

# International Journal of Sales, Retailing and Marketing

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## EDITORIAL



I am very glad to welcome readers and researchers to this issue of the International Journal of Sales, Retailing and Marketing, of IJSRM. Thank you for taking an interest in publishing and reading the International Journal of Sales, Retailing and Marketing, which is devoting to the advancement and dissemination of knowl-

edge in focused research areas. We hope it will be a valuable help in your professional and academic advancement.

The current issue of the International Journal of Sales, Retailing and Marketing is once more dedicated to the best research papers from the area of sales, retailing, and marketing and more other's fields which are modern and actual in this time. In this issue, we are proud to present five original research papers and one communication in the form of an invitation letter.

The contributing authors published next interesting researches:

- BEHAVIOURAL ECONOMICS – INFLUENCE ON USER BEHAVIOUR THROUGH MARKETING STRATEGIES USING THE EXAMPLE OF CAR-GLASS;
- SPECIFICATION OF EVIDENCE OF CORRUPTIVE CRIMINAL ACTS;
- IMPACT OF INTERNET TECHNOLOGY ON TO CONSUMER BEHAVIOUR;
- CONSUMER ATTITUDES ON ELECTRONIC COMMERCE IN BOSNIA AND HERZEGOVINA;
- PRAGMATIC MODEL FOR PREVENTING AND COMBATING OF CORRUPTION AND MITIGATING OF ITS CONSEQUENCES

The profile of contributors to the journal ranges from well-known established professors to young and promising master and doctoral students whose time is yet to come.

I would like to invite all persons connected with our in-focus research fields to contribute to the IJSRM in the oncoming period.

*Editor in chief*

*Professor Lazo Roljić Ph.D.  
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## BEHAVIOURAL ECONOMICS – INFLUENCE ON USER BEHAVIOUR THROUGH MARKETING STRATEGIES USING THE EXAMPLE OF CARGLASS

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### Abstract

*This paper presents a case study dealing with different marketing strategies of the globally operating company Carglass, a service provider for vehicle windows, focusing especially on the topic of behavioural economics. The issue of marketing is substantial for business companies in general, but also in the automotive industry. Improvements are requested due to the enhancement of the acquisition of new clients and thus the increase in profitability. The findings of this case study are based on the analysis of German TV-commercials of Carglass between 2010 and 2019.*

*Due to the relentless modernization in the digital world, the topic of behavioural economics and its marketing strategies gains importance for the automotive service sector.*

*The visualization of the used marketing methods of Carglass was realized with a newly developed matrix, placing these methods as a function of the time of the published commercial. To get an even more precise image, the methods are also classified into three categories.*

*With this method and interviews with specialists in these topics, this paper gives an insight into the marketing in general, as well as into the automotive sector. The findings of this case study can be used to help automobile manufacturers, as well as car service providers, to improve their marketing.*

**Keywords:** behavioural economics, automotive, marketing, Carglass, advertising

**Category:** Case Study

### INTRODUCTION

Living in a world of constant change, the interaction between company and customer evolves, too. In a time of digitalization and connectivity, there is enormous pressure on developers of marketing strategies to ensure that the latest trends in this field suit their businesses – and also to adopt these new strategies to ensure that potential new customers choose their specific company.

The foundation of modern marketing is based upon Jerome McCarthy's development of the concept of the 4Ps in 1960. It details four sections, namely product, price, place, and promotion, into which the topic of marketing should be divided.

The "product" policy deals with the creation of the actual product, while the "price" policy covers the value and the pricing of that product. "Place" addresses the distribution through different channels. The "promotion" is the voice of the company directed towards the customer.

Contact with the customer must be established in different ways to impart the knowledge of the greater product or sales campaign.

The framework of this paper is behavioural economics. It combines the psychological with the economic aspects of the purchase to demonstrate the human influences upon markets (Mullaiathan et al. 2000, p. 2). Based on neoclassical economics (Camerer, p.5), behavioural economics and its development are essential for the automotive industry – for the Original Equipment Manufacturer (OEM) as well as for the different service providers. With increasing customer orientation in the economy, there must be an enhancement of the understanding of the psychological aspects of the client.

The company Carglass, a service provider for vehicle windows, has an outstanding reputation in the area of behavioural economics. As a result of their TV and Radio Commercials, Carglass has a brand awareness of 94% in Germany. In the event of stone chip damage to their windscreen, many people don't



even consider approaching the customer service of the manufacturer of their automobile – the first thing that occurs to them is the repair methods of Carglass.

For this reason, we conducted a case study dealing with different marketing methods used in the commercials of Carglass. The data provided refers to 11 commercials from TV and the Internet. We developed a matrix illustrating several methods to influence potential customers over three periods to understand the development of these methods over time and to detect potential future trends.

The paper is structured as follows: A compilation of related research gives an overview of the subject of behavioural economics in general and different marketing strategies in the automotive industry. This is followed by the chapter of methods used to get results and conclusions which are discussed in the following sections.

## LITERATURE REVIEW

There are very few publications dealing with marketing in the automotive industry, especially with behavioural strategies.

First, it is necessary to define behavioural economics. There is no universal definition, but it is a sub-domain of economic science which deals with human behaviour contradicting the rational optimization of value. In general “Behavioural Economics is the combination of psychology and economics that investigates what happens in markets in which some of the agents display human limitations and complications.” (Mullaiathan et al. 2000, p. 2)

This definition is used in our case study because it points out the influence of marketing in controlling human behaviour towards irrational purchase decisions, which is worked out in this paper. Marketing in the past was not always seen as a field of management. The evolution of marketing in the twentieth century consists of different phases. In the first half of the century, the subject was founded and formalized. After 1950, marketing was seen as a method of managing and sciences. The history of marketing in detail is described by Frederick E. Webster Jr. (2005, p.1).

The evolution of behaviour economics, in particular, is shown by Camerer, et al. (2004, p.1). From the roots of the ideas of neoclassical economics (2004, p.3) to its applications nowadays in macroeconomics, saving (2004, p.37), labor economics (p.38) and finances (p.41), it gives a complete overview about the topic with a forecast for the future.

Mullaiathan et al. (2000, p. 5) focus especially on the psychological aspect of behavioural economics. A discussion of the standard economic model, with the traits of unbounded rationality, willpower, and selfishness, displays the boundaries of human nature and therefore the required change of the standard economic model to behavioural strategies. Also examining the standard model, Wilkinson, et al. (2007, p.4) gives an overview of the differences between standard and behavioural economics.

These changes in marketing strategies not only need to be implemented by the financial world but also by the industry. O’Neal (1989, p.1) identifies the changes of the U.S. manufacturers and their suppliers to a concept of just-in-time supplier-customer exchange, which supports the long-term relationships between company and customer and only works with an adequate customer orientation.

With the increase of digitalization and connectivity, the improvement of marketing strategies is very important in the automotive industries, too. With their research of changes in television advertising for cars and minivans from 1983 to 1998, Ferguson, et al. (2003, p.1) display the changes in marketing strategies in earlier times. With the increase of safety systems, such as advanced driver assistance systems in the vehicle, the conclusions could be transferred to the present time.

Not only rational but especially emotional decision-making, is the subject of behavioural economics. Car cultures have a special relationship with their vehicles which Sheller (2004, p.1) illustrates. The entire car experience, such as the purchase, the driving or the service, is not based solely on rational economic choices. Through the research into people’s feelings about cars and their use in different cultures, it is possible to react with appropriate marketing strategies that reflect those feelings and thus improve customer acquisition and the positive development of sales.

The main issue is the variety of people’s personalities and their feelings towards a mechanical product such as an automobile. In the consumer-oriented marketing, and hence in the development of behavioural marketing strategies, the variety of personality in consumer behaviour plays a major role, which is shown in the work of Haugtvedt, et al. (1992, p.1). They conducted three studies, in which the need for awareness of personalities consuming advertisement is examined.

Not only have the differences between the various personalities played a role for marketing developers, but also the individual gender. The method of processing marketing and product information differs between men and women. The behaviour



in the market place is different as well. This is shown by Putrevu (2001, p.1). Based on biological and social findings, suggestions are made to reach males as well as females, with different advertising structures.

Jacoby, et al. (1974, p.1) address the decision-making process, depending upon the amount of information given to potential customers. Contrary to the expectations that more information has a positive influence on decisions, it is shown that potential customers decide more negatively if given more information – so the less confused the customer is, the more satisfied he or she will be.

Not only the amount but also the setting of the given information is one key aspect for the strategies of behavioural economics. Scheufele, et al. (2007, p.3) gives an overview of the strategies: “framing”, “agenda-setting” and “priming” – which are covered in this case study using the example of Carglass.

But there are not only advantages to behavioural economics. Many customers fear manipulation from companies due to new marketing strategies. And if customers feel that they are being manipulated by different marketing strategies, the risk of loss of the customer increases.

In conclusion, as yet, no published studies are dealing with marketing strategies of behavioural economics in the domain of automotive industries and automotive service providers. We maintain, however, that this is a very important research field.

## METHODOLOGY

Behavioural economics, as previously described, is the combination of economics and psychology, shown in figure 1.

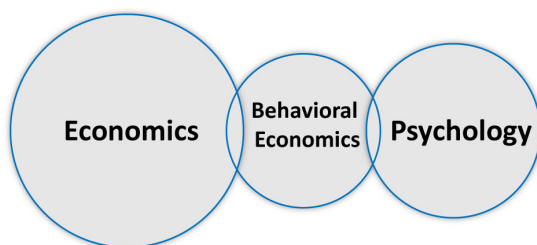


Figure 1. Economics and Psychology

Behavioural economics, which is closely related to economic psychology, deals with human behaviour in economic scenarios in which people behave inconsistently, with the assumption of always making decisions for maximized benefit.

The household theory primarily investigates the economic decisions of private households. Following these are formulated:

- Consumers prefer some goods for other goods.
- Consumers are subject to budget restrictions.
- Consumers choose different combinations of goods due to their preferences, bounded income situation and prices - to maximize their satisfaction level – and hence their benefit.

Customers of Carglass are mostly private individuals, so the household theory plays an important role in the type of decision-making we wish to address in our case study.

Due to behavioural economics, a realistic assumption of human behaviour can lead to a better understanding of consumer demand. In earlier times, research on this topic was conducted by experimental observations or surveys. Nowadays, factors such as functional magnetic resonance imaging are being used to find out which areas of the brain are used in the various aspects of economic decision-making.

## Method Matrix

Carglass uses many different marketing methods in their commercials regarding the topic of behavioural economics. For better visualization of these methods, a matrix was developed (Tab. 1), which displays the methods used as a function of the time in which those commercials were published. Alongside several TV commercials, also some internet commercials, that for example are published on You-Tube, were used for the investigation.

Due to the problem that an exact year of publication mostly wasn't given, the videos were structured into three different time eras. Two of the overall eleven videos are in the category of relatively recent videos from 2018 or later. The clips from the previous five years also form one category, containing seven videos. Two further videos represent the five years and older times.

For precise observation, the individual subsections were separated into three different categories.



First viewed is Category 1, in which the marketing methods of behavioural strategies are collected, clearly displaying a common thread over the past ten years.

Category 2 contains those commercial clips that use specific behavioural economic tools that emerge frequently over the years.

In Category 3, the marketing methods are listed that are only used sporadically, with no clear line.

In the following, the individual methods used in the commercials are analyzed.

First, we start with the priming, which is not included in the matrix because every commercial starts with the easy and memorable jingle. The music of the jingle is the same in every country, but the text is translatable into every language. According to many surveys, Carglass jingle is one of the most hated in today's world of advertising. And that is the concept for the success of their spots and the reason why everyone remembers Carglass. But the priming is not the only method the company uses to convince potential customers.

Dealing with the matrix, we want to start with the constant in all periods appearing methods falling in Category 1. It is recognized that these are all methods that create a domestic atmosphere. The advertising figures, such as the worker with the identifiable dialect, strengthen the personal connection to the potential customer. These are not perfectly styled models, but normal people, just like you and me. This atmosphere is also enhanced through the use of friendly and caring wording.

Furthermore, the commercials are addressed towards the adult individual, because they are the ones who decide to become a customer. Also in each Clip, the fact, that the threshold for the customer to take up the Carglass service is lowered as far as possible is very important.

Category 2 includes things such as the artificial creation of fear of stone chipping, the clear emphasis on the technical term for the HPX-3 repair resin and the indication that a stone chipping repair "does not cost a cent for hull insured". Some of these things can be classified into one of the main topics of behavioural economics, the so-called "framing". Framing suggests that the way a problem or decision is presented influences the action of the decision-maker.

Building up fear influences the customer to act quickly – and indirectly should not give him the choice to obtain information on alternative workshops to Carglass, since prompt action is

required. This is also shown with the family as a target group. The fear of the insecurity of the family leads to quick decision-making by the responsible person.

With the mention of the internal abbreviation "HPX-3" for the special resin, along with the application process using special tools highlighted in the Carglass colors, the potential customer is clearly shown the technically superior position of the brand. The potential customer is also made aware in some video clips that as a hull insured he does not have to pay a cent for the HPX-3 stone chip repair. This is underlined visually in the video by a gesture by the Carglass employee, rejecting the wallet that the customer is about to pull out.



Method Matrix												
	Number of videos	HPX-3 Tech (Category 2)	Target group: family (Category 2)	Adult individuals (Category 1)	Anxiety-building (Category 2)	Employees with dialect (Category 1)	Mobile service (Category 3)	Kind/ intimate (Category 1)	Objective/ elevated position (Category 1)	Not a cent for people under hull insurance (Category 2)	Lower threshold for service (Category 1)	HPX-3   windscreen replacement (Category 2)
Older than five years	1	X		X	X				X	X		
	1	X	X					X		X		
Maximum five Years old	1 2	X		X X		X X		X X	X X		X X	x   x
	1 2 3	X		X X X	X X	X		X X X	X X	X	X X X	x
	1 2		X	X		X X	X	X	X X		X X	x x
Maximum one year old	1 2		X X		X	X X		X X	X X	X	X X	x   x

Tab. 1 Method Matrix



The interaction of all the marketing methods of those videos, also uses, alongside the above mentioned “framing”, the so-called “heuristics”. This is also a major topic of behavioural economics, which makes the statement that people often make quick decisions without considering other possibilities. In the case of a car driver who has stone damage and sees a Carglass advertisement, this would be: “I have to act quickly, Carglass is an absolute professional in this field and is also cheap. I don’t even have to look for other possibilities”.

