 th
GDP per capita	5,086.95 EUR
Unemployment	15.7%
Average gross salary	752.38 EUR
Average net salary	486,99 EUR
Exports	5,858,299,000.00 EUR
Imports	8,643,786,000.00 EUR

*GDP – gross domestic product

Source: International Monetary Fund (<https://www.imf.org/en/Countries/BIH>), retrieved August 23rd, 2020

Bosnia and Herzegovina uses the Bosnian-Herzegovian convertible mark (BAM) as its official currency. The BAM is pegged to the euro (EUR), where 1 EUR = 1.95 BAM (up to date: August 23rd, 2020) (The Central Bank of Bosnia and Herzegovina, 2020). As a result of this, the BAM is one of the most stable currencies in Southeast Europe. Bosnia and Herzegovina is considered to be one of the economically most undeveloped countries in Europe (Table 1).

The municipality of Grude is located in the Southwest part of Bosnia and Herzegovina, in the Herzegovina region, on the border with Croatia. It is an administrative part of the Federation of Bosnia and Herzegovina and geopolitically and administratively located in the West Herzegovina Canton. The municipality spreads along 218 km² of mostly karst terrain. About 17,308 inhabitants live in Grude, with predominately Croats (99.47%), according to the data from the 2013 census (Agency for Statistics of Bosnia and Herzegovina, 2013).

The municipality of Grude (Figure 5) is a historically important part of Bosnia and Herzegovina, as it was inhabited since the Neolithic age and remembered in recent history as the capital and birthplace of the Croatian Republic of Herzeg-Bosnia. Although the municipality of Grude was one of the most undeveloped areas in Bosnia and Herzegovina before the war, today it is one of the most developed municipalities in Bosnia and Herzegovina (Federal Institute for Development Programming, 2018).

Figure 5. Official flag and coat of arms of the municipality of Grude



Source: The municipality of Grude (<https://grude.info/graficki-elementi-opcine-grude/>), retrieved September 7th, 2020

The municipality of Grude is one of the rarest parts of Bosnia and Herzegovina where the employment rate is higher than the one before the war, as this is not the case with many other parts of Bosnia and Herzegovina. Moreover, although the population of Bosnia and Herzegovina is declining since 1991, that is not the case for Grude. This municipality has an increase in the number of inhabitants since 1991 (Federal Bureau for Statistics, 2018). Also, that is the case for only a few municipalities/cities in Bosnia and Herzegovina. Others are also part of the West Herzegovina canton (Ljubuški, Posušje and Široki Brijeg) and Tešanj and Kalesija in the Bosnia region. Moreover, the municipality of Grude represents the area in Bosnia and Herzegovina with the highest increase of employment in the period from 1988 to 2018, with the highest percentage of 90.21% (Federal Bureau for Statistics, 2018) (Table 2).

Table 2. Basic economic facts about the municipality of Grude

Population	17,308
GDP	3,576,333.21 EUR
GDP per capita	3,981.82 EUR
Unemployment	14.2%
Average gross salary	730 EUR
Average net salary	476 EUR

*GDP – gross domestic product

Source: Federal Bureau for Statistics (<http://fzs.ba/wp-content/uploads/2018/07/Kanton-8-Zapadnohercegova%C4%8Dki-kanton.pdf>), retrieved August 25th, 2020

3.2. Description of the retailing structure in Grude

The business sector is the main part of the economic development of the municipality. The economy is based on micro- and small businesses, some middle and large businesses, which are companies that are regional leaders in the processing industry. The total number of business subjects registered in the municipality is 542. All of this lists the municipality of Grude as one of the top 10 most developed places in Bosnia and Herzegovina, taking the 9th place (Hadžić and Bunjak, 2018). The export of goods from Grude is continuously increasing (83% in the period from 2012 to 2016). The private sector employs more than 80% of all employed citizens of Grude (Federal Bureau for Statistics, 2018). The municipality is the birthplace of some major companies and regional leaders in different sectors. For instance, the biggest B&H brand, *Violeta*, is from the *Violeta Ltd* factory in Grude, which employs more than 600 people, with several factories in Bosnia and Herzegovina, Croatia and Slovenia. Other large companies from Grude, such as *Grafotisak Ltd*, are also directed towards production and export towards European and world markets.

Table 3. Economically significant companies in Grude

Name	Sector	Number of employees
Violeta Ltd	Cellulose and paper	616
Grafotisak Ltd	Graphical	363
TP Drinovci Ltd	Service and trade	62
Bili Brig Ltd	Service and trade	104
Franck Ltd	Processing	44
Autoherc Ltd	Transport	72
Putovi Ltd	Civil engineering	94
Lumen Ltd	Trade	55

Source: Municipality of Grude (http://www.eui-zzh.ba/images/PDF/brosure/grude_brosuraHRV.pdf), retrieved August 25th, 2020

As stated in Table 3, the municipality of Grude has several stores that operate in the field of service and trade. Using the online tool from the Ministry of Justice of Bosnia and Herzegovina (available at: <https://www.pravosudje.ba/>) and applying certain search criteria (retail subjects registered in Grude that deal with retail of various unspecified products in mostly food, drinks and tobacco products) yield a result of 29 legal subjects in this category (Table 4).