The only method used sporadically is the mentioning of the mobile service. This is closely related to the section “lower the threshold to use the Carglass service”. The customer should get the impression, that besides personal proximity, Carglass willingly accepts additional expenses for stress-free customer service. The reason that mobile service cannot be the focal point of commercial and corporal strategy has several technical and logistical reasons. Most of the stone damage incidents are not of the correct size or position to be repaired with the HPX-3 resin, which would lead to a windscreen replacement. Among other reasons is the space required for windscreen replacement – and also that it would be unfeasible to always transport the number of windscreens that would be required – which are the main reasons why mobile windscreen replacement can not be a reasonable central focal point in commercials.

Another aim of our research and the analysis of Carglass marketing was to find an answer to the question of whether car manufacturers were using Carglass marketing strategies – and whether it would be possible to win back the transferred customers.

To be able to make a reliable and fact-based statement about the quality and applicability of these strategies, we have spoken with a specialist in the field of glazing marketing of an international car manufacturer.

After analyzing and comparing the Carglass marketing strategies from an OEM’s point of view, we took a more general look at Marketing and Behavioural Economics. To be able to make qualitative and usable statements, we conducted another interview with a professor from the University of Hohenheim.

## RESULTS

To understand how the company Carglass has become so successful in the field of car glazing and how the brand has been able to achieve a reputation of 94% in Germany, it must be noted that Carglass specializes in a niche market. Also, Carglass, with its specialization in one area of expertise, can invest significantly more in advertising than the big OEMs. On average, Carglass spends 50 times a higher annual advertising budget. Most of this is invested in radio advertising, which, for example, was strategically placed alongside traffic news. However, the TV commercials we examined have also a significant degree of success. The commonality of the two advertising media is that they are represented everywhere and very offensive.

Using the marketing strategies, we have analyzed, Carglass has succeeded in taking some of its customers from the car manufacturers. To find out whether and how the OEMs are going to tackle this trend – and how to prevent losing any more divisions or niche markets – we interviewed with a globally far-reaching car manufacturer, Daimler AG.

Perhaps the most important aspect is that Daimler AG, as well as the other large OEMs, do not compete directly with Carglass. The reason for this is the different approaches of the two companies. While the OEMs focus on the complete package of accident and damage repair, Carglass places the focus specifically on window repair or window replacement. However, since glazing can be seen as the entry-level into the accident repair business, Daimler AG has significantly increased its focus and advertising efforts in this area. So the migration of the existing customer base can be counteracted.

Internal studies by Daimler AG have shown that, unlike as suggested by Carglass advertising, the reparability of a stone chipped windscreen is about 12%. This means that not every windscreen damage can be repaired as claimed – but in 88% of cases, it has to be replaced. However, since a repair, in any case, costs less and at least part of the cost is usually borne by the insurance companies, the aspect of window repair is primarily promoted by both, Carglass as well as the different car manufacturers.

Instead, major differences can be seen in the advertising media used, as well as their indirectly indicated advertising message. So Daimler AG primarily uses on-site advertising in its workshops and branches and directs window repair advertising towards existing customers already connected to the brand and the company. For example, model windows and videos are used for this, which attracts the attention of customers. This shows potential customers a branded alternative. Furthermore,



OEMs strive to use their original parts to indicate that the quality of their products meets a higher standard. Carglass also uses OEM-quality windows but can often try to avoid this due to cost-related issues.

To reach a larger customer base, Daimler AG also uses the option of online communication via well-known social media platforms, such as Facebook, Instagram, and Google. In contrast, Carglass advertises almost exclusively via radio and television channels to reach a large number of potential customers of all social classes. In doing so, Carglass has, over the years, perfected the methodology of offensive Marketing and succeeded in addressing new customer groups. The marketing of Daimler AG is completely different from Carglass in this regard. Due to legal constraints, as well as the reputation and the standing of the company, the communication must correspond to the brand and the company.

Another Carglass success factor is the outsourcing of window repair with the help of the so-called Flying Doctors – mobile employees, who carry out the necessary repairs on-site at the customer's premises. As a result, Carglass workshops are relieved of pressure – and thus a higher output of repairs can be carried out. Since damage to the vehicle glazing always leads to displeasure on the part of the customer, the acceptance and customer satisfaction can be increased with the help of the Flying Doctors. As a rule, this also leads to a greater willingness to make recommendations. As a result of this, Daimler AG has also conducted experiments using mobile employees. The findings were extremely negative, based on various issues – such as logistics, local geological issues, weather and climate, and internal standards. So on this occasion, the concept of the mobile repair was dropped.

After analyzing the various points of view, the question now arises of the retention and recovery of customers. Currently, customer recovery is not planned. The reasons for this are, on the one hand, the high capacity utilization of the Mercedes workshops, and on the other hand the question of economy. Pure window repair, unlike other areas, such as the spare parts market, is not lucrative enough for car manufacturers. Also, Carglass has now positioned itself too well in the market and displacement is very difficult or even impossible. Currently, OEMs are reluctant to invest more in marketing for glazing, thus letting Carglass resell customers.

To avoid a loss of customers in other niche areas, Daimler AG uses digitization as a preventive measure. The spare parts market can be cited as an example. It is now easier for customers to compare prices and suppliers and then decide against the OEM. Instead of the original part, customers can buy cheaper and

often lower quality replicas on online platforms, such as Amazon or eBay. Using digitization, both existing and new customers can be reached and informed better via online and social media channels. Other digital customer loyalty tools include automotive manufacturer apps and standardized customer satisfaction surveys. Also, Daimler AG is trying to identify trends such as share-services and to firmly establish itself there.

For marketing, the question of the effectiveness of a strategy is always of paramount importance. An advertising message that manages to stay in the head for years – such as the simple slogan of Carglass advertising: “Carglass repairs, Carglass exchanges!” – leads to a high recognition value of the brand or the company. The message should – as in this example – imply a simple solution to a complicated problem, taking into account people's cognitive comfort.

As people change and evolve throughout their lives, marketing must also adapt to new circumstances in its future manifestation. These future trends in marketing strategies can already be seen today. The so-called “War for Attention”, the fight of companies for the attention of the customers, will play a very big role. Already today, companies try to draw attention to themselves by clever use of advertising and communication media and distract from other competitors. Only those who are in constant view and thus in the mind of the customer can keep up with the market in the long term. For companies, the attention of potential customers is like a kind of currency that is even traded in the right markets.

The quality of advertising usually plays a greater role than quantity. This means that advertising must always be consistent with the brand. This is one of the reasons why a company like Daimler AG does not seek to transfer Carglass's marketing strategies.

To be able to transfer Behavioural Economics to the automotive industry, the image and brand should be promoted in particular. Price bouts or discount campaigns would deter customers in the automotive industry, rather than attract them.



## CONCLUSIONS

Marketing is a relevant field for OEMs as well as for car service providers. Marketing is the voice of the company to the customer and due to digitalization and connectivity, there are many opportunities for development in the topic of marketing. Behavioural economics as the combination of economics and psychology is the current new step of marketing strategists to reach the potential customer based on the inconsistency of human behaviour.

We present a case study dealing with different marketing strategies in the behavioural context of the company Carglass, a service provider for vehicle windows. Based on commercials from TV and the Internet a method matrix was developed for better visualization of the methods used according to the time. A classification in three categories was made to further improve the visualisation. This method can be reproduced to analyze all types of commercial activity in different media channels.

The first aim was to identify whether the big OEMs can also use the marketing strategies used by Carglass. As shown in the results, the OEMs do not directly compete with Carglass because of the different approaches. OEMs offer the complete accident repair package, while Carglass is specialized in window services. This results in different budgets for marketing in specific niche areas, as well as different approaches to customers via marketing. It is becoming more and more important than marketing reflects the image of the brand. The offensive marketing used by Carglass is certainly not the right way for reputable companies, such as major automobile concerns, to approach their customers.

Furthermore, it is shown in the results that there is only a minor chance of recovering the customers from Carglass due to the limited capacities of the workshops and the lack of profitability with such repairs. This is cemented by the good market position of Carglass.

But what are the future trends in this market? Due to the increase of different advanced driver assistance systems using a camera behind the windscreen, there are advantages for the OEMs because of the necessary calibration of these systems – but Carglass is aware of this issue and is bound to react accordingly.

The next step could be the automatization of processes. The repair of the windscreen will always be an analog process but every process before and after can be automated. The vehicle could itself recognize that a window is damaged. It could either inform the owner or independently make an appointment in the workshop for the repair process. This could also be an advantage for the OEMs because the repair would be booked by their workshops and there is, therefore, no need for the customer to choose a different service provider.

This is a similar issue to the rising of sharing services. In the future, OEMs will not merely be car producers anymore. They will be providers of mobility. With their sharing concepts, there will be no need for other service providers such as Carglass in any niche areas.

In general, there could be much more to work out regarding the future of car service providers such as Carglass – and also on the topic of behavioural economics.

There are not only upsides to marketing methods using behavioural strategies. Many customers are very sensitive to the thought of being influenced and manipulated. True customer loyalty can only be achieved with a relationship on equal terms. Carglass does a good job of customer acquisition, but a valuable customer is the one staying with the company. There are many areas and opportunities for more research into customer loyalty at Carglass.

In closing, it remains to say that behavioural economics is a topic that will get more and more important in current research and practical discussions. Not only the increasing speed of changes in the modern world will push the significance of behavioural economics – especially in the automotive industries – but also the increasing numbers of personal used vehicles. This research, therefore, marks a suitable starting point for further investigations.



## SPECIFICATION OF EVIDENCE OF CORRUPTIVE CRIMINAL ACTS

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### **Abstract**

*The concept of corruption is defined by international acts in several ways; one of the ways of defining corruption is: "Corruption is the abuse of entrusted powers for private gain." Due to the narrow understanding of the concept of corruption given by this definition, I take as one of the most comprehensive and complete definitions of this kind in the Civil Law Convention against Corruption of the Council of Europe as a wider framework. The Convention points to various forms of corruption that are sanctioned by the norms of criminal law in BiH. Defining corruption is important in order for this phenomenon to differ from cases where bias in decision-making is the result of prejudice or affection, and not the intention to achieve some benefit for oneself or others, as well as situations in which an ill-founded decision is the result of a lack of information or knowledge the decision-maker disposes. In this paper, it is necessary to research and scientifically justify with the presentation of certain facts and data on the work of the judicial authorities, prosecutors' offices and courts at all levels of the judiciary in Bosnia and Herzegovina which refers to a total number of applications in the work of the prosecutor's offices and the number of investigations and charges, with special reference to the aforementioned criminal offenses. Data presented will be data referring to the total number and structure of the court decisions made, with reference to corruption crimes, as well as data on the number of cases and the amount of property gain obtained by the criminal offense, for which decisions of the competent courts on the seizure, with a focus on the trends in the imposition of fines.*

**Keywords:** *corruptive criminal acts, proving, specificity.*

### **INTRODUCTION**

For several years now, many activities have focused on the consideration of the work of police and judicial authorities in Bosnia and Herzegovina in the area of the issue, detection, proving and prosecution of criminal offenses, which, according to the valid legal provisions, are called criminal acts of corruption, that is, criminal offenses against the official and other responsible duties.

The value of certain activities lies in the fact that after the expiration of a certain period of time, trends in the criminal-legal treatment of these crimes and their perpetrators can be seen, and in a very precise and measurable manner objectively point to some of the problems that the competent judicial authorities must face in the direction raising the level of their effectiveness in combating criminal acts that have the characteristics of corruption.

One of the problems that the judiciary in Bosnia and Herzegovina faces is the question of the existence of four almost autonomous judicial systems, which are in fact (apart from some exceptions in war crimes cases that do not touch on the jurisdiction, which is, in fact, a consequence of BiH's constitutional structure). Also, the additional problem is the fact that there is poor coordination in the fight against corruption at the state level. There is no comprehensive overview or analysis of statistics on cases of corruption. The execution of court decisions on cases of corruption is slow. A constant lack of final judgments is very worrying. Bearing in mind, on the one hand, the shortcomings in the organization and functioning of the criminal justice system in BiH, and the general characteristics of corruption offenses, on the other hand, it can be assumed that the efficiency of prosecuting corruption in the courts and prosecutor's offices in BiH in this monetary and on a very low level.



## LEGAL FRAMEWORK

### Material legal regulations

Material Criminal Legislation in Bosnia and Herzegovina also contains provisions that criminalize criminal offenses against official and other responsible duties. More precisely, this is the criminal offense prescribed by the Criminal Code of BiH (Chapter XIX - Criminal Offenses of Corruption and Criminal Offenses Against Official and Other Responsible Duties), FBiH Criminal Code (Chapter XXXI - Criminal offenses of bribery and criminal offenses against the official and other responsible duty), the Criminal Code of the RS (Chapter XXVII - Criminal offenses against official duty) and the Criminal Code of the Brčko District of BiH (Chapter XXXI - Criminal offenses of bribery and criminal offenses against official and other responsible duties<sup>1</sup>). For the sake of note, these regulations are mutually different in terms of the names used for individual incriminations, the names of individual heads of criminal laws containing corruption crimes, or the difference in legislative systematization (which should not reflect the views of legislators about the importance of a common protection object).

In this way, it can be concluded that the substantive and legal framework criminalizing corruption offenses is to a considerable extent harmonized with relevant sources of an international character. Also, the internal consistency between state and criminal legislation at lower levels is at a satisfactory level<sup>2</sup>. Likewise, recent amendments to the state criminal law have made significant steps towards extending the circle of perpetrators (international officials) to criminal offenses of receiving and giving

1 Criminal Code of Bosnia and Herzegovina (for pertaining amendments, amendments), Official Gazette of BiH, no. 3/03, 32/03, 37/03, 54/04, 61/04, 30/05, 53/06, 55/06, 32/07, 08/10. This section of the law prescribes the following incriminations: (a) Receiving gifts and other forms of benefits (Article 217), (b) Giving gifts and other forms of benefits (Article 218), (c) Unlawful mediation (Article 219), (d) Abuse of office or authority (Article 220), (e) Service test (Article 221), (f) Fraud in service (Article 222), (g) Service in service (Article 223), (h) Incompatible work in the service (Article 224), (i) Counterfeiting of an official document (Article 226), (j) Unlawful collection and payment (Article 227), (k) Unlawful release of a person deprived of liberty (Article 228) and (l) Unlawful apprehending of matters during search or execution (Article 229); FBiH Criminal Code, Official Gazette FBiH, no. 36/03; RS Criminal Code, RS Official Gazette, no. 49/03; Criminal Code of Brcko District of BiH, Official Gazette of the BD BiH, no. 10/03.

2 Law on Amendments to the Criminal Code of FBiH, Official Gazette of the Federation of Bosnia and Herzegovina, no. 42/10. (Article 62).

gifts and other forms of benefits<sup>3</sup>. In addition, the prescription of the taking of received or acquired rewards, property benefits, money, securities and other movable items in the composition of individual incriminations against official or other responsible duty, or perpetrator criminal offenses (unlawful interference, abuse of office or authority, embezzlement in service and fraud in the service) support the claim that the existing material and legal framework provides an adequate basis for the effective suppression of all forms of corruption offenses in BiH. The main shortcomings continue to be the non-acceptance of the Additional Protocol to the Criminal Law Convention of the Council of Europe on Corruption, the OECD Convention on the Suppression of Bribery of Foreign Public Officials in International Business Transactions and the harmonization of legislation in BiH with the Civil Law Convention of the Council of Europe on Corruption. In terms of an additional protocol, the most important elements of harmonization relate to the extension of the scope of punishability to perpetrators who have the titles of domestic and foreign arbitrators and lay judges for committed criminal offenses of active and passive bribery. Compliance with the OECD Convention is primarily concerned with extending the circle of punishments to officials who do not belong to public officials involved in various forms of corrupt practices in international business transactions.

On the other hand, internal regulations in BiH should be aligned with the Civil Law Convention of the Council of Europe on Corruption, to the extent that BiH, through its legislation, should provide effective protection of the rights of persons who suffered some damage due to corruptive actions.

### Procedural legal regulations

For the analysis of the processing of corruption before the prosecutor's offices and the courts in BiH, it is important to remind that criminal procedural legislation is also regulated by autonomous regulations that exist at all levels of government in BiH, together with the Brčko District of BiH<sup>4</sup>. One of the frequently mentioned problems related to

3 Law on Amendments to the Criminal Code of BiH, Official Gazette of BiH, no. 8/10. (Articles 94 and 95). Namely, the extension of the perpetrator's circle, which includes international officials, is envisaged by several international sources, more specifically the UN Convention against Corruption (Article 16), the Criminal Law Convention on Corruption (Article 5) and others.

4 BiH Criminal Procedure Code (for Corrections, Amendments, and Amendments), Official Gazette of BiH, no. 3/03, 32/03, 36/03, 26/04, 63/04, 13/05, 48/05, 46/06, 76/06, 29/07, 32/07, 53/07, 76 / 07, 15/08, 58/08, 12/09, 16/09, 93/09.



the suppression of corruption in BiH was related to the impossibility of applying the so-called “ special investigative actions for the detection and proving of corrupt criminal offenses, because the reform of the criminal legislation from 2003, the application of these legal instruments was, inter alia, related to the prescribed special minimum penalties for individual incriminations. In this way, corruptive offenses were omitted from the catalog of crimes for which special investigative actions could be ordered. However, in 2009, the amendments to the Criminal Procedure Code of BiH enabled the prosecutorial and police bodies to undertake special investigative actions in investigating all incriminations from the catalog of corrupt criminal offenses (if general legal requirements regarding the particularly aggravating circumstances of obtaining evidence about these crimes, etc.).<sup>5</sup>

The progress made in this area is greater because this area has finally been harmonized with more important international sources in this field<sup>6</sup>. Generally speaking, it is an extremely important instrument for more efficient and decisive suppression of corruption in BiH. It is important to point out that after removing the legal shortcomings noted, the entire expert public justifiably expected that these evidence-making operations would start to be more intensely applied in combating corruption in BiH. In the context of very important amendments to the criminal legislation from 2009, it is necessary to mention the adoption of regulations that regulate international legal cooperation in criminal cases. For remembrance, this is especially important since a whole range of international sources contain provisions on cooperation and assistance of States Parties in combating corrupt criminal offenses. In that sense, it is important to note that in BiH the Law on International Legal Assistance in Criminal Matters is in force, which prescribes general and special institutes of international legal assistance.<sup>7</sup> It is important to repeat that this is a regulation that represents temporary progress in creating the preconditions for more effective suppression of all cases of corruption with which they have international elements.

5 Law on Amendments to the Law on Criminal Procedure of BiH, Official Gazette of BiH, no. 58/08. (Article 34).

6 UN Convention Against Corruption, Art. 50, UN Convention Against Transnational Organized Crime, Art. 20, Criminal Law Convention of the Council of Europe on Corruption, Art. 23, Council of Europe Convention on Laundering, Search, Temporary Seizure and Confiscation of Proceeds from Criminal Offenses, Art. 4.

7 Law on International Legal Assistance in Criminal Matters, Official Gazette of BiH, no. 53/09.

## Other regulations

In the framework of the reform of BiH criminal legislation, it has also adopted several “accompanying” regulations that should ensure the smooth and efficient conduct of criminal proceedings. Among these regulations are the newly mentioned laws that protect witnesses in proceedings for corrupt and other criminal offenses. In that sense, the mentioned Law on Witness Protection under threat and threatened witnesses and the Law on Witness Protection Program in Bosnia and Herzegovina should be provided that ensure adequate measures for the protection of the integrity of persons who may appear in the capacity of the complainant of corrupt criminal offenses (if they were able to ask them for what kind of gift or other forms of benefits) or witnesses of such actions.<sup>8</sup>

The biggest lack of legal solutions to protect witnesses in BiH continues to be the inability to move witnesses under threat or threatened witnesses to other countries, which measure is predicted by some international sources.<sup>9</sup> Likewise, it is worth pointing out other regulations in the context of an analysis of the effectiveness of the penal policy in the process of prosecuting corruption in the courts and prosecutor’s offices in BiH. Again, it is worth pointing out the BiH Law on Execution of Criminal Sanctions, Detention and Other Measures, the Law on the Prevention of Money Laundering, the Law on Freedom of Access to Information, the Law on Personal Data Protection, the Law on the Protection of Classified Information.<sup>10</sup>

8 Law on Protection of Witnesses under Threat and Vulnerable Witnesses (for pertaining amendments, amendments), Official Gazette of BiH, no. 3/03, 21/03, 61/04, 55/05. Law on Witness Protection Program in Bosnia and Herzegovina, Official Gazette of BiH, no. 29/04.

9 In this respect, the provision of Art. 32 of the UN Convention against Corruption, which, inter alia, provides for the adoption of such measures, of the States Parties to this Treaty, to ensure the relocation (which is not explicitly stated as relocating to other States) of witnesses, expert witnesses and injured parties, members of their families and their close relatives. These are the persons who testified in the proceedings for the offenses covered by this Convention.

10 Zakon BiH o izvršenju krivičnih sankcija, pritvora i drugih mjera (sa pripadajućim izmjenama i dopunama), Službeni glasnik BiH, br. 13/05, 53/07, 97/07, 37/09; Zakon o sprečavanju pranja novca i finansiranja terorističkih aktivnosti, Službeni glasnik BiH, br. 53/09; Zakon o slobodi pristupa informacijama (sa pripadajućim izmjenama i dopunama), Službeni glasnik BiH, br. 28/00, 45/06, 102/09; Zakon o zaštiti ličnih podataka, Službeni glasnik BiH, br. 49/06; Zakon o zaštiti tajnih podataka (sa pripadajućim izmjenama i dopunama), Službeni glasnik BiH, br. 54/05, 12/09.

### Regulations on the organization and competencies of judicial and law enforcement bodies

The criminal justice system in Bosnia and Herzegovina consists of courts and prosecutors at all levels of government together with law enforcement agencies whose role is to provide support to judicial authorities in the exercise of their functions of detecting, prosecuting and issuing criminal sanctions against perpetrators of corrupt criminal offenses. For example, the organization of the criminal justice system is in line with the BiH government organization, so that at this moment four mutually unrelated systems of prosecutors are not in the system of mutual subordination, but their relations are based on cooperation and mutual assistance following the applicable legal regulations. Such an institutional arrangement can, in a certain way, influence the effectiveness of the suppression of corruptive criminal offenses in BiH, especially if one takes into account the difficulties faced by prosecutors at the lower levels of government in their work. However, the BiH Prosecutor's Office is mostly dedicated to the investigation and prosecution of perpetrators of corrupt criminal offenses within the jurisdiction of the Court of BiH. At the same time, this Prosecutor's Office, within its jurisdiction, performs international legal assistance and cooperation activities, which additionally emphasizes the role and importance of this judicial body for the suppression of high-level corruptive offenses.<sup>11</sup>

In the organizational sense, within the BiH Prosecutor's Office, the Special Department for Organized Crime, Economic Crime and Corruption has been established by law, thus creating institutional preconditions for effective suppression of corruption at the highest levels of government in BiH. However, the analysis of the work of the prosecutor's offices in BiH on corruption cases will provide an overview of the distribution of the prosecution of corruption at all levels of the organization of prosecutor's offices in the country. The situation is the same concerning the organization of courts in BiH. Practically, in practice, the organization of courts was set up so that the courts of the first instance (municipal and basic courts), second instance (cantonal, district and appellate courts) and supreme jurisdictions (Supreme Courts of FBiH and RS) were established in the Entities and Brčko District of BiH for criminal offenses against official and other responsible duties. The High Judicial and Prosecutorial Council / Council of BiH has a very important role for the professional performance of judicial functions, with the Office of the Disciplinary Prosecutor, whose jurisdiction refers to the handling of complaints on the work of judges and prosecutors in BiH. On the other hand, the actual

jurisdiction of the Court of BiH concerning corruption offenses is regulated by the Law on the Court of BiH, according to which this judicial body is competent for criminal offenses established (prescribed) by the BiH Criminal Code and other laws of BiH. In addition, the criminal jurisdiction of the Court of BiH extends to those criminal offenses prescribed by other criminal laws in BiH if they are endangered by the sovereignty, territorial integrity, political independence, national security and international subjectivity of Bosnia and Herzegovina, or these crimes may have serious repercussions or adverse consequences the economy of Bosnia and Herzegovina or can cause other harmful consequences for Bosnia and Herzegovina or can cause serious economic damage or other harmful consequences outside the territory of the given entity or Brčko District.<sup>12</sup>

It follows from the above that the Court of BiH has an extremely important role in prosecuting corruption in BiH, especially since a separate department for organized crime, economic crime and corruption has been established within the organizational structure of this judicial body. From the data on proceedings for corruption offenses before the courts in BiH, the idea of how much participation of state judicial bodies in the overall prosecution of corrupt criminal offenses in BiH is acquired. Furthermore, the police system in Bosnia and Herzegovina is organized on decentralized, multiple, uncoordinated bases, with significant differences in the model of police organization between the two entities and the Brčko District of BiH as a separate entity. The FBiH police system, organized on a decentralization basis, consists of the cantonal police and the Federal Ministry of the Interior, which, from actual jurisdiction, deal with the detection, proving and prevention of criminal offenses against official and other responsible duties from the FBiH CC. It should be noted that corruption investigation activities, within the organizational structure of the Federal Police Administration, are dealt with by special criminal police bodies, specifically the Department for Combating Economic Crime, Corruption and Money Laundering and Computer Crime. It should be noted that in the FBiH, within the Ministry of Finance, the Financial Police is active, which plays a very important role in detecting various forms of economic crime and corruption. On the other hand, the centralized police system of the RS consists of regional level organizational units and the central management structure of the police, together with its specialized criminal and basic police services. Regarding the jurisdiction to fight corruption, these bodies act on the knowledge of the criminal offenses prescribed by the Criminal Code of RS, whereby the specialized criminal police service from the headquarters of the

<sup>11</sup> Law on Prosecutor's Office of BiH (with corresponding amendments), Official Gazette of BiH, no. 24/02, 42/03, 03/03, 37/03, 42/03, 09/04, 35/04, 61/04, 97/09.

<sup>12</sup> Law on the Court of BiH (consolidated text), Official Gazette of BiH, no. 49/09, 74/09, 97/09.



MUP of the RS (primarily the special investigation unit and the department for the prevention of economic crime). The model of the Brčko Police District BiH Police Organization is specific in that the police are headed by directly responsible police chief (ie without the mediation of a political body in the form of a ministry of the interior) responsible to the local parliament and the mayor of the District. The appearance of criminal offenses from the Criminal Code of the Brčko District of BiH is investigated within the organizational units of the Criminal Police Unit or its specialized body (Department for Combating Economic Crime and Corruption). At the state level of BiH, the State Investigation and Protection Agency is certainly the most important place in the detection, proving and prevention of corrupt criminal offenses within the jurisdiction of the Court of BiH. The specific treatment in cases of corruptive offenses is left to the Criminal Investigation Department of this agency, within which a specialized body dealing with the aforementioned activities operates (Department for Prevention and Disclosure of Financial Crime and Corruption).<sup>13</sup>

Finally, it should be noted that some progress has been made in coordinating the existing police bodies in BiH by adopting several laws in the field of police reform, whose implementation should, among other things, provide for greater compliance of the police bodies' actions in combating corrupt criminal offenses.<sup>14</sup> The aforementioned laws envisage the establishment of new police bodies, which do not have direct operational competencies in terms of investigating criminal offenses, but their powers are determined to coordinate, support, ensure the independence and operational autonomy of police bodies in BiH. The latest in a series of regulations regulating the upgraded institutional architecture for more effective countering corruption in BiH is the Law on the Agency for the Prevention of Corruption and Coordination of the Fight against Corruption.<sup>15</sup> For the sake of remarks, bypassing this law, one of the more important conditions from the so-called "The Roadmap for the liberalization of the visa

regime for BiH citizens, by its adoption, one of the "Greco" recommendations was respected, and, more importantly, BiH has thus harmonized its legislation with the provisions of the UN Convention against Corruption whose party. This law stipulates that the Agency is an independent and independent administrative organization directly accountable to the Parliament of BiH, whose activities will refer to the adoption of anti-corruption measures, recommendations, and instructions, as well as giving opinions and initiating initiatives. However, almost three years after the adoption of this law, the Agency for the Prevention of Corruption and Coordination of the Fight against Corruption did not start its work, which certainly represents a significant disadvantage. Finally, it is necessary to mention other institutions that have the authority to combat corruption in BiH, such as the Border Police, the Indirect Taxation Authority and others. Also, the inevitable role in detecting corruption cases should have tax administrations that operate at the level of Entities and the Brčko District of BiH in the cases of calculation and collection of direct taxes. This is particularly important in the context of the role of the tax administration in the delivery of data important for determining the extent of the unlawful material gain obtained through the commission of corrupt criminal offenses.