Table 4. Retail stores in Grude that deal with various unspecified products in mostly food, drinks and tobacco products

1.	SABMES d.o.o. Grude
2.	VIRTUAL d.o.o. Grude
3.	DUHAN HERCEGOVINA d.o.o. GRUDE
4.	KALFARM d.o.o. Grude
5.	ATLAS d.o.o. GRUDE
6.	EUTERPA d.o.o. Drinovci - Grude
7.	IVIJA d.o.o. GRUDE
8.	PRIČVRSNI ELEMENTI D.C. d.o.o. GRUDE
9.	TREND-MAR d.o.o. za trgovinu i usluge GRUDE
10.	INSTALL d.o.o. za usluge i trgovinu GRUDE
11.	MARANELLO AUTO d.o.o. Gude
12.	MIMAKRI d.o.o. GRUDE
13.	HEPLAST d.o.o. za proizvodnju i trgovinu GRUDE
14.	GAGA ŠPED d.o.o. Grude
15.	ŽIGA d.o.o. za preradu drveta GRUDE
16.	DINGO d.o.o. GRUDE
17.	INTER MEDIC d.o.o. Grude
18.	MATIV d.o.o. GRUDE
19.	ŽULJ TRADE d.o.o. za trgovinu Grude
20.	PIKA - COMERCE d.o.o. Grude
21.	SPEKTAR 4 AM d.o.o. GRUDE
22.	SIVEKO d.o.o. GRUDE
23.	FARMA JAZINE d.o.o. Grude
24.	ANTUKIĆ d.o.o. GRUDE
25.	PAULA d.o.o. Grude
26.	ZARKAN-PROMET d.o.o. GRUDE
27.	MLADEN PROM d.o.o. GRUDE
28.	FLAMENCO-COMMERCE d.o.o. GRUDE

Source: The Ministry of Justice of Bosnia and Herzegovina (<https://www.pravosudje.ba/>), retrieved September 2nd, 2020

However we have to take into consideration that the largest retail stores in Grude are not on this list, as they are not registered as centered in Grude. They are either registered as branches of retail stores or registered in other cities (Prodex Ltd, Bili Brig Ltd,

Konzum Ltd and so on). So the real number is closer to 40 legal subjects that deal in retail in the municipality of Grude.

3.3. Consumers' consumption habits in Grude retail market

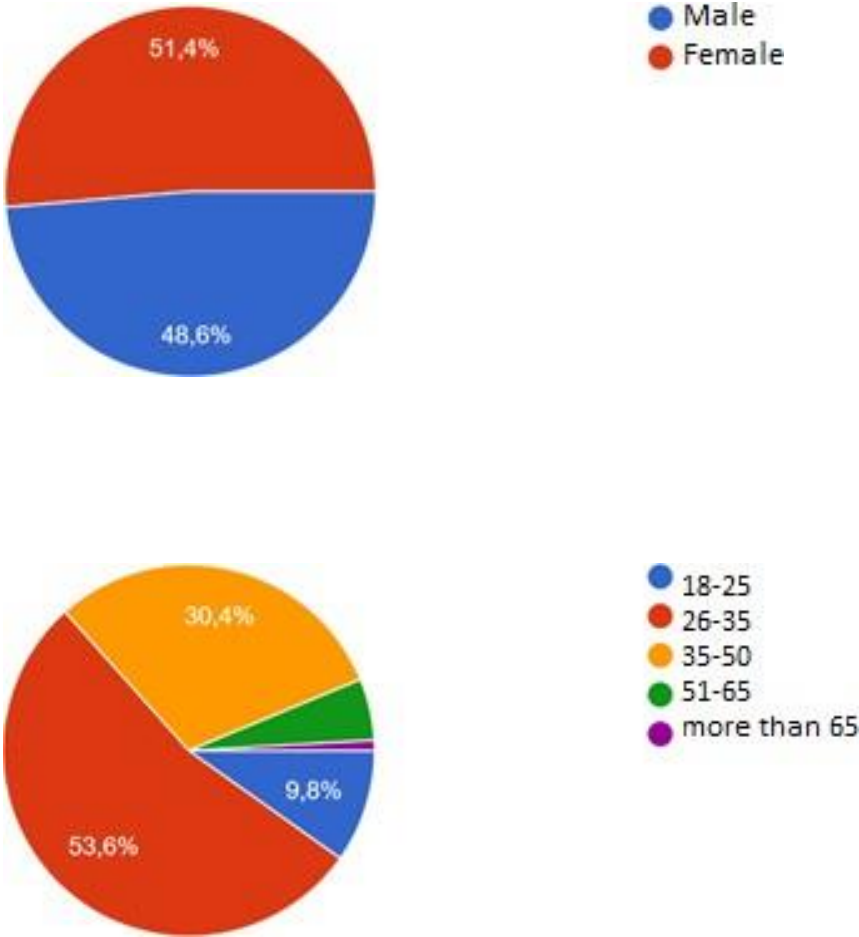
In European countries and in Bosnia and Herzegovina, there is an increase in the concept of “one-stop shopping”, while the market share of small retailers is decreasing and thus the role of a large modern non-specialized supermarket, a hypermarket and a discount store is emerging. (Bryman and Bell, 2003). The main trend that enabled the growth of large store sales areas is the concept of “one stop shopping”, reducing buying frequency and increasing average purchase size. Furthermore, when purchases are small in terms of spending, consumers in Bosnia and Herzegovina prefer stores which are closer to their place of residence and are reluctant to travel to distant shops (Mešić et al, 2012). It is well known that consumer decisions are affected by a large number of criteria. The literature review indicates significant deviations among researchers in the number of relevant selection criteria for the store. Store choice is largely considered to be a cognitive process and has been studied in a variety of contexts like: location influence (Brčić-Stipčević and Renko, 2007); pre-purchase information of brand (Goworek and McGoldrick, 2015). Although the municipality of Grude represents one of the most developed parts of Bosnia and Herzegovina, there is little, or no research done on the habits and shopping experiences of customers in retail. So, this presents a possibility for a further scientific insight into the retail process of this part of Bosnia and Herzegovina.