## CONCLUSION

Analyzing the judiciary statistics, concerning statistics on corruption crimes, it can be concluded that over the past years, judicial authorities in BiH have achieved poor results in the last few years (2009-2016). Negative tendencies are present both at all stages of criminal proceedings and all judicial levels of government in BiH. Taking into account such results, as well as the demands of the public, it is noted that, unfortunately, the fight of the judicial authorities in combating corruption crimes is not only stagnant, but is already in a considerable fall, and the reasons for such a crack in the processing of corruption are completely unclear. The impression is that the complex ties between the political public, the business sector and media representatives that have a significant impact on the work of the judicial authorities have expanded, as well as that their independence has continued to deteriorate. The judicial system in Bosnia and Herzegovina in the process of corruption of criminal offenses has completely settled down and experienced a sort of collapse, and it can be said that the processing of corruption is completely collapsed. If we add this to the assumption that in most cases only the criminal offenses of "petty corruption" are prosecuted, the results are devastating. Such trends should be addressed by the professional and academic community to try to identify the causes of the

13 For the sake of this, the legally regulated real jurisdiction of the SIPE provides that this agency of the Ministry of Security of BiH will deal with the prevention, detection, and investigation of criminal offenses within the jurisdiction of the Court of BiH, especially in cases of serious financial crime. Vid. Law on State Investigation and Protection Agency, Official Gazette of BiH, no. 27/04, Art. 3. st. 1.

14 Law on Independent Supervisory Bodies of the Police Structure in BiH (Official Gazette of BiH, No. 36/08) and the Law on the Directorate for Coordination of Police Bodies and Agencies for Support to the Police Structure of Bosnia and Herzegovina (Official Gazette of BiH, No. 36/08).

15 Law on the Agency for the Prevention of Corruption and Coordination of the Fight against Corruption, Official Gazette of BiH, no. 103/09.

negative results, and it is considered necessary to analyze the cases of corruption itself and methods in detecting and prosecuting corruption, that is, analyzing the work of the judiciary in the processing corruption. Regarding the previously stated, we can conclude that the observed trends in the criminal-legal treatment of corrupt criminal offenses objectively point to specific problems with which the competent judicial authorities are faced with the detection, proving and prosecution of criminal offenses that have characteristics of corruption. Evidence of corruption crimes is precisely the fact that by their commissioning, that is, by misusing a particular position, authority, themselves or another, property or another benefit is obtained. Therefore, the perpetrators of these crimes rarely or seldom report. Confirmation of the aforementioned theses also gives us the analysis of the data from the judicial statistics indicating the scope of the activities of the competent authorities, the police, and the prosecution, and the courts in the process

of processing the criminal offenses, as well as in the field of confiscation of the property gain obtained by the criminal offense, ultimately has a specific value.

The phenomenon of corruption is most often classified in the so-called. "Criminality of white-collar" and corporate crime. According to these perceptions, bribery and other types of corruption are most often integrated into the political apparatus of local and state executive bodies. Criminalization of a white-collar is always a crime aimed at obtaining property benefits, where the delinquent, as a rule, does not act out of necessity, but from the desire to raise the already high standard, to gain more power and prestige. This is certainly a detective activity, and the evidentiary process makes it even more difficult and more specific. One of the most significant problems related to the detection, proving and clarification of corrupt criminal offenses is related to the existence of the so-called "The dark figures of this kind of crime.

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## IMPACT OF INTERNET TECHNOLOGY ON TO CONSUMER BEHAVIOUR

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### **Abstract**

*The beginning of the nineties of the twentieth century is the period in which dramatic changes in the behaviour of consumers occur. The two main causes that have led to behaviour change are the emergence of the Internet and the concept of e-commerce, this period is characterized by the need to pay attention to the needs of users to achieve and maintain a successful business. According to the latest research, social media advertising has a strong impact on all age groups from the high school age to the middle age, with somewhat greater impact on the female population, resulting in the main goal of the work related to determining the attitudes of the respondents regarding the question that advertising messages on social networks affect the behaviour of consumers as well as making an ultimate purchase decision. From which the main hypothesis arises: Ho - Internet technologies influence the behaviour of consumers and make the ultimate purchase decision. Qualitative research was used for this type of research and a questionnaire was created. After the completion of the research, empirical data were processed by the statistical program SPSS 22 and StatPlus 2009.*

**Keywords:** consumer, decision, technology, advertising

**JELcode:** M37, N3

### **INTRODUCTION**

Marketing drives all functions to consumers, to meet its needs. Dynamics of marketing is defined as the pace of its development, the speed of response and adaptation to conditions and changes in demand driven by the needs of consumers. Consumer needs to develop in parallel with the development of the economic power of society. Changes in consumer demand are becoming more and more complex, and are increasingly being manifested. Namely, the complexity and frequency of changes are important characteristics of consumer demand.

The task of marketing is to make all those needs, or changes, at the same pace at which they are manifested. With the right dynamics of marketing, it is possible to quickly respond to changes in consumer demand. The right time and the right way to respond is achieved if there are relevant business data relevant for making business decisions, then if efficient processing of this information is done and if business decisions are made and implemented at the right time and in the right way. Adapting to changes is also conditioned by the functioning of the marketing sector and the service.

The dynamism of marketing does not just mean its passive relationship, but in that endeavor, marketing should start from consumers and affect the attitude of buying to meet its needs. For such companies, we say that they have the appropriate dynamics of marketing, specifically the speed of reaction in the consumer market. Internet customers generally belong to a younger and highly educated group of customers who perform larger purchases. (Radosavljević & Borisavljević, 2018)

### **Review of literature**

Customer relationship management represents a metaphor for an effective, according to buyer's oriented management of stepwise mature marketing processes in functional marketing channels. (Laketa & Laketa, 2016)

Investigating consumer behaviour as a special marketing discipline began when bidders realized that consumers are not behaving and reacting always in line with the assumption of marketing theory. In spite of the occasional "and I want the same" approach to hi-fi and fashion, many consumers have refused to use those products that others have used. (Shiffman & Leslie, 2009) The recipient of the advertising message is a consumer or user of the

service to whom the advertisement is sent, while the sales point is a business premise where the registered activity is performed. (Vlada RS, 2014)

The American Marketing Association (AMA) defines consumer behaviour as a dynamic interaction of thinking, behaviour, and events in an environment in which human beings manage aspects of their lives in exchange, emphasizing the following aspects:

- Dynamic, i.e. that consumer behaviour takes place in a certain space (market), a certain time, a specific marketing environment (target group), and for a particular product, a group of products, services, things or ideas.
- Interaction, i.e. that consumer behaviour is conditioned by their effect and thinking, behaviour and events in the environment. (Peter & Olson, 1990)

Consumer behaviour is defined as "behaviour that consumers show in seeking, buying, using, evaluating and disposing of products and services they expect to meet their needs" (Leon & Leslie, 2004)

When deciding on the purchase of a particular product or service, many factors are influenced by the society: social class and layer, culture and subculture, lifestyle, location of the object of sale, family life cycle, whether or not the family has children or not. A lifestyle can be defined as a way that a person or group of people lives. The style of life in people differs from the characteristics of personality, culture, social class, family and social environment in which he lives. Consequently, all people as consumers have different opinions and attitudes when deciding on buying.

"Compulsive shopping is defined as" chronic, repetitive shopping that should become the primary response to negative events or feelings" (Fayez & Labib, 2016)

»The expansion of Internet-based advertising is transforming the advertising business by providing more efficient methods of matching advertisers and consumers and transforming the media business by providing a source of revenue for online media firms that competes with traditional media firms« (Evans, 2009).

Many companies opine that it is in advertising that they turn to women as their primary market, but, also, there are not enough methodologically well-founded research on women's consumers. (Maričić & Radulović, 2013)

"The advertising landscape has experienced dramatic change over the past several years, as consumers spend more time online, have more control over traditional advertising vehicles, and chose to create and share their content". (Sheehan Kim & Morrison, 2009)

Instagram is a gray marketing zone, since the followers have certain pretensions, for example, favorite actors, singers, groups, and so on. The

situation arises that the same public persons from well-known brands receive certain products that advertise known people through social networks for free. (Vidović, 2017)

There are numerous advantages of using the Internet as a marketing medium, and for international marketing, it is certainly a very important possibility of communicating with foreign consumers, with significantly lower costs compared to the use of traditional media. (Mitić, 2018)

### Methodology of research

The subject of research in this paper is the influence of advertising messages on the behaviour of consumers in the function of starting new entrepreneurial ventures or business of individuals with the use of social networks.

The list of research questions used in the research, in addition to general questions, included a specific set of questions: in which the relationship of consumers towards social networks is reflected, or how influential this type of advertising has on the development of online shopping on our premises. Which social networks are most used and how often they use, what kind of content they prefer, which types of digital advertising are used, how many social networks have influenced their business start-up, where they mostly advertise, in what format they post online content, have social networks contributed better rating and higher sales of their products or services, etc.

The aim of the work related to determining the attitudes of the respondents regarding the fact that advertising messages on social networks affect the behaviour of consumers as well as making the final decision on the purchase.

The research work is designed to show how many advertising messages affect the final decision on starting new business ventures

The survey technique was used to collect relevant data.

The survey was conducted in the period from 01.03.2019 to 31.03.2019. The survey involved 108 respondents from the territory of the Republic of Srpska (69.444% women and 30.556% men) between 18 and 45 years.

The questionnaire was made through the Survey Monkey Survey, which included friends, acquaintances and unknown respondents, links were provided via e-mail, Facebook, Viber. All respondents are at least some of the social networks: Facebook, Instagram, Google, Pinterest, Twitter, YouTube, Snapchat or blog.

In the continuation of the work, graphical representations of statistical data were made following the questions from the questionnaire and the interviews, as well as the comparison between the two questionnaires. The data are entered numerically and perceptually.



The dependent variable in the survey represents the effectiveness of this type of advertising, while the independent variable represents the admissibility of this type of advertising.

Based on the literature review and previous research, a zero hypothesis is set, which reads: H0 - Advertisements on social networks affect the behaviour of consumers and make the ultimate purchase decision.

In the realization of the set goal of research the author starts from the following research questions:

1. Frequency of using the Internet and social networks?
2. Do you make internet purchases?
3. The announcement/ad that promotes a new type of product/service on social networks influences the Internet's desire to buy a product offered by the consumer?
4. If you have made purchases via social networks and the Internet, please indicate your experience?
5. Do you think that buying through Internet technology will completely replace the usual?

**Results of research and discussion**

After the completed research, the empirical data collected were analyzed through the Statistical Program StatPlus 2009 and SPSS 22, the results are tabulated graphically and theoretically. As a first step, a descriptive analysis was performed for calculating the frequency, standard deviation, and median, t-test, for testing the statistical significance of the difference in the distribution of frequency frequencies using the Chi-Square test for each of the above claims.

Since the variables in this study were on non-parametric rocks, it was, therefore, necessary to transform to higher-order scales, and this was exactly the result of the analysis of variance (ANOVA). The results obtained after the conducted research are given below.

The survey involved 108 respondents, observing the socio-demographic structure of the sample, it can be noted that there were more female respondents in the sample of 75, which is 69.444% compared to male respondents 33, which makes 30.556% of respondents. Nearly half, or 62 respondents (57%) include respondents aged between 20 and 30, while the highest number of respondents according to education is from secondary school.

Variable	Category	%
Gender	Male	33
	Female	75
Age structure	-20	25
	21-30	62
	31-45	21
Education	High school education	58
	Higher or high qualification	47
	Master, doctorate	3

Figure 1 The structure of the samples

The results of the answers received from the research questions are as follows:

When asked about the frequency of use of the Internet and social networks, the respondents answered that they use 31 of them daily (28,704)%, several times a day, 58 respondents, which makes (53,704)%, several times a week, 10 respondents made 9,259% I do not use them often only 9 respondents, (8,333)%.

Descriptive statistics gave the following results:

Descriptive Statistics - One-Sample Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	Std. Error Mean
Using the Internet	108	1	4	1,97	,848	,082
Internet shopping	108	1	3	1,82	,905	,087
Product wishes	108	1	2	1,26	,440	,042
Experience with buying	108	1	4	2,89	1,017	,098
The future of this purchase	108	1	3	1,78	,801	,077
Valid N	108					

Figure 2 Descriptive statistic

Question No. 1 - Frequency of using the Internet and social networks gives the following results. By analyzing the obtained data, the results of the answers received from the respondents - their experience ranges from "One day" where answers were obtained from 31 respondents, "Several times a day" said 58, "Several times a week" 10 respondents, while 9 respondents declared under "I do not use them often".

Paired Samples Statistics					
	Mean	N	Std. Deviation	Std. Error Mean	
Pair 1	Age structure	1,96	108	,655	,063
	Using the Internet	1,97	108	,848	,082

Figure 3 Authors' research

Paired Samples Correlations				
	N	Correlation	Sig.	
Pair 1	Age structure & Using the Internet	108	,891	,000

Figure 4 Authors' research

Paired Samples Test									
		Paired Differences					t	df	Sig(2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Age structure - Using the Internet	-,009	,398	,038	-,085	,067	-,241	107	,810

Figure 5 Authors' research



After the statistical data processing was completed, the following results were obtained: Sig. (2-tailed) represents the desired probability of making the wrong conclusion. When this value is less than 0.05, there is a significant difference between the two results. According to the results obtained in Question 1, it was found that Sig. (2-tailed) amounts 0,810 it is concluded that there is no statistically significant difference between the two results. The obtained value of t is -0,241 and the number of degrees of freedom (df = 107), the average frequency of using the Internet and social networks is (Mean) is -0,009, and the interval of 95 percent confidence ranges from lower (lower) -0,085 upper (Upper) 0,067.

Question number 2 - Do they perform Internet shopping? The respondents answered the following answers: the highest number of respondents answered that they perform Internet shopping of 55 of them, which makes 50.926%, 17 (15.741%) of respondents do not do this type of purchase, while 36 (33.333%) did not perform this kind of shopping but they wanted to try it.

ANOVA					
Product wishes	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9,039	2	4,519	40,551	,000
Within Groups	11,702	105	,111		
Total	20,741	107			

Figure 6 Authors' research

According to the results of ANOVA variance analysis when the value of  $p < 0.05$ , in this case, is 0,000, we conclude that the correlation coefficient is significant, i.e. there is a statistically significant difference between the mean values dependent variable in the three groups.

Question No. 3 - The advertisement/ad I've seen on the social network contributes to the decision to buy this product refers to the degree of acceptance or non-acceptance of new ideas by the respondents. Respondents answered that they agreed with this statement of 80, which makes (74.074%), while only 28 (25.926%) of respondents disagree with this statement. Of the 80 respondents according to the level of education, 47 of them were with secondary education, while the other 30 with a high school and 3 respondents with a master's degree who agreed with this statement. On the other hand, out of 28 respondents who disagreed with this finding, according to the level of education, 11 were with secondary education, and 17 with a high degree of education.

With the application of the appropriate test, i.e.  $X^2$  - the independence test and, with a probability of 95%, the zero hypotheses were verified.

Output data: Number of rows  $m = 3$ , column number  $k = 2$ .  $r = (m-1) * (k-1) = (3-1) * (2-1) = 2 * 1 = 2$ ,  $X^2(\alpha; r) = X^2(0.05, 2) = 0, 0788$  How is the calculated value  $X^2 = 0.0778 <$ ,  $X^2(0.05, 2) = 5.99$ , since the calculated value of  $X^2$  is smaller than the table, means that the set zero hypothesis is accepted, that is, that the previous communication via the Internet or social the consumer network influences the final consumption decision, i.e. the data obtained has a normal distribution.

Question number 4 - Internet shopping experience. When the significance level is less than 0.05, which in this case is 0,000, it can be concluded that the difference in the values obtained is continuously variable between these three groups. Kruskal-Wallis test revealed a statistically significant difference in purchasing decisions between three different age groups (Gp1,  $n = 25$ , 1. Group (20 year), Gp2,  $n = 62$ , 2. Group (21-30 year), and Gp3,  $n = 21$ ; 3. group (31-45 year),  $c^2(2, n = 108) = 175.119$ ,  $p = 0.000$  (Asymp. Sig.).

Showing the results for the given question given in the following table:

Ranks			
	Age structure	N	Mean Rank
Experience with buying	20 years	25	14,98
	21-30 years	62	58,24
	31-45 years	21	90,50
Total		108	
Test Statistics			
Experience with buying			
Chi-Square	75,119		
df	2		
Asymp. Sig.	,000		

Figure 7 Kruskal Wallis test

Question number 5 - Do you consider that the purchase through the use of Internet technologies will completely replace the usual one. Respondents gave the most answers to believe that this purchase will replace the traditional 49, which makes 45.37%, 34 respondents believe that this purchase will not replace the traditional 31.481% and at the end 25 of the respondents cannot assess what the situation will be in the future or 23.148 %. Based on the Mann-Whitney test, it is determined whether men and women differ in the degree of shopping on the Internet. From the table, it can be seen that the value z is -6.989 with a significance level of  $p = 0.000$ .

The probability of probability ( $p$ ) is less than 0.05, so this result ( $z$ ) is significant, i.e. there is a statistically significant difference between men and women thinking. Since a statistically significant difference has been found between groups, it is necessary to find a plan, i.e., in which the group is continuously variable, the average is larger, this view can be seen in the Mean Rank column. Therefore, the continuous variable is 67.48, i.e., female respondents have a statistically significant difference in the answers to the question raised. The following table shows the results.

Ranks				
	Gender structure	N	Mean Rank	Sum of Ranks
The future of this purchase	Male	33	25,00	825,00
	Female	75	67,48	5061,00
	Total	108		
Test Statistics - a. Grouping Variable: Gender structure				
The future of this purchase				
Mann-Whitney U	264,000			
Wilcoxon W	825,000			
Z	-6,989			
Asymp. Sig. (2-tailed)	,000			

Figure 8 Mann- Whitney U test

## CONCLUSION

All consumers are different, so they buy different products and services. Consumers in the shop are driven by motives, desires, instincts, needs, desires, habits and according to them, and buy. Many studies have shown that more and more emotions are prevalent in the selection of products and services. Consumer behaviour in Bosnia and Herzegovina depends on the purchasing power of the population, as the purchasing power of the population is lower and consumer behaviour moves within the framework of the procurement of basic life necessities, and occasional higher purchases on sales.

Shopping habits of consumers in Bosnia and Herzegovina are under great pressure from promotions, especially promotion through social networks. Based on the results of the research, it is concluded that the respondents are well acquainted with advertising messages on social networks and that they are true followers of them, and hence the zero hypothesis is set:  $H_0$  - Internet technologies influence the behaviour of consumers and the final decision on the purchase is confirmed.



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## CONSUMER ATTITUDES ON ELECTRONIC COMMERCE IN BOSNIA AND HERZEGOVINA

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### Summary

*Nowadays more and more companies in Bosnia and Herzegovina who use or are in the phase of the start of electronic commerce. To obtain the right image of the state and potential of electronic commerce, on the one hand, we must observe companies and their relationship to new tendencies in business, but at the same time, we must observe attitudes and behaviors of consumers and their view of the electronic trade.*

*This paper aims to establish the consumer's relation to electronic commerce, as a new form of trade. Consumer attitudes, as well as the areas that are subject to the interest of consumers who use this trade, are explored in the paper.*

*In the procedure of verification of the established hypothesis, different scientific methods were applied, the most significant of which are the methods of surveying, method of analysis, method of synthesis, comparative method, and statistical method.*

*The results of the survey indicate that a positive consumer relationship is present in Bosnia and Herzegovina according to Electronic commerce, as a new aspect of trade and that consumers are ready to cooperate with companies by realizing the purchase of a sale transaction, that the number of potential users of electronic commerce is increasing day by day and that there are certain areas of consumers who are interested to use the Electronic commerce. Based on the research carried out, it can be concluded that there is a willingness of consumers to accept Electronic commerce as a more comfortable form of purchase, to create loyal relationships with companies offer products and services through electronic commerce and that there are fears of misuse in the realization of online purchases in a number of consumers.*

**Keywords:** *Electronic commerce, consumers, Bosnia and Herzegovina, online shop.*

**JEL:** 37

### INTRODUCTION

The development of information-communication technologies has enabled half of the 1980 years to develop a new trade institution – electronic commerce. Having in mind the expansion of this vision of trade, both in the world and in Bosnia and Herzegovina, the goal of this work is to explore attitudes of consumers related to the perspective of the development of electronic commerce in Bosnia and Herzegovina.

Expansion of the development of electronic commerce has significantly increased through the mass use of the Internet. In this sense, the consumer's relationship to marketing campaigns carried out by the company on the Internet in the function of improving communications with consumers, arriving at new customers, reducing business costs and increasing profits.

The analysis of electronic commerce in the world shows that positive tendencies in the use of electronic commerce are present. Models of electronic commerce from the aspect of business and relations among participants in electronic commerce were developed.

Using e-commerce enables customers to make purchases easier, availability of products, lower prices, adaptability to individual requirements, convenience shopping and some other advantages.

To obtain relevant knowledge about the situation and trends of e-commerce in Bosnia and Herzegovina, a survey was conducted on the consumer's views on e-commerce. The results of the research indicate that in Bosnia and Herzegovina there is both the information and communication infrastructure for the development of electronic commerce, as well as the critical mass of potential customers, as well as the commitment of companies to develop this type of trade.



On the basis of the research carried out, it can be concluded that in Bosnia and Herzegovina there are assumptions for the development of electronic commerce with aspects of companies and consumer, but at the same time, the state should adopt the legislation, which is necessary for the advancement and further development of this trade vision. The analysis of the results suggests that the perspective of the development of electronic commerce lies with young and educated users and company managers, which aim to achieve the best results both in terms of customer satisfaction and sales and marketing communications.

### RESEARCH OF CONSUMERS ON ELECTRONIC TRADE-IN BOSNIA AND HERZEGOVINA

To define the questionnaire on consumer attitudes on e-commerce, literature and theoretical concepts as well as applied research in the world were analyzed. Also, the questionnaire contained 26 questions, which could be answered with several possible answers and questions for assessing attitudes that covered the following areas:

- Basic indicators on the use of the Internet,
- Consumer attitudes on electronic commerce and
- Demographic issues.

To create a more complete picture, it was necessary to look at the state of the infrastructure: the number of computers, ways of accessing the Internet, etc., but the most important thing is to explore their relationship to e-commerce. In this regard, the following elements have been analyzed: how buyers accept e-commerce as a new form of trade, what are the elements that attract the most in selecting purchases via e-commerce, how they come up with data on trading venues on the Internet, what are the marketing activities that attract them to access the sales outlets of electronic commerce, which the population best accepts electronic commerce, and what are the threats that customers are afraid of by trading through electronic commerce?

The results were presented in a way to monitor the logic of the questionnaire and the research problem.

The aim of the research is knowledge of attitudes and consumer relations to electronic commerce. In this sense, the following elements are analyzed:

- How do consumers accept e-commerce as a new form of trade?
- What are the elements that attract the most in the selection of e-commerce purchases?
- How do you find information about trading sites on the Internet?
- What are the marketing activities that attract them to access e-commerce outlets?

- Which population best accepts e-commerce?
- What are the threats that buyers are buying e-commerce?

### Hypothesis of research

The paper examines the working general hypothesis. Consumers have a positive attitude towards e-commerce.

From the working hypothesis the following auxiliary hypotheses are performed:

- Consumers are opting for e-commerce because of the convenience of buying, the possibilities of easy selection, the possibility of seeking additional information, the possibility of achieving a loyal relationship with sellers and asking for creative offers,
- Consumers prefer to establish links with companies through e-commerce, but do not like excessive marketing activity,
- Consumers have color from e-commerce because of the security of payment and the quality of ordered goods.

### Research methods

Following the practice of scientific-research work, a combination of several scientific methods and research methods of data collection has been applied in the work. The combination of methods was necessary to achieve a higher level of cognition and a higher level of precision, hence the relevance of the results obtained.

The data collection instrument was a questionnaire. For surveys, Google Docs is used to send and receive results in electronic form, and then analyze and direct communication with citizens, whose questionnaires are automatically entered into the Google Docs database for analysis purposes. The survey method sought to collect the primary data, attitudes, and opinions on electronic commerce.

### Limitations in the field of research

The survey was based on surveying with approx. 500 other citizens in Bosnia and Herzegovina. Surveying was carried out electronically. The research limits consist in that only one number of e-mail users have been provided a survey, so that the obtained research results do not necessarily reflect the real state, and that research is carried out in a developing country where the application of information technologies is far below the level of the developed countries. On the other hand, the research includes only electronic commerce, as one of the elements of the electronic business, and the research has an influence and cultural aspect, as well as the uneven distribution of information-communication technologies on the entire territory of Bosnia and Herzegovina.

The research sought to obtain information from all over Bosnia and Herzegovina, but no feedback was provided from certain parts.

The highest number of respondents in the survey belongs to a group of advanced Internet users, who use the electronic trade and other services provided by the Internet, while there were users who simply responded to the request not to use the electronics store and did not want to participate further in the surveys as well as those who have declared themselves to use electronic commerce occasionally, but are unable to respond to the questions raised in the questionnaire. These respondents and they are a significant number, were not taken into consideration when analyzing the results of the research.

## RESULTS OF RESEARCH AND ANALYSIS

### Defining the target group and sample selection

Primary data were collected to obtain relevant data in the market of Bosnia and Herzegovina. These data were collected by a survey i.e. using the questionnaire. The survey covers 500 persons. The choice of natural persons was performed according to the regional principle, so that 230 e-mails sent to the entity area of the Federation of BiH, 230 to the entity area Republic of Srpska and 40 e-mails in the area of Brčko District. One part of the e-mails are addressed to people in colleges in both entities, government ministers, delegates in cantonal assemblies, and one part from the databases of e-mails of individual Internet providers by non-selective choices. Part of the e-mails was sent to the recommendation of friends, acquaintances and business partners to certain addresses. The aim was to create a dispersion in the entire territory of Bosnia and Herzegovina and to be represented in both urban and rural environments.

### Formatting the survey

The questionnaire was done using Google Docs and was generated to be displayed in the Web form. The persons to whom the email was sent were accompanied by a cover letter, asking them to take part in the survey and explained the aim and purpose of the survey, and in the accompanying letter was given a link to access the questionnaire, so by clicking on the given link it came to the form for participation in the survey. Participants in the survey were able to easily answer all questions from the questionnaire. After responding to questions and confirming the completion of the survey process, the data was generated in a database that was later used in the analysis.

## Results of research and analysis

### Pattern structure

Of the total 500 e-mails sent, 67 were returned for the reason of the wrong email address, or the users changed the e-mail address, which amounts to 13.40%. Several open, probably read (Reader rate-open rate) The message is 397, which amounts to 79.40% and the number of participants (replies) to the survey is 289, which is 57.80% compared to the number of received or open emails. One email number was not read (36; 7.2%), probably because the recipient immediately deleted them or ended up as spam in the recipient. This level of response represents a satisfactory level compared to the average so far conducted online research. According to Dave Chaffey's book Total E-mail Marketing, according to Aaker, Kumar and Day Marketing Research, CATI's response rate is 31%, while the answering rate is 20% by e-mail methodology. According to Krile's research, K. the response rate for the territory of Croatia is 14%, which corresponds also to the Bosnian-Herzegovinian environment. The response rate in our case is 57.80%, which is a satisfactory level with the average of the on-line research conducted so far.

58.13% of men and 41.87% of women participated in the survey. This information may indicate that men spend more time on the Internet than women, but also that the representation of women's internet users is quite large.

The maximum number of respondents is in the age of 36 to 45 years (23.88%), followed by an age structure of 25 to 30 years (22.15%). From the obtained research results it is possible to conclude that the impact on consumers of electronic commerce should be carried out segmented for different age structures and to adapt to the content and offer according to the age structure, to be able to obtain appropriate results.

Various approaches to the Internet, in technical terms, have enabled a mass connected to the Internet. Customers can choose how they want to connect to the Internet. In addition to the connection via the telephone line, there are also ADSL, Cable internet, wireless (Wireless internet), in recent times and mobile Internet, so it is able, regardless of whether it is urban or rural environments, Internet connection in one of the possible ways.

Conducted research does not exactly give the right picture in the cities, i.e. regions related to individual cities. The highest participation in the survey was taken by the recipients of electronic mail that gravitated to Sarajevo (13.15%), which is logically due to the population, followed by Zenica (9.69%), Banja Luka (8.65%), Tuzla (6.23%) and Mostar (4.48%), and from smaller towns Doboj (4.15%) and Tesanj (4.84%). Distribution by other cities is given in Table 1.



From this distribution, it can be concluded that the development of electronic commerce depends on whether it is urban or rural environments. However, a larger market for the development of electronic commerce can be expected in urban environments.