4. EMPIRICAL RESEARCH ON THE IMPACT OF COLOURS ON CONSUMERS PURCHASING IN RETAIL STORS IN GRUDE

4.1. Research sample

The research was conducted on 112 participants, who completed the survey voluntarily. The participants were residents of the municipality of Grude, at least 18 years of age, with established shopping habits. The participants were asked to fill out the survey online, after finishing their shopping experience in a local retail store (Figure 6). In total, 57 participants were females (51.4%) and 56 of them were males (48.6%). Most participants were in the age group of 25 to 35 (60 or 53.6%), followed by participants in the age group 35 to 50 (34 or 30.4%), participants in the age group of 18 to 25 (11 or 9.8%), participants in the age group of 51 to 65 (6 or 5.4%) and only 1 participant (0.9%) older than 65 (Graph 1).

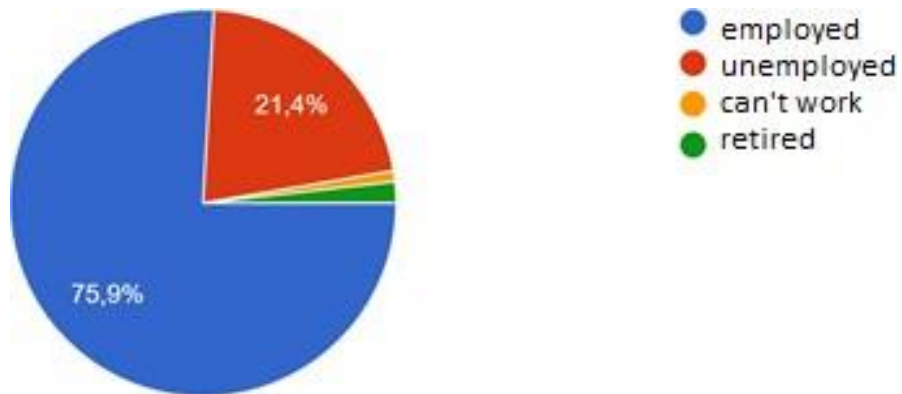
Graph 1. Sex and age distribution among participants



Source: Own research

Most of the participants were employed (85 or 75.9%), followed by unemployed participants (24 or 21.4%), participants that are retired (2 or 1.8%) and 1 participant that was unable to work (0.9%) (Graph 2).

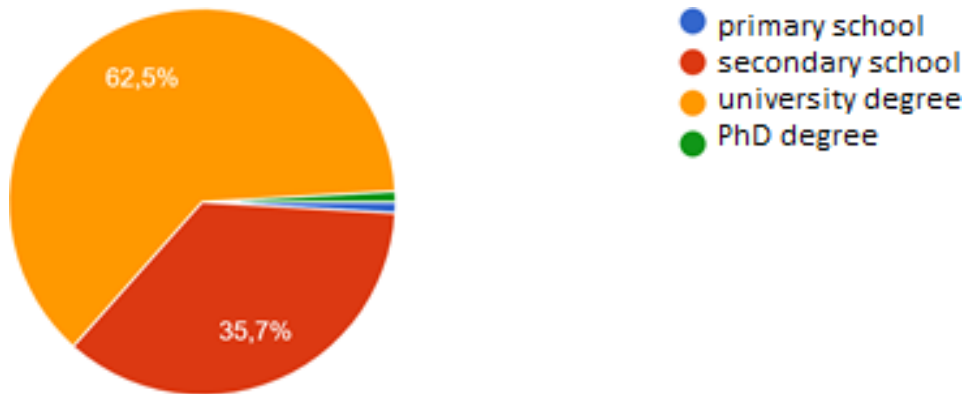
Graph 2. Employment status of participants



Source: Own research

When it comes to the highest degrees of participants, they were mostly participants with a university degree (70 or 62.5%) and participants with a secondary school degree (40 or 35.7%). There were few participants with a primary school as the highest achieved degree and with a doctoral degree (1 of both or 0.9%) (Graph 3).

Graph 3. Highest level of degree among participants



Source: Own research

When it comes to their shopping habits, participants were mostly truthful to one retail store, with some changes in their shopping locations (60 participants or 53.6%). Participants that usually change the locations of their retail shopping were second (20 or 17.9%), followed by participants that usually shop at the same retail store (17 or 15.2%). Participants that don't have any preferences regarding retail store locations made up 13.4% of the survey (15 of them).

4.2. Research instrument

The research was conducted via an online survey in the period from August 1st, 2020 to August 15th, 2020. The participants then proceed to fill out the online survey up to August 15th, 2020. The survey was conducted in the Croatian language, as it is the official language used in the municipality of Grude and one of the official languages in Bosnia and Herzegovina. The survey consisted out of 8 questions, all of which were closed-ended. Questions from 1 to 6 were multiple-choice questions with only one possible answer. Question 7 was a multiple-choice question, were participants could choose 3 answers. In question 8 participants were provided with a picture and a statement. They could choose an answer on a scale from 1 to 5, were 1 represents *I completely agree with the statement*, 2 represents *I agree with the statement*, 3 represents *I neither agree or disagree with the*

statement, 4 represents *I disagree with the statement* and 5 represents *I completely disagree with the statement*. The results were shown as absolute numbers and mean values. Results were rounded up to two decimals. An example of the conducted survey can be found in the appendix of this master thesis.

Figure 6. Retail store in Grude (provided in the survey)



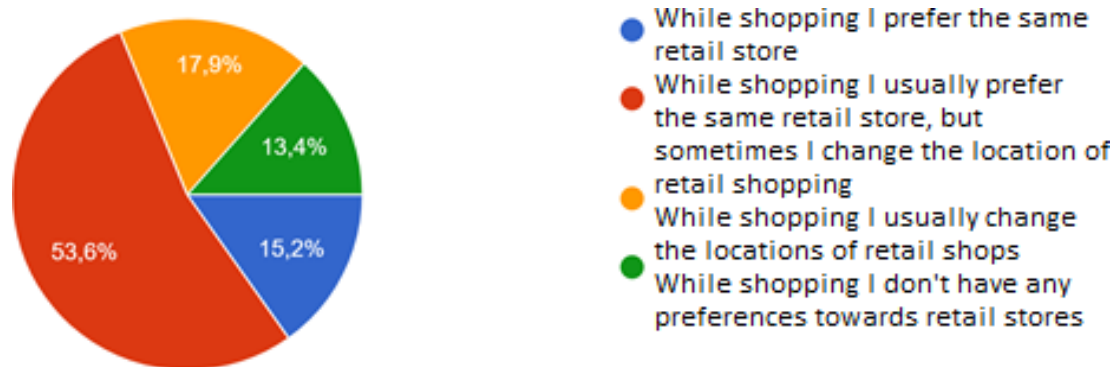
Source: Own photography

4.3. Results and discussion

When it comes to their shopping habits, participants were mostly truthful to one retail store (Graph 4), with some changes in their shopping locations (60 participants or 53.6%). Participants that usually change the locations of their retail shopping were second (20 or 17.9%), followed by participants that usually shop at the same retail store (17 or

15.2%). Participants that don't have any preferences regarding retail store locations made up 13.4% of the survey (15 of them). This result was expected, as it could be attributed to the developed culture of shopping established in local communities that is visible in most parts of the world (Khalifa, 2007).

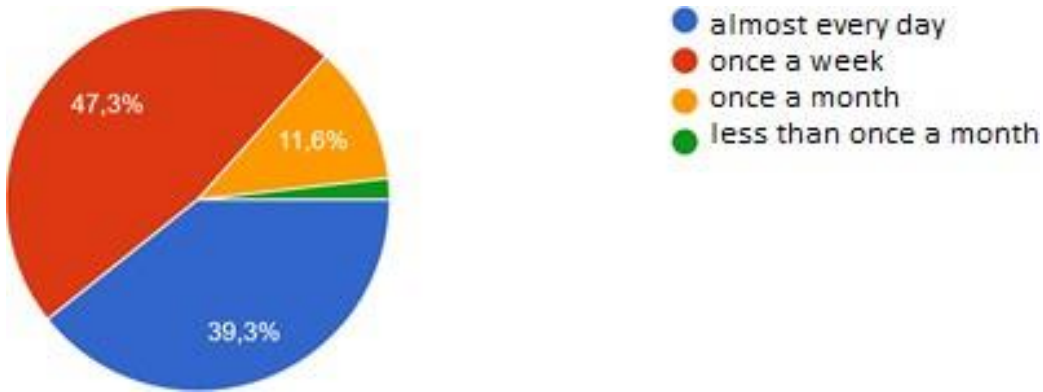
Graph 4. Retail location preferences of participants



Source: Own research

Based on this survey, the daily shopping habits of participants were mostly once a week and almost every day (53 participants or 47.3% and 44 or 39.3%, respectively). There was a much smaller number of participants that shopped in retail once a month (13 or 11.6%) and less than once a month (2 or 1.8%) (Graph 5). These results are in accordance to multiple research conducted on daily shopping habits that estimate that people spend around 399 hours per year in shopping (Katallia, 2011). As the municipality of Grude is a smaller community it is expected that the daily shopping habits would be less frequent (from once a day to once a week).

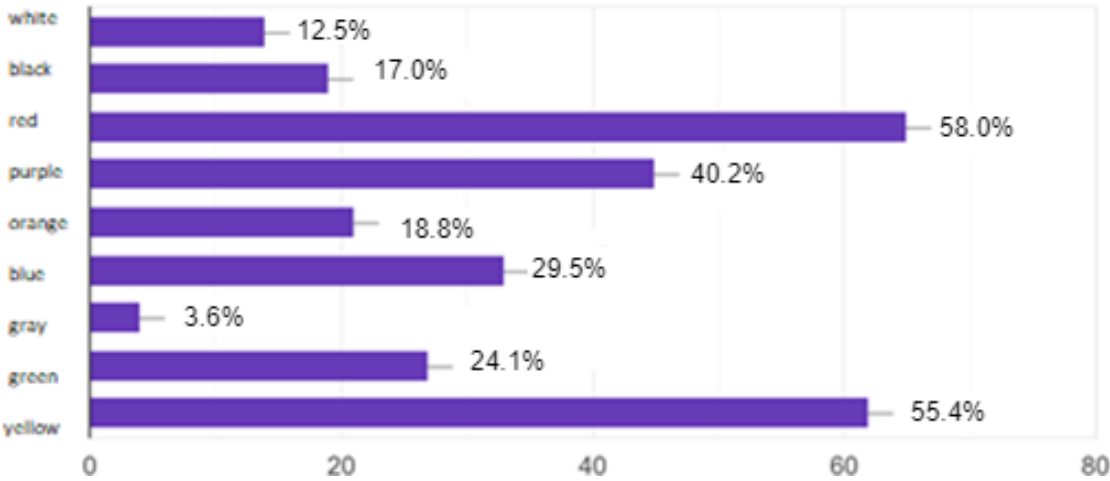
Graph 5. Shopping habits of participants



Source: Own research

The two most highlighted colors that participants expressed as the ones they notice the most in retail stores were red (65 or 58.0%) and yellow (62 or 55.4%) (Graph 6). These were significantly higher than other choices, such as purple (45 or 40.2%) and blue (33 or 29.5%). These are followed by green (27 or 24.1%), orange (21 or 18.8%) and black (19 or 17.0%). The least noticeable colors according to this survey were white (14 or 12.5%) and gray (4 or 3.6%). This was in accordance to the research stated above, where warm colors were found to have a greater impact than other choices (Brenngman, 2002; Tantanatewin and Inkarojrit, 2016).