Populated places	Number of respondents	%
Banovići	5	1.73
Banja Luka	25	8.65
Bihać	8	2.77
Bijeljina	5	1.73
Brčko	7	2.42
Bugojno	9	3.11
Cazin	3	1.04
Čitluk	2	0.69
Doboj	12	4.15
Donji Vakuf	4	1.38
Drvar	1	0.35
Foča	3	1.04
Goražde	4	1.38
Gornji Vakuf	2	0.69
Gračanica	5	1.73
Jajce	6	2.08
Laktaši	1	0.35
Livno	2	0.69
Ljubuški	2	0.69
Maglaj	5	1.73
Mostar	14	4.84
Mrkonjić Grad	2	0.69
Neum	2	0.69
Prijedor	4	1.38
Sanski	2	0.69
Sanski	4	1.38
Sarajevo	38	13.15
Srebrenica	3	1.04
Teslić	3	1.04
Tešanj	14	4.84
Tomislavgrad	3	1.04
Travnik	7	2.42
Trebinje	3	1.04
Tuzla	18	6.23
Visoko	7	2.42
Vitez	9	3.11
Zavidovići	5	1.73
Zenica	28	9.69
Zvornik	4	1.38
Žepče	8	2.77
Total:	289	100,00

Table 1: Distribution of respondents by places in Bosnia and Herzegovina

The highest number of replies were given by respondents who have completed the faculty (53.29%), followed by respondents with a four-years of secondary school (15.57%), college or university (15.22%), and bearing in mind that a number of surveys were sent to the participation took 7.61% of the Masters and 1.73% of the Ph.D., Table 2.

	Number of respondents	%
The secondary vocational school completed and less	8	2.77
Completed four-year of high school	45	15.57
College or university	44	15.22
Faculty	154	53.29
Specialization	7	2.42
Master's Degree	22	7.61
PhD	5	1.73
Else	4	1.38
<b>Total:</b>	<b>289</b>	<b>100,00</b>

Table 2: Formal Education

Observing the research from the aspect of the current career status, the biggest participation was taken by persons belonging to administrative workers (21.80%), middle management (20.42%), students (13.49%) and top management (10.73%). A large number of respondents responded with the second but did not specify the status (21.80%).

	Number of respondents	%
Student	11	3.81
Student	39	13.49
I do physical work	0	0.00
Administrative worker	63	21.80
Machine worker	0	0.00
Manager	10	3.46
Middle management	59	20.42
TOP Management	31	10.73
Unemployed	7	2.42
Pensioner	6	2.08
Else	63	21.80
<b>Total:</b>	<b>289</b>	<b>100.00</b>

Table 3: Current career status

Participation in a poll depending on current career status reflects on responses depending on average net monthly earnings. People with higher incomes are generally more present on the Internet. This result can also be used in segmented performance by online consumers.



	Number of respondents	%
Up to 300 KM	33	11.42
301 to 500 KM	14	4.84
501 to 800 KM	30	10.38
801 to 1000 KM	55	19.03
1001 to 1500 KM	83	28.72
1501 to 2000 KM	36	12.46
Exceeding 2000 KM	38	13.15
<b>Total:</b>	<b>289</b>	<b>100.00</b>

Table 4: Monthly admission of respondents

### Using the Internet

From the aspect of the time spending on the Internet, research results show that most subjects used the Internet several hours a week (75.43%), while several hours per day used (4.84%) of subjects and approximately an hour daily used (18.69%) subjects. The conclusion can be drawn that given the time it spends on the Internet, there is great potential for the implementation of electronic commerce.

	Number of respondents	%
More hours per day	14	4.84
Approx. hour per day	54	18.69
A few hours a week	218	75.43
Sometimes monthly	1	0.35
Rarely	2	0.69
<b>Total:</b>	<b>289</b>	<b>100.00</b>

Table 5: Internet usage Frequency

Internet access has been present in Bosnia and Herzegovina for a long time. This is confirmed by the results obtained about the time of using the Internet. Most respondents use the Internet over 5 years (82.70%), and from 2 to 5 years (10.73%), so it can be concluded that only a small number of populations use the Internet for a smaller time. Less use of the Internet refers mainly to respondents from rural areas since there is still a middle ground in Bosnia and Herzegovina that has not arrived at any means of accessing the Internet. The situation is repaired day by day, in addition to the expansion of ADSL Internet access possibilities that are usually realized via telecom operators, the expansion of both cable infrastructures and WiFi internet access is significant. In those areas where it is not possible to access any of the above-mentioned modes, and they have a mobile phone signal they can gain access through mobile Internet, which has been offered by telecom operators recently.

	Number of respondents	%
Less than 1 year	5	1.73
1 to 2 years	14	4.84
2 to 5 years	31	10.73
More than 5 years	239	82.70
<b>Total:</b>	<b>289</b>	<b>100.00</b>

Table 6: Using the Internet

Respondents usually access the Internet from home (35.29%) or combine access to both home and workplace (33.56%), while 23.18% of respondents access the worksite. Internet access from schools, colleges, internet clubs, libraries, and other places is insignificant.

The development of new technologies and Internet access possibilities not only from computers but also from mobile phones, tablets, iPad's enabled users to have Internet access in any location, so that one number of respondents (4.50%) benefits and Benefits Access to the Internet from any location where it is located.

This is also a significant indicator of the possibility of the development of electronic commerce so that transactions will be able to be realized no matter where the user is located and which channel comes to internet access.

	Number of respondents	%
Workplace	67	23.18
At school, at the university	3	1.04
In an Internet club, library or other public places	2	0.69
at home	102	35.29
Other places	3	1.04
At home, other places	2	0.69
In the workplace, at home	97	33.56
In all places listed	13	4.50
Total:	289	100.00

Table 7: Places to use the Internet

	Number of respondents	%
ADSL Access	156	53.98
Wireless Access (wireless)	57	19.72
Cable modem	63	21.80
Phone Modem on the analog line	1	0.35
Phone modem on ISDN line	7	2.42
Else	3	1.04
I do not understand the question	2	0.69
Total:	289	100.00

Table 8: Internet access type



### Frequency of using the Internet for different purposes

To investigate how often and for what purpose respondents use the Internet, they calculated the arithmetic mean and standard deviation for each of the categories in which respondents responded to the Likert scale of five degrees of frequency: Never, rarely, monthly, weekly and Daily. The results are given in Table 9.

	Number of respondents	Arithmetic mean	Standard deviation
Searching for information	289	4.85	0.45
Using e-mail	289	4.72	0.76
Getting interesting magazines	289	2.85	1.35
Searching for purchase information	289	3.36	1.23
Purchase	289	2.34	1.18
On-Line Conversations (MSN, Skype)	289	3.76	1.42
Education	289	4.24	1.04
Find a Job	289	2.47	1.40
Fun	289	3.69	1.39

Table 9: Arithmetic mean and standard deviation of respondents' responses to questions about the frequency of Internet use for different purposes.

How we can see from Table 9 respondents use the Internet on a daily basis to search for information ( $M = 4,85$ ;  $SD = ,45$ ) and use of e-mail ( $M = 4.72$ ;  $SD = ,76$ ). At least once a week they use the Internet for education ( $M = 4,24$ ;  $SD = 1.04$ ), online conversations ( $M = 3.76$ ;  $SD = 1.42$ ) and entertainment ( $M = 3.69$ ;  $SD = 1.39$ ). At least once a month they use the Internet to search for information for purchases ( $M = 3.36$ ;  $SD = 1.23$ ) and obtaining interesting magazines ( $M = 2.85$ ;  $SD = 1.35$ ). These rarely use the Internet to search for work ( $M = 2.47$ ;  $SD = 1.40$ ) and purchase ( $M = 2.34$ ;  $SD = 1.18$ ). Table 10 Below brings the results of checking the normality of the response of the respondents to the question about the frequency of Internet use for different purposes. Indicators were used Kurtosis and Skewness.

	Number of respondents	Kurtosis	Skewness
Searching for information	289	16.767	-3.738
Using e-mail	289	9.637	-3.140
Getting interesting magazines	289	-1.236	0.214
Searching for purchase information	289	-1.023	-0.296
Purchase	289	-0.332	0.723
On-Line Conversations (MSN, Skype)	289	-0.964	-0.716
Education	289	0.956	-1.359
Find a Job	289	-0.900	0.643
Fun	289	-1.231	-0.545

Table 10: Check the normality of the distribution of responsiveness of respondents to a question about the frequency of using the Internet for different purposes.

From Table 10 we can see all the variables investigated except Searching for information and Using e-mail according to the above criteria do not deviate significantly from a normal distribution. Searching for information Kurtosis is greater than 10 (16.767) and Skewness less than -3 (-3.738) while Using e-mail Skewness less than -3 (-3.140).

Since most variables according to the indicators used are Skewness and Kurtosis corresponds to the requirements of a normal distribution, it is justified to apply parametric statistical procedures, including factorial analysis.

Table 11 presents the characteristic roots and the percentage of explanations of the variant obtained by implementing the factorial analysis on respondents' replies to the question about the frequency of Internet use for various purposes.

	Characteristic root	% explained variant	Cumulative% of variants explained
Factor 1	2.69	29.9%	29.9%
Factor 2	1.38	15.3%	45.2%

Table 11: Characteristic roots and percentage explanation variant obtained by factorial analysis on responses related to the frequency of use of the Internet for various purposes.

As we see from the table 11 analysis, we extracted two factors, the first of which explains 29.9% and the other 15.3%, respectively, a total of 45.2% of variants.

Table 12 below brings the factorial structure of the respondents' responses to the question about the frequency of using the Internet for different purposes.

	Factor 1	Factor 2
Searching for information	0.74	
Using e-mail	0.69	
Getting interesting magazines	0.62	
Searching for purchase information	0.54	-0.53
Purchase	0.50	
On-Line Conversations (MSN, Skype)	0.50	0.47
Education	0.47	-0.44
Find a Job	0.45	
Fun		0.68

Table 12: Factorial structure of responses related to the frequency of use of the Internet for different purposes.

If we look at Table 12 we can see how Factor 1 associated with more frequent information-seeking ( $\beta = .74$ ), by using e-mail ( $\beta = .69$ ), obtaining interesting journals ( $\beta = .62$ ), searching for information for purchases ( $\beta = .54$ ), purchasing ( $\beta = .50$ ), on-line conversations ( $\beta = .50$ ), using the Internet for education ( $\beta = .47$ ) and searching for work ( $\beta = .45$ ). On the other hand Factor 2 is associated with the less requested purchase information ( $\beta = -.53$ ) and less frequent use of the Internet for education ( $\beta = -.44$ ) and more frequent on-line conversations ( $\beta = .47$ ) and using the Internet for entertainment ( $\beta = .68$ ).

The interpretation of the factor is based on the content analysis of the issues forming individual factors. If we look at the results from the table 14 we can see how Factor 1 could call advanced Internet usage and Factor 2 – Basic Internet usage, which is primarily focused on entertainment, but not other more advanced possibilities of the Internet such as education, use of e-mail, buying, etc.

A little over half of the respondents answered that they had made online purchases and 37.02% more than once. It is not necessary to disregard the fact that a large number of respondents 35.99% who have never made a purchase online. This data points to the need to educate Internet users regarding the possibilities of online trading, the advantages, and disadvantages of this vision of trading, as well as the development of trust in electronic commerce.

**Consumer attitudes on electronic commerce**

Respondents were mostly registered to a certain number of e-notifications. The majority of respondents were registered in 3 to 10 e-notifications (47.40%), while fewer than 3 E-notifications registered 29.76% of respondents. More than 10 E-notifications registered 10.38% of respondents, and a small number of respondents were not registered for receiving e-notification (12.46%). The results show that the majority of respondents manage and target the construction of the desired communication. Several respondents reported a few information, which is understandable given that only a small number of Internet users can maximize benefits from it.

	Number of respondents	%
Less than 3	86	29.76
3 to 10	137	47.40
More than 10	30	10.38
I have not logged on to E-notifications	36	12.46

Table 13: Registration on e-notification (current information, news, E-menstruation, online offers)

Respondents are most likely to register for receiving E-notification from the area (4.84%), followed by current Daily News (3.46%), advice from the professional area (2.08%), purchase information, sales (4.15%). Other areas are represented in a small percentage but there is interest from the respondents.

	Number of respondents	%
Current Daily News	10	3.46
News from the professional area	14	4.84
Tips from the professional area	6	2.08
Information on new education	2	0.69
Information on the purchase, sale/special information	12	4.15
Employment Ads	3	1.04
Current Daily News, purchase information, sales/special information	13	4.50
Current Daily News, purchase information, sales/special information, employment listings	6	2.08
Current Daily News, information on new education	2	0.69
Current Daily News, information on new education, purchase information, sales/special information	4	1.38
Current Daily News, information on new education, employment listings	2	0.69
Current Daily News, news from the professional area	13	4.50
Current Daily News, news from the professional area, purchase information, sales/special information	10	3.46
Current Daily News, purchase information, sales/special information, employment listings	6	2.08
Current Daily News, news from the professional area	13	4.50
Current Daily News, news from the professional area, purchase information, sales/special information	11	3.81
Current Daily News, news from the professional area, purchase information, sales/special information, employment listings	5	1.73



	Number of respondents	%
Current Daily News, news from the professional area, information on new education	2	0.69
Current Daily News, news from the professional area, employment listings	4	1.38
Current Daily News, news from the professional area, advice from the professional area	7	2.42
Current Daily News, news from the professional area, advice from the professional area, purchase information, sales/special information	2	0.69
Current Daily News, news from the professional area, advice from the professional field, information on new education	4	1.38
Current Daily News, news from the professional area, advice from the professional area, information on new education, information on buying, selling/special information	6	2.08
Current Daily news, employment listings	5	1.73
Current Daily news, tips from the professional area	3	1.04
Current Daily News, tips from the professional area, purchase information, sales/special information	5	1.73
Purchase information, sales/special information, employment listings	6	2.08
Information on new education, employment ads	3	1.04
I have not logged on to E-notifications	36	12.46
News from the professional area, purchase information, sales/special information	13	4.50
News from the professional area, purchase information, sales/special information, employment ads	3	1.04
News from the Professional field, information on new education	8	2.77
News from the professional area, information on new education, purchase information, sales/special information	4	1.38
News from the professional area, information on new education, employment ads	3	1.04
News from the professional area, employment listings	4	1.38
News from the professional area, advice from the professional field	9	3.11
News from the professional area, advice from the professional area, purchase information, sales/special information	3	1.04
News from the Professional field, advice from the professional field, information on new education	4	1.38
News from the Professional field, advice from the professional field, information on new education, employment ads	3	1.04
News from the professional area, advice from the professional area, employment ads	4	1.38
Tips from the professional area, information on buying, selling/special information	2	0.69
Advice from the Professional field, information on new education, employment ads	2	0.69
Advice from the professional area, employment listings	2	0.69

Table 14: Areas of e-notification

Regardless of what consumers receive E-notifications daily, they do not decide to buy. Only 9.69% of respondents made purchases after receiving E-notification. Subjects do not show passivity after obtaining E-notification. There is interest in the content offered so that 51.21% of them will visit the page where the offer is located to obtain new information after receiving the E-notification. Any action is not decided by 39.10% of respondents, which represents a fairly large number.