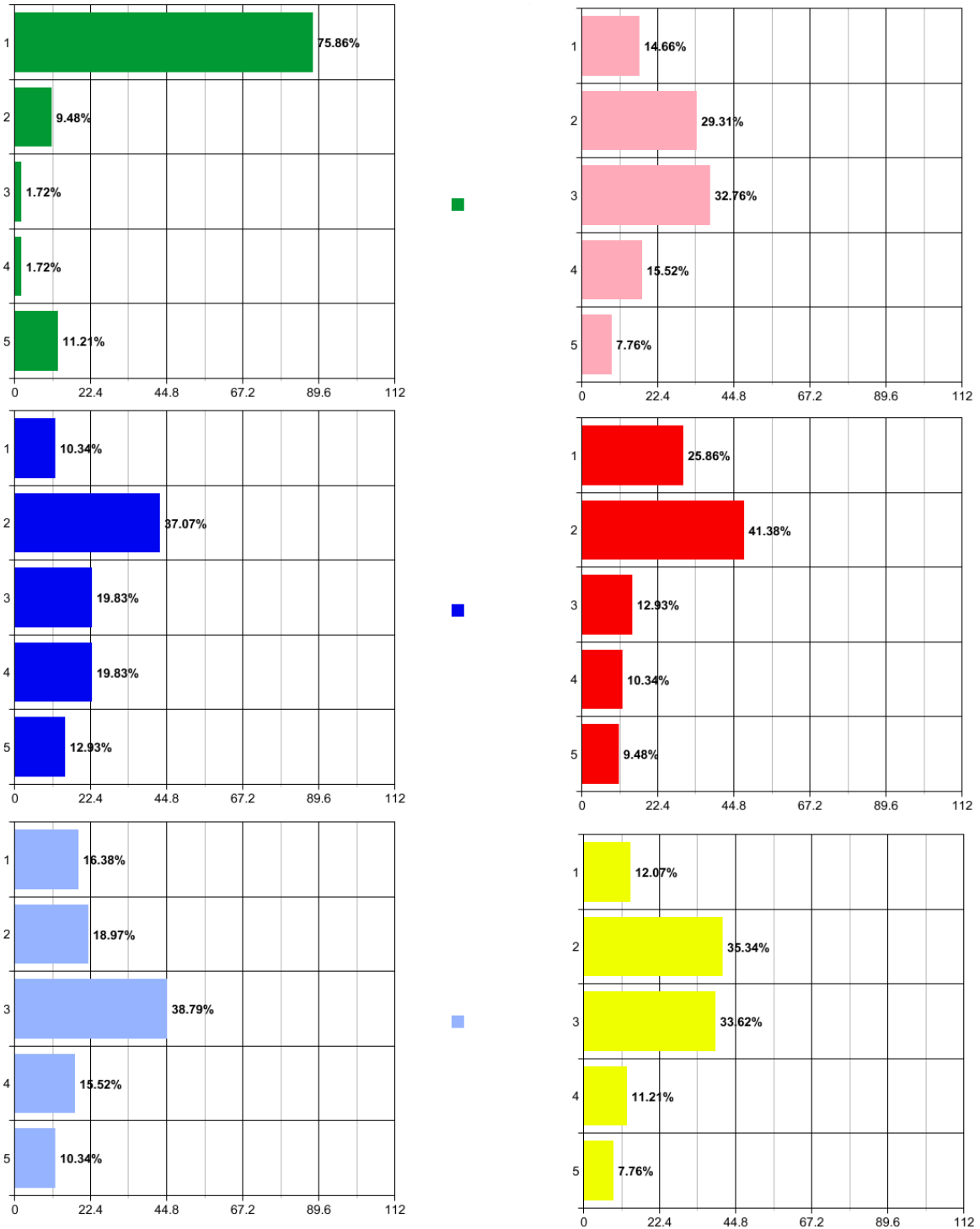
Graph 6. The most noticeable colors in retail according to participants



Source: Own research

Participants mostly agreed that when buying products in the store, it is important to them that they are arranged in a noticeable and neat way (84 participants or 75.0% claim that they completely agree with the statement). The mean value for this answer was 1.65. Most participants state that they agree that when buying products in the store, they pay attention to the way the colors of the products in the store, shelves, entrances and other parts of the store are arranged (42 participants or 37.5%), with a mean value of 2.85 (Graph 7). When it comes to the store entrance, participants neither agreed or disagreed that when entering the store, they pay attention to the colors of the products and the way they are arranged at the entrance to the store (44 participants or 39.29%), with a mean value of 2.83 for this answer. It is important to notice that participants feel the strongest about the arrangement of the products in the store. Shopping aisles are usually located on substantially all sides of the central portion to provide access to the central portion from substantially all points in the store. This is one of the strategies for increasing of sales and an opportunity to use colors efficiently (Kinshuk Jerath and Zhang, 2010).

Graph 7. Participant's statements on the influence of color and other details in retail stores, questions 1 to 6



*Legend: green – question 1, blue – question 2, light blue – question 3, pink – question 4, red – question 5, yellow – question 6

Source: Own research

That was also the most used statement for the next question regarding the association of food in the store with the colors red, yellow and orange. Most participants (37 or 33.04%) stated that they neither agree nor disagree with the statement. The mean value was 2.70 for this question. This is not in accordance with a lot of research conducted on the topic of food and colour association. This could be attributed to the different meaning that color represents in different cultures, so they give different answers on stated questions (Table 5) (Wyszecki, 1982). But, on the other hand, the participants stated that they agree that they associate healthy products in the store with green color when asked that question (45 participants or 40.18%). The mean value was 2.36.

Table 5. The questions on retail colors and details with answers and mean values

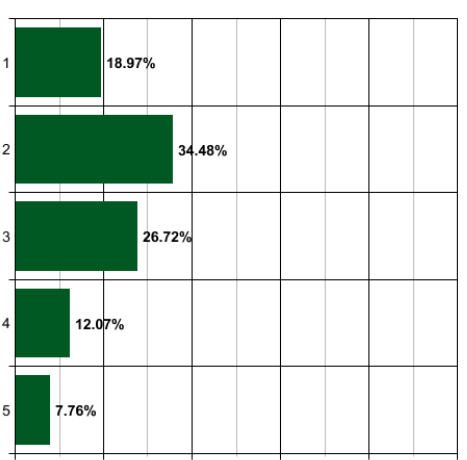
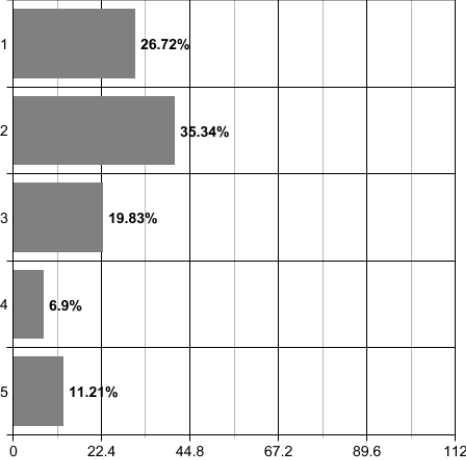
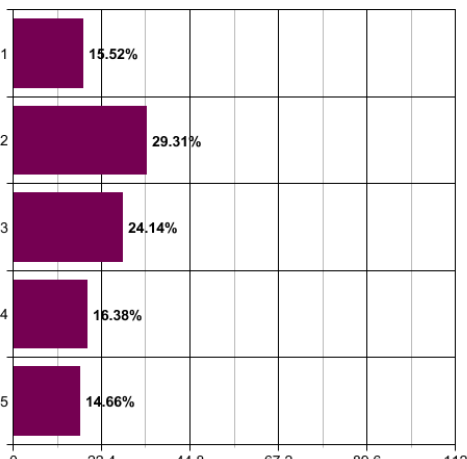
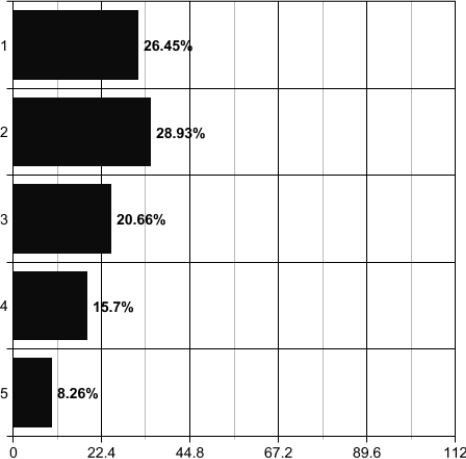
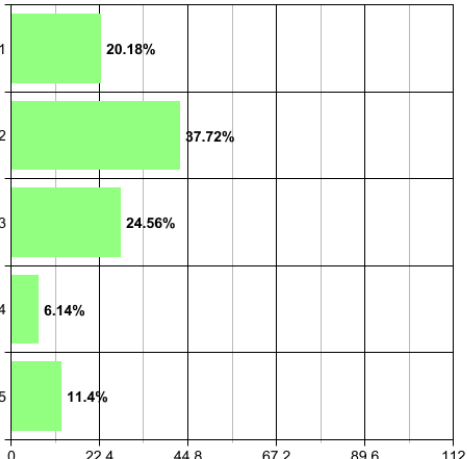
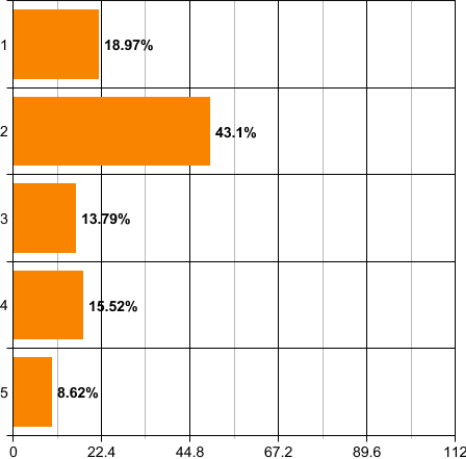
Question	1	2	3	4	5	MV
It is important to me that products are arranged in a noticeable and neat way	84	11	2	2	13	1.65
I pay attention to the way the colors of the products, shelves, entrances of the store are arranged.	12	42	23	21	14	2.85
I pay attention to the colors of the products at the entrance to the store.	19	21	44	16	12	2.83
I usually associate food in the store with red, yellow, or orange	16	34	37	17	8	2.70
I associate healthy products in the store with green	30	45	15	11	11	2.36
I associate household products with blue or white in the store	14	39	39	11	9	2.66
I associate black and gray with technological products in the store	22	48	16	16	10	2.50
I associate white with dairy products in the store	30	34	24	14	10	2.46
I associate red with products on sale at the store	31	40	20	8	13	2.39
I associate the golden color with products that are more expensive than others in the store	23	41	27	6	15	2.54
Colors and the way the colors of the products in the store are assembled affect my shopping habits	18	33	28	18	15	2.81
According to the color of the product or group of products, I guess what type of product it is	21	38	30	14	9	2.57

*MV – mean value

Source: Own research

When it comes to associating household products with blue or white colors in the store participants were in doubt between agreement and neither agreement nor disagreement (39 participants or 34.82%). The mean value was 2.66. Although Singh (2006) found a strong association of household products with blue and white, this is not the case for the municipality of Grude. All of the differences could be associated with different cultural backgrounds and societies (especially in the light of the long socialist regime of the former Yugoslavia).