	Number of respondents	%
Yes, I did the shopping.	28	9.69
Yes, I clicked on a link in the received notification and a visit link containing additional information	148	51.21
No, I didn't get the action stimulated	58	20.07
No, no, no.	55	19.03

Table 15: Taking action after obtaining e-notification

Today's customers are not waiting for an advertisement to come to them about a product or service, to undertake a particular activity, but in view of the level of knowledge of computing and computer networks taking personal action, in order to find what they are for their needs the most favorable in terms of price, quality, design and any other conditions that can adapt to their consumer opportunities. All respondents need to explore on the Internet, but the reasons for this research are different. The largest number of respondents researched to compare prices and quality of products from different bidders (43.94%). Several respondents do so because of the inability to find a product or service in a nearby environment or the domestic market (12.11%), while several respondents are attempting to explore a similar product to the required product (10.03%). Most respondents (33.90%) have been researching on the Internet for several reasons, not stating just one reason, but all cite the reason for price and quality comparisons.

	Number of respondents	%
Product unavailability	35	12.11
Price comparison and quality	127	43.94
Search for similar products	29	10.03
Product unavailability, search for similar products	4	1.38
Product unavailability, price comparison, and quality	20	6.92
Product unavailability, price comparison, and quality search for similar products	9	3.11
Price and quality comparison, search for similar products	22	7.61
Else	43	14.88

Table 16: Reasons to search for products on the Internet

The basic principle of marketing and sales is the knowledge of consumers and their consumer habits. It is a different behavior of consumers in the classical sales of online sales. Consumer behavior in electronics stores depends on several factors. One of the factors is the Environment. If the consumer lives and works in an environment where he is talking about electronic purchases, he will decide to use the electronic way of purchasing. Also, the decision on online buying has a significant influence on lifestyle and social influences. Of course, consumer behavior on the Internet has a lot in common with the general model of consumer behavior, but also some specifics. Some factors are specific only to online buying. Among these factors are personality traits, properties of the product (whether it is adapted for sale in an online environment), the possibilities offered by the online shop through the organization of the Web site.

Research shows that the most significant factors for predicting consumer behavior when purchasing: Online Search for information about the outputs, online Conducting Part of work and private time (E.g. Send and receive e-mail messages, stay on social networks, search, etc.) | Experience gained and trust in online ordering. Similar results have come and Hernández, Jiménez and Martín examining the behaviour of customers in

the electronic trade with previous experience and after the first completed purchase using the electronic commerce<sup>1</sup>, as well as research by David Gefen in which the prerequisites for gaining trust in electronic commerce, such as intimacy, informing and trust<sup>2</sup>.

Consumers spend most of their time on the Internet exploring product characteristics and prices.

	Does the information you get on the Web can lead to purchasing this product in a classic store?		Do you read comments about the product of customers who have already made purchases before purchasing an electronic trade?		Do you collect information about the product itself on the manufacturer's website before deciding to purchase it from an electronics store?		Do you feel that you have changed your consumer habits after some transactions have been performed through electronic commerce?		If you are buying goods in a classical shop (e.g. a car salon), will you be able to collect information about the product and prices from different distributors or manufacturers through the Internet?	
	Number of respondents	%	Number of respondents	%	Number of respondents	%	Number of respondents	%	Number of respondents	%
Yes	241	83.39	235	81.31	246	85.12	79	27.34	263	91.00
No	48	16.61	54	18.69	43	14.88	210	72.66	26	9.00

Table 17: Consumer behavior in electronic commerce

The maximum number of respondents (83.39%), who took part in the poll, declared that after the information they receive on the Web, they decided to buy products in a classical shop. Before conducting the trade, consumers are informed of earlier purchases and their decision to purchase the comments on the products and services of earlier customers (81.31% of respondents). Most respondents (85.12%) collect information about the product itself on the website of the manufacturer and/or the trader before deciding on the purchase via electronic commerce. Interestingly, regardless of the number of repetitions of transactions through electronic commerce, there is a certain uncertainty among consumers regarding the conduct of online transactions so that a large number of respondents (72.66%) believe that the repetition of online purchases is not affected by to change their consumer habits. Consumers do not collect information only on products and prices of individual goods, but also for comparison with different competitors. Thus, 91.00% of respondents said that before online purchases they collected information about products and prices from different distributors and/or manufacturers.

### Use of electronic commerce

To explore how often respondents use the Internet to buy certain types of goods and services, the arithmetic mean and standard deviation of the response for each of the offered categories to which respondents answered to the Likert scale of five Frequency: Never, rarely, sometimes, often and most commonly. The results are given in Table 18.

1 Hernández, B., Jiménez, J. and Martín, M.J. (2010) Customer behavior in electronic commerce: The moderating effect of The e-purchasing experience Journal of Business Research, In Press, Corrected Proof, P. 970.

2 Gefen, D. (2000) E-commerce: the role of familiarity and trust Omega, Volume 28, Issue 6, P. 734.



	Number of respondents	Arithmetic mean	Standard deviation
Travel	289	2.34	1.41
Computers and Software	289	2.44	1.42
Books, Videos, and music	289	2.61	1.46
Clothes	289	1.98	1.22
Stock Trading	289	1.29	0.84
Cosmetics, fragrances, and vitamins	289	1.75	1.14
Electronics	289	2.19	1.33
office equipment	289	1.66	1.07
Gifts, jewelry, and flowers	289	1.78	1.17
Toys and video games	289	1.70	1.09
Foods	289	1.49	0.92
Furniture	289	1.52	0.94
Shoes	289	1.61	1.02

Table 18: Arithmetic mean and standard deviation of respondents' responses to questions on the frequency of purchases of certain types of goods and services over the Internet.

As we can see from the Table 18 respondents sometimes use the Internet to purchase books, video content and music ( $M = 2.61$ ;  $SD = 1.46$ ). Rare for buying trips ( $M = 2.34$ ;  $SD = 1.41$ ), computer and software ( $M = 2.44$ ;  $SD = 1.42$ ), clothing ( $M = 1.98$ ;  $SD = 1.22$ ), cosmetics of fragrances and vitamins ( $M = 1.75$ ;  $SD = 1.14$ ), electronics ( $M = 2.19$ ;  $SD = 1.33$ ), office equipment ( $M = 1.66$ ,  $SD = 1.07$ ), gifts of jewellery and flowers ( $M = 1.78$ ;  $SD = 1.17$ ), toys and video games ( $M = 1.70$ ;  $SD = 1.09$ ), furniture ( $M = 1.52$ ;  $SD = 0.94$ ) and shoes ( $M = 1.61$ ;  $SD = 1.02$ ). Respondents never use the Internet for trading in shares ( $M = 1.29$ ;  $SD = 0.84$ ) and grocery buying ( $M = 1.49$ ;  $SD = 0.92$ ).

Table 19 below provides the results of checking the normality of the distribution of respondents' replies to the question of the frequency of purchasing different types of goods and services over the Internet. Indicators were used Kurtosis and Skewness.

	Number of respondents	Kurtosis	Skewness
Travel	289	-0.912	0.662
Computers and Software	289	-1.156	0.461
Books, Videos, and music	289	-1.310	0.310
Clothes	289	-0.015	1.023
Stock Trading	289	10.107	3.223
Cosmetics, fragrances, and vitamins	289	0.996	1.423
Electronics	289	-0.730	0.734
Office equipment	289	1.548	1.579
Gifts, jewelry, and flowers	289	0.773	1.371
Toys and video games	289	1.076	1.469
Foods	289	2.293	1.818
Furniture	289	2.468	1.805
Shoes	289	1.557	1.597

Table 19: Check the normality of the distribution of replies of respondents to the question of the frequency of purchasing different types of goods and services over the Internet.

As we can see from Table 19 all the variables investigated except Stock Trading According to the above criteria do not deviate significantly from a normal distribution. Code Stock Trading Kurtosis is greater than 10 (10.107) as well as Skewness of 3 (3.223).

Since most variables according to the indicators used are Skewness and Kurtosis corresponds to the requirements of the normal distribution, it is justified to apply parametric statistical procedures, including factorial analysis.

Table 20 below gives the characteristic roots and the percentage of explanation of variance obtained by the implementation of factor analysis on respondents' responses to the question of the frequency of purchasing different types of goods and services over the Internet.

	Characteristic root	% explained Variance	Cumulative% of Variance explained
Factor 1	4.87	37.5%	37.5%
Factor 2	1.70	13.1%	50.6%
Factor 3	1.04	8.0%	58.6%

Table 20: Characteristic roots and percentage explanation variant obtained by factorial analysis on respondents' replies to the question on the frequency of purchases of different types of goods and services over the Internet.

As we can see from Table 20 by factor analysis, we extracted three factors from which the first explains 37.5%, the other 13.1%, and the third 8.0%, or in total 58.6% of the variance.

Table 21 sets the factor structure of the response to questions about the frequency of purchases of different types of goods and services over the Internet.

	Factor 1	Factor 2	Factor 3
Furniture	0.70		
Shoes	0.70	-0.49	
Electronics	0.66	0.47	
Gifts, jewelry, and flowers	0.66		
Clothes	0.66	-0.37	
Office equipment	0.63	0.31	
Toys and video games	0.62		-0.34
Cosmetics, fragrances and vitamins	0.62	-0.47	
Computers and Software	0.61	0.54	
Books, Videos, and music	0.59		
Foods	0.56		
Stock Trading	0.45	0.53	0.32
Travel	0.45		0.76

Table 21: Factorial structure of respondents' replies to questions on the frequency of purchases of different types of goods and services over the Internet.

If we look at Table 21 See how Factor 1 associated with more frequent purchases of all these goods and services. Factor 2 is associated with the areas of shoes ( $\beta = -.49$ ) and clothing ( $\beta = -.37$ ), and the more frequent purchasing of electronics ( $\beta = .47$ ), office equipment ( $\beta = .31$ ), computers and software ( $\beta = .54$ ) and trade in stocks ( $\beta = .53$ ). Factor 3 is associated with a rarity buying toys and video games ( $\beta = -.34$ ) and with more frequent trading of shares ( $\beta = .32$ ) and the most significant with the purchase of tourist arrangements ( $\beta = .76$ ).

Bearing in mind the meaningful interpretation of the factors, Factor 1 could be called the General Factor of Internet Purchase, Factor 2 Purchase of electronic equipment where it is also associated with the trading of shares, and Factor 3 Purchase of tourist arrangements.

A very important determinant for e-commerce development is the availability and wide application of electronic payment systems. The majority of respondents using electronic payment use credit cards Visa and MasterCard (36.33%). In Bosnia and Herzegovina, other services are less available. Many respondents besides credit cards use PayPal service, which has recently been enabled in Bosnia and Herzegovina. Users are likely to develop an online store to get acquainted with other online payment services and choose the ones that are most favorable to them at the time. However, more than a quarter of respondents (25.95%) do not use any form of payment, and these are mostly respondents who declare themselves not using electronic commerce. Consumers have concerns about the use of electronic commerce. It turned out that even those who have repeatedly bought something via e-commerce do not change their consumer habits. The biggest reason for the greater use of electronic commerce is the possibility of product quality assessment (10.73%). Another important reason is the fear of misuse of other personal information provided during the purchase (8.65%), followed by theft from the theft of the credit card number (7.61%). Respondents also cited the problem of large transport costs (6.57%). 21.45% of the respondents gave other reasons but did not explain what the reasons are. The rest of the respondents cite a combination of two or more reasons why they do not take more participation in e-commerce buying, and their review is given in Table 22.

	Number of respondents	%
Fear of stealing a credit card number	22	7.61
Inability to estimate product quality	31	10.73
Fears of non-delivery of products	8	2.77
Large transport costs	19	6.57
Large customs costs	9	3.11
Worried about the misuse of other personal data provided when purchasing	25	8.65
Large transport costs, large customs costs, fears of misuse of other personal data that are given when purchasing	2	0.69
Fears of theft of a credit card number, fears of non-delivery of the product, fears of misuse of other personal data that are given when purchasing	8	2.77
Fears of theft of a credit card number, fears of non-delivery of products, large customs costs, fears of misuse of other personal data that are given when	5	1.73
Fear of stealing a credit card number, fearing the misuse of other personal information that is provided when you purchase	13	4.50
Fears of theft of credit card number, inability to estimate product quality, fears of non-delivery of products	9	3.11
Fears of theft of credit card numbers, inability to estimate product quality, fears of product failure, fears of misuse of other personal data that are given when purchasing	10	3.46
Fears of stealing a credit card number, inability to estimate product quality, fears of misuse of other personal data that are provided when purchasing	9	3.11
Fears of theft of credit card numbers, inability to estimate product quality, large transport costs, fears of misuse of other personal data provided when purchasing	15	5.19
Fears of non-delivery of products, large transport costs, large customs costs	6	2.08
Inability to estimate product quality, fears of non-delivery	14	4.84
Inability to estimate product quality, fears of misuse of other personal data provided when purchasing	10	3.46
Inability to estimate product quality, large customs costs	12	4.15
Else	62	21.45
Total:	289	100.00

Table 22: Reasons for greater use of electronic commerce



As the most significant obstacle to purchasing using the Internet respondents cited a lack of security (41.87%). The second most important obstacle is the lack of physical contact (16.26%), while 11.76% of respondents consider them as barriers and lack of safety and lack of physical contact. Other numbers of respondents cite a combination of two or more reasons as barriers to purchasing using the Internet while 21.80% of respondents have no attitude about it. Also, respondents cite one of the obstacles for a large supply of products in classical stores (4.50%). An overview of the pre-sale for the use of online shopping is given in Table 23.

	Number of respondents	%
Lack of safety	121	41.87
Large product supply in classical stores	13	4.50
Lack of physical contact	47	16.26
Lack of safety, lack of physical contact	34	11.76
Lack of safety, great supply of products in the classic stores	5	1.73
Lack of safety, a large supply of products in classical stores, lack of physical contact	4	1.38
Great supply of products in classical stores, lack of physical contact	2	0.69
I have no attitude about	63	21.80
Total:	289	100.00

Table 23: Barriers to purchasing using the Internet

## CONCLUSION

The results of the research indicate that in Bosnia and Herzegovina there is a positive attitude of consumers towards e-commerce, as a new type of trade. However, one of the important factors for the development of e-commerce is the number of residents within one state as purchasing power. This factor for the Bosnian-Herzegovinian situation is not so favorable as there are few inhabitants in Bosnia and Herzegovina, and the same is influenced by the changes in the structure of the population (age, education, religion, culture, the ratio of the number of male and female population, population mobility). For the realization of e-commerce, the structure of household consumption is also important, how much is spent on housing, food, clothing, energy, travel and the like. The development of electronic commerce is contributed by the level of education of the population for the use of information technologies.