Graph 8. Participant’s statements on the influence of color and other details in retail stores, questions 7 to 12



*Legend: orange – question 7, black – question 8, gray – question 9, light green – question 10, purple – question 11 and dark green – question 12

Source: Own research

Most participants agree that they associate black and gray with technological products in the store (Graph 8) (48 participants or 42.86%). The mean value was 2.50. Participants (34 or 30.36%) usually associate white color with dairy products in the store, with a mean value of 2.46. Participants (40 or 35.71%) usually associate red color with products on sale at the store, with a mean value of 2.39. Participants (41 or 36.61%) usually associate the golden color with products that are more expensive than others in the store. Participants (33 or 29.46%) state that they agree that colors and the way the colors of the products in the store are assembled affect their shopping habits when buying everyday goods. The mean value 2.81. According to the color of the product or group of products, the participants guess what type of product it is (38 participants state that they agree or 33.93%, with a mean value of 2.57. These findings are in accordance with most of the research conducted on the color theory and the use of color in retail stores, where it was found that color and the way in which color is arranged has a great impact on the customers purchasing decision (Bryman and Bell, 2003; Bellizi, 1983).

4.4. Limitations of the study

This research has some limitations. First of all, the number of participants is not large enough to make a general conclusion regarding the shopping habits of the citizens of the municipality of Grude. Moreover, the online survey where participants choose answers based on their beliefs, may be subjective and biased. The data in this thesis is based only on the perception of participants. There is no way of knowing if these answers would be the same in improvised environments where participants are a part of the shopping process and where researchers could see the unbiased impact that color of products makes on the choices of retail shoppers. More studies on these subjects are needed in general, so we could better understand what effects consumer choices in retail stores in developing countries.

5. COMPARISON BETWEEN THE PERCEPTION OF COLORS OF CROATIAN AND BOSNIAN & HERZEGOVINIAN CONSUMERS

5.1. Literature review on the color influence on Croatian consumers

Although there is research conducted on the consumer's behavior in retail stores in Croatia, there is very little research that deals with color in retail (it is mostly research conducted on the influence of color in marketing). However, there is some emerging research that seems to be popular in the last decade, so we could say that this topic is becoming more and more interesting in this part of the world.

For instance Mihić and Kursan (2010) stated in their research that women tend to prefer yellow and using this color will not provoke different consumers' impulsive buying reactions between males and females. Men tend to prefer darker colors in their shopping experience. This research is accordance to other done on similar topics (Tkalec Verčić and Kuharić Smrekar, 2007) that suggests that among three groups of colors, primary, secondary and tertiary, yellow was always the most noticeable, while blue, purple and blue-purple were the least noticeable. Also, the authors report little research on this topic. Every consumer has a different perception of color. Since colors don't have the same impact on the consumer, it's on the marketing side challenge experts to match the product and the color of the product to make the product fit to each consumer and to achieve the desired deception. Consumers align everything they want, starting with price and quality, through their product needs, up to the color and packaging of the product. And it is precisely the color that will to achieve recognizability and emotional connection with the brand and product (Kapusta, 2019).

Muhek (2019) stated that consumers react differently to certain colors and they evoke different human emotions, moods and behaviors. Colors are all around us, part of our everyday life. Color directly affects our mind, certain color can attract us or repel us. It not only affects the eyesight, but gives a feeling of warmth and cold. Warm and colorful colors can be annoying, but they have the great advantage of attracting attention (red, yellow and oranges are often used to

highlight special offers or discounts). Cold colors do not attract attention, but their advantage is that they have a calming effect and thus extend the time of purchase.

Varga and Vujčić (2014) explored the impact of color on the repurchase intentions in a retail store. Looking at the research results through retail stores in which different colors prevail, it is suggested to use warm colors in grocery retail store interior. All of the explored dimensions are graded with a higher grade in retail stores where warm colors are dominant. Products that are purchased there are bought routinely, so warm colors like red, orange and yellow are advised. Red color can be positive for products that are not expensive and durable according to these authors.

5.2. Existing researches on colors impact on Bosnian & Herzegovinian consumers

In Bosnia and Herzegovina there is very little research conducted on the influence of color on the behavior of consumers. Jelčić (2015) states that width of assortment, offer of different brands of products, existence of sufficient stock products sought by customers, offering brands of products of different price ranges and different qualities as indicators of the latent variable merchandising positive, as well the impact of colors, affect the perception of the quality of service in retail. Furthermore, employee behavior, courtesy, knowledge and expertise, willingness to respond and respond to customers as indicators of the latent variable interactions with employees positively affect quality of service in retail.

Soče Kraljević, Vidačak and Mabić in their 2016 study which explores the impact of public relations on the buying decisions, state that color is what makes a space attractive in throughout the story they play a very strong role, in to some extent affect our decisions, impressions, mood, atmosphere - although we are not aware. Color means different things different cultures, and retail (or websites) they must have a full understanding of colors and their meanings. In the US, red is the color of energy and is often used to stimulate appetite, where like blue is a soothing color. Any color can create a positive but also a side effect - for example, black on an individual can signify elegance and sophistication, but also unavailability or reservedness. Red means the warmth and openness of the person wearing it makes it more attractive and desirable because it is, also, and the color of passion and lust, but it can also symbolize aggression, aggression and desire for with care.

5.3. Implications for retailers

As mentioned in previous chapters and as our study confirms, retailers should use color effectively in their retail store in order to increase the interest of consumers and to increase the profits of their retail stores. It is advised that retailers use mostly warm colors when arranging food and products related to food, green colors in relation to healthy products, black and gray with technological products in the store, white color with dairy products in the store, red color with products on sale at the store. Colors and the way the colors of the products in the store are assembled affect their shopping habits when buying everyday goods. The influence of color is present either through pleasant feelings during the shopping experience or a physical attraction to the store. Customers often tend to create opinions and assessments about the product itself based on color.

6. CONCLUSIONS

Retail is a process that evolved since ancient times and a process that we are still learning and exploring today. The main goal in retail is to increase profit using various strategies to influence buyers. One of the ways to influence consumers is the adequate use of color in retail stores. Color has a possibility to influence consumers as they tend to attach meaning to color and associate it with various products. However, color can have different meaning for people all around the world. The use of color in retail stores is also presented in Grude, a municipality located in Bosnia and Herzegovina. Although it is one of the most economically developed parts of Bosnia and Herzegovina, there is no or little research on the color influence in this part of the country.

Citizens of the municipality of Grude when buying in retail usually prefer the same retail store, with occasional changes of the retail store, with a retail experience of mostly once a week. The colors that they mostly notice in a retail store are red, yellow, purple, blue and green. The participants of this survey state that they completely agree that it is important for them that the products are arranged in a noticeable and neat way. The participants agreed that they pay attention to the way the colors of the products in the store, shelves, entrances and other parts of the store are arranged, associate healthy products in the store with green color, associate black and gray with technological products in the store, white color with dairy products in the store, red color with products on sale at the store, golden color with products that are more expensive than others in the store, that colors and the way the colors of the products in the store are assembled affect their shopping habits when buying everyday goods. According to the color of the product or group of products, the participants guess what type of product it is. The participants neither agreed or disagreed that when entering the store, they pay attention to the colors of the products and the way they are arranged at the entrance to the store and in associating the colors red, yellow and orange with food and associating household products with blue or white colors.

There is a strong impact of color in retail present among the citizens of Grude which impacts their daily retail shopping habits.

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APPENDIX – SURVEY QUESTIONNAIRE

Poštovani,

Molim Vas da u svrhu pisanja i objave diplomskog rada pod nazivom „The influence of color in retail stores on customer purchasing in the municipality of Grude“, izdvojite nekoliko trenutaka i odgovorite na pitanja ovog anketnog upitnika. Anketni upitnik je u potpunosti anoniman, a rezultati će se koristiti isključivo u znanstvene svrhe.

1. Vaš spol:
 - Muško
 - Žensko
2. Vaša dob:
 - 18 do 25
 - 26 do 35
 - 35 do 50
 - 51 do 65
 - Više od 65
3. Molimo odaberite Vaš status:
 - Zaposlen/a
 - Nezaposlen/a
 - Nisam radno sposoban/na
 - U mirovini
4. Vaš najviši stupanj obrazovanja:
 - Završena osnovna škola
 - Završena srednja škola
 - Završen fakultet
 - Završen doktorat znanosti
5. Molimo odaberite tvrdnju koja se najviše odnosi na Vas prilikom kupovine robe svakodnevne potrošnje:
 - Prilikom kupovine preferiram istu prodavaonicu/trgovački centar
 - Prilikom kupovine najčešće preferiram istu prodavaonicu/trgovački centar, ali ponekad izmijenim mjesto kupovanja

- Prilikom kupovine često mijenjam različite prodavaonice/trgovačke centre
 - Prilikom kupovine nemam preferencije prema određenoj trgovini/trgovačkom centru
6. Koliko često obavljate kupovinu robe svakodnevne potrošnje:
- Gotovo svaki dan
 - Jedanput tjedno
 - Jedanput mjesečno
 - Manje od jedanput mjesečno
7. Od ponuđenih boja odaberite najviše tri boje koje najprije uočite u prodavaonicama svakodnevne potrošnje:
- Bijela
 - Crna
 - Crvena
 - Ljubičasta
 - Narančasta
 - Plava
 - Siva
 - Zelena
 - Žuta
 - Ostalo (napisati)
8. Molim obratite pozornost na prethodnu fotografiju, te odgovorite na sljedeća pitanja, na način da na ljestvici označite do koje mjere se sljedeće tvrdnje o kupovini robe svakodnevne potrošnje odnose na Vas: (1 - u potpunosti se slažem, 2 - slažem se, 3 - niti se slažem niti se ne slažem, 4 - ne slažem se ili 5 - u potpunosti se ne slažem)
- Prilikom kupovine proizvoda u prodavaonici važno mi je da su posloženi na uočljiv i uredan način
 - Prilikom kupovine proizvoda u prodavaonici obraćam pozornost na način na koji su posložene boje proizvoda u prodavaonici, polica, ulaza i ostalih dijelova trgovine
 - Prilikom ulaska u prodavaonicu obraćam pozornost na boje proizvoda i način na koji su posloženi na ulasku u prodavaonicu
 - Hranu u prodavaonici obično povezujem s crvenom, žutom ili narančastom bojom
 - Zdrave proizvode u prodavaonici povezujem sa zelenom bojom

- Proizvode za kućanstvo povezujem s plavom ili bijelom bojom u prodavaonici
- Crnu i sivu boju povezujem s tehnološkim proizvodima u prodavaonici
- Bijelu boju povezujem s mliječnim proizvodima u prodavaonici
- Crvenu boju povezujem s proizvodima na sniženju u prodavaonici
- Zlatnu boju povezujem sa proizvodima koji su skuplji od ostalih u prodavaonici
- Boje i način posloženosti boja proizvoda u prodavaonici utječu na moje kupovne navike prilikom kupovanja robe svakodnevne potrošnje
- Prema boji proizvoda ili skupine proizvoda pretpostavim o kojoj se vrsti proizvoda radi

BIOGRAPHY

Luka Kolobarić was born on the 5th of April 1994 in Mostar, Bosnia and Herzegovina. From 2001 to 2009 he was enrolled in the Ruđer Bošković Primary School in Grude. From 2009 to 2013 he was enrolled in the Antun Branko Šimić Secondary School in Grude. From 2013 he is enrolled in the Zagreb University of Applied Sciences, undergraduate studies in Civil Engineering. From 2015 to 2019 he was enrolled in the University of Zagreb Faculty of Economics and Business, where he obtained a bachelor's degree in Business. From 2019 he is enrolled in the University of Zagreb Faculty of Economics and Business where he is a candidate for obtaining a master's degree in Business. He is fluent in English, with basic knowledge of German.