The results of the survey show that in Bosnia and Herzegovina, information and communication technologies almost equally use both sexes, with men accounting for 16% more access to and use of the Internet. The population of the respondents mostly moves between the ages of 25 and 45 years, which indicates that, regardless of age, there is interest in using new technologies in the purchasing process.

In urban areas, the use of the Internet is more represented, which is understandable, since all technological innovations are first realized in places with a larger number of inhabitants, and then they are gradually transferred to rural areas. The results of the survey show that a very important feature and educational structure, since the largest share in the survey was taken by persons with completed faculties.

Also, an important social factor is the monthly income of the population, which is also shown by the results of the research that the highest percentage of respondents have an income ranging from 800,00 KM to 1500,00 KM. The restriction of purchases via e-commerce also stems from a cultural relationship to this type of trade.

Bearing in mind the obtained results of the research on the views of customers on e-commerce, it can be concluded that the general hypothesis of labor is confirmed that consumers have a positive attitude towards e-commerce. In addition, the results confirm the auxiliary hypothesis of the research that: consumers choose for e-commerce because of the convenience of buying, the possibilities of easy selection, the possibility of seeking additional information, the possibility of achieving a more loyal

relationship with the seller and asking for a more creative offer; consumers like to establish links with companies via e-commerce, but do not like excessive marketing activity, and consumers have a fear of e-commerce because of the security of payment and the quality of ordered goods.

The results show that companies in Bosnia and Herzegovina need to understand the messages sent by consumers and to work more intensively on the transformation of their business, with the mandatory introduction of electronic commerce in addition to the classic way of doing business.

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## PRAGMATIC MODEL FOR PREVENTING AND COMBATING OF CORRUPTION AND MITIGATING OF ITS CONSEQUENCES

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### Abstract

*This paper deals with the problems of gathering evidence of corruption acts by computer or digital forensics. It presents a diversity of forms of corruption in our area and explores possible ways of keeping out corruption and mitigate its harmful effects, which are provided by a legal framework, and furthermore some suggestions from the experience of other countries. By the term mitigation of harmful effects of corruption, there are methods of digital forensics used to collect evidence of offenses committed which is valid and accepted in judicial proceedings. Moreover, some unconventional methods of corruption prevention and combating, which have not been brought up so far, are observed as well as the mitigation of corruption in society and its economically devastating effects. It also suggests a model of raising public awareness of corruption and cyber-crime and their prevention through informal education and training of students.*

**Keywords:** *corruption, digital forensics, preventing and combating of corruption, mitigating of corruption consequences, pragmatic model*

### INCENTIVES FOR CHOOSING A STUDY TOPIC

I am not sure whether the situation in sales, retailing and marketing are still the same as it was in the mid-1970s when I was a young researcher at the Institute of Economics<sup>1</sup>, but I am sure that the issue has been tackled up to the present, just maybe expressed in another form. The issue is about crime in marketing, retailing, and sales. During those years, I participated in an international project called "Development of Bosanska Krajina Agricultural complex" (FAO 514/74) where I met an FAO expert, a marketing professor from France. I recall that at the beginning of his presentation he said something like this: "There is only one book in France whose contents keep growing and updating while its sales increase. Its title is "How to Shoplift and Methods and Measures of Preventing Thefts". Explaining that, over time, new ways of stealing from the store were always found and then methods and ways of detecting such thefts. Over time, this type of 'activity' in marketing, trade, and sale had been constantly increasing, so after introducing the Internet (1993) and gradual transition from classic to electronic business, a new era of criminal started. Today it has spread not only on marketing, trade, and sale but also on all other forms and segments of human action. However, nowadays it is generally

called 'crime and corruption' at the top level (state economy). I very well remembered that statement from a visiting researcher in the field of marketing from France and now, after many decades of my research, I wrote an article on a similar topic and I want to share it with you. I have written an article (on local language) on the phenomenon (*Digital Forensics in Evidence and Mitigating Corruption Effects*<sup>2</sup>), whose theme is primarily oriented to the "final stage" of criminal activities of theft and corruption in society today. These are forensic activities in the role of preventing the effects of corruption.

<sup>1</sup> The Institute of Economics, University of Banja Luka

<sup>2</sup> Roljić, L. (2013). Digital forensics in evidence and in mitigating the corruption effects. Proceedings of the Faculty of the Legal Sciences University of Vitez, (5) 87-101.



## INTRODUCTION

Even though corruption exists since ancient times, society has focused on it in the last ten years, when the media started to warn us of various irregularities, violations, and crimes. Today, people are much more writing, doing and speaking about it. Corruption is a global problem that exists in all countries but different proportions. It is present in poor and rich countries, as well as in underdeveloped and developed countries. It is present in all areas of life and work. The reasons for the development of corruption are complex and the ways to control corruption are not everywhere equally developed. It is constantly changing its shape in response to the rapid development of international business. Its long-term effect is negative, which is why it deserves more and more attention everywhere in the world. Corruption has become a major problem for businesses, governments, and individuals. "Corruption in the public and private sector threatens the stability and prosperity of Bosnia and Herzegovina. It undermines confidence in government institutions, hinders economic development and fair market competition, undermines the rule of law, democracy, and human rights, undermines good governance, fairness, and social justice, it enables the growth of organized crime and terrorism, threatens the stability of democratic institutions and moral foundations of society". [1] It is generally confirmed that corruption harms all aspects of development. Evidence from around the world confirms that corruption hurts the poor, discourages economic growth and development, reduces the effectiveness of public services and institutions and deters private investors and investments. Corruption represents a political, social and cultural problem of a society that enables activities and development of organized crime. For this purpose, the society must use all available resources to prevent it.

The perpetrators of corruption offenses usually use the latest technologies that are available to them, and that's how they, often unconsciously, leave traces of the time, content, participants and other details of the crimes. Those devices contain a significant amount of data that can be used as evidence. Exactly those devices and the data they contain are the main subjects of interest in digital forensics. Digital forensics can be defined as a set of scientific methods for the preservation, collection, validation, identification, analysis, interpretation, documentation and presentation of digital evidence derived from digital sources to confirm or help in the reconstruction of events which are often of a criminal nature.

The process of digital forensics, from the moment an incident or offense occurs, goes through four basic stages: the gathering of information, data and material evidence, search for and review of relevant data, the analysis focused on finding answers in the specific expert evaluation/expertise

and preparation of reports. The results of the investigation are presented to the person who asked for the investigation in an appropriate way, i.e. in a trial in which the forensic expert becomes a witness. In court, the results of the investigation conducted by the forensic expert should be presented to the lawyers, the judge and the jury in written form (report) and orally. A professionally conducted digital forensic analysis can mitigate the deleterious effects caused by corruption if it provides maximum evidence of the offense in legal proceedings, which is valid and recognized as evidence, which will help to make an objective and fair judgment for the perpetrators of criminal offenses.

## DEFINITIONS OF CORRUPTION

According to the Law on the Agency for Corruption Prevention and Coordination of the Fight against Corruption in Bosnia and Herzegovina [6] corruption means any abuse of power entrusted to a civil servant or a person in a political position at the state, entity, cantonal level, the level of the Brčko District of Bosnia and Herzegovina, the city or municipal level, which can lead to private gain. Corruption, in particular, may involve direct or indirect requesting, offering, giving or accepting of bribes or some other improper advantage or its possibility, which violates the proper performance of any duty or behavior expected of the recipient of the bribe.

The Council of Europe defines corruption as any activities of persons entrusted with the responsibility in the public or private sector, that are in conflict with the obligations arising from the status of a public servant in the private sector, an independent agency and other relationships of this kind, and that are aimed at the acquisition of any undeserved benefits for themselves and for others.[5] The classic definition, which is used by the World Bank and Transparency International, says that corruption is a misuse of public office for personal gain. According to the OUN Convention, corruption includes the following types and forms: bribery, embezzlement, theft, and fraud, blackmail, abuse of discretion, nepotism and favoritism.[3]

As in other countries in the world, different areas of corruption in B&H have their specific importance. In B&H, this includes: judiciary (judges, prosecutors and other members of the judiciary), the police (as the second-largest segment of the public administration), politics (state officials, including members of parliament and other officials in governments, government agencies and other state and para-state institutions), health care, legal entities and private businesses, schools and universities.

## FIGHT AGAINST CORRUPTION

Effective fight against corruption requires close cooperation of the entire society and international organizations for help. Its main goal is focused on the prevention of corruption. Significant progress in the fight against corruption in B&H was made in December 2009 with the establishment of the Agency for Corruption Prevention and Coordination of the Fight against Corruption. One of the goals of the Agency is, by the beginning of 2014, to begin with, the preparation and implementation of the latest programs for corruption prevention and education programs to raise awareness about the fight against corruption.[2] Prevention of corruption means the totality of systematically designed, organized and undertaken measures and activities which seek to eliminate or reduce the direct and indirect causes of corrupt behavior.

Some of the world organizations solved differently the issue of fighting corruption. Organization for Economic Cooperation and Development - OECD is a key forum for the fight against corruption in the past 20 years and has played a key role in the establishment and promotion of anti-corruption standards and principles.[5] The OECD has applied a multi-disciplinary approach to fight corruption. This approach includes work in areas such as the fight against bribery of foreign public officials, fiscal policy, the integrity of the management of the public and private sector and development assistance and export credits.

## DETECTION OF CORRUPTION

It is well known that today we still can not reliably predict the occurrence of earthquakes, lightning, etc., neither can corruption be predicted, especially because it mostly involves people in higher positions in the social hierarchy, who are called "untouchables", but also those in lower positions, positioned lower in the hierarchy in the public service, but who are corrupt people.

As medicine calls some diseases (heart, brain, blood flow) "the silent killer", the same could be said for corruption in the society because it is an instance of a dangerous, covert, mainly criminal activity. It is discovered, if at all, when the damage has already occurred for society or individuals, it is often irreparable - like an incurable disease in medicine and its fatal consequences.

Detection of corruption is a difficult task because it is a criminal activity that involves a limited number of people, including the government, with a high degree of discretion. None of the participants in this activity feels like a victim of crime so that nobody reports it, therefore it is difficult to detect it.

Computer technology has come a long way in recent years and has become a part of various aspects of

our lives, which may contain information and clues about the perpetrator and the act of corruption:

- Personal equipment (cell phones and related devices, audio and video players)
- Equipment in the apartment (telephone, fax, video and similar equipment, DTV, automated home appliances)
- Computer and related equipment in offices and homes (server, personal computer, laptop, palmtop computers - PDAs, wired and wireless infrastructure)
- Identification documents (e-index, "smart cards", e-social)
- Credit and debit cards (Visa, Maestro, American, Diners, etc.)
- E-information (news, newspapers, forums, social networks, advertisements).

New technologies have been introduced in business, such as:

- Factories use technological advances and replace old appliances with sophisticated equipment to improve their production.
- Wherever possible, paper archives are replaced by the electronic database.
- Managers in companies use different electronic planners instead of paper notebooks.
- Internet users have become participants in the online store.
- In hospitals, patient files have been replaced by information in electronic form.
- This new form of data storage means significant improvement compared to the previous situation, but it also opens the door to a group of people who misuse this information. Data has become easily available, and the technology itself has brought powerful tools in their hands.

Then, it became necessary to protect the data stored in that way.

- Application of new technologies has created a need for different types of data protection, but no matter how successful science is in this aspect, the person who wants to get some information always finds a way to do so.
- Participants in on-line shops have realized that someone was stealing their money from the account, companies have noticed unauthorized access to important data, banks have been defrauded in transactions executed by an unknown person from the outside.
- It has become evident that we are more and more often victims of a new kind of crime that should primarily be prevented, but if it happens, then the key role in the detection of perpetrators and their conviction today has a relatively new scientific field - digital forensics.

The perpetrators of corruption offenses usually use the latest technologies that are available to them, and that's how they, often unconsciously, leave traces of the time, content, participants and other details of the crimes. Those devices contain a significant amount of data that can be used as evidence. Exactly those devices and the data they contain are the main subjects of interest of digital forensics.

## PREVENTION OF CORRUPTION

Corruption is certainly a problem that can be restricted by law and institutional measures, but that still does not mean that corrupt mentality in society has been eliminated. The experience of countries that have successfully coped with corruption shows that their anti-corruption strategy is built on three equal and complementary anti-corruption levels:

- They have developed good “situational prevention”, which means that they have limited the opportunities for corruption,
- The increased repression against perpetrators clearly shows that corruption does not pay, and
- Special attention is given to the effort to change cultural patterns in society.

The law has a crucial impact on digital forensics because there are strict rules on the acceptance of the data collected as evidence. Laws are not the same in all countries, but their purpose and intent are the same. To truly treat the collected information as evidence, a high level of formality should be maintained in dealing with the investigated digital devices.

Since digital forensics is a new scientific discipline, the laws that are the basis for the recognition of electronic evidence in courts are still incomplete and ambiguous, and the constant advance of technology leads to a growing body of evidence, tools, and confusion.

Digital forensics certainly is not the solution that can prevent any corrupt or criminal act, because it appears after the events, but it can certainly serve to mitigate the damage caused by a criminal act.

## DIGITAL FORENSICS IN THE FUNCTION OF MITIGATING THE EFFECTS OF CORRUPTION AND CYBERCRIME

*Forensics* is the process of using scientific methods in collecting, analyzing and presenting evidence in court. The meaning of the word forensic comes from the Latin word *forensis*, which means “of or before the forum”. *Digital forensics* can be defined as a set of scientific methods for the preservation, collection, validation, identification, analysis, interpretation, documentation, and presentation of evidence, i.e.

data that is stored, processed or transmitted in digital form, or that is derived from digital sources in order to confirm or help in the reconstruction of events which are often of a criminal nature. Digital forensics involves methods of collection, analysis, and presentation of evidence that can be found on computers, servers, computer networks, databases, mobile devices, and all other electronic devices that can record and store data. Such evidence can be useful in criminal proceedings and proceedings before the courts, civil cases, and proceedings within the company in the management of human resources, i.e. in the process of hiring and firing workers. It is important that none of the equipment or procedures used in the investigation of digital devices (computers or other digital media) gets destroyed or changes the data on the investigated device.

Digital forensics used to deal only with persistent data, i.e. data stored on the local hard disk or some other media that remain on it even when the device is turned off. After the Second World War, computers have slowly but surely become the database of human activities. This trend accelerated with the development of personal computers (1980), the Internet (1991), and the convergence of computer science, telecommunications and multimedia (2000). Nowadays, in the era of networks, it is more and more important to collect, review and analyze volatile data. Volatile data are the data stored (saved) in memory or transit and will be lost when the device is turned off. Volatile data are found in the registers, cache memory, working memory of computers, that are lost when digital devices are turned off, and because of their nature, the collection of these data must take place in real-time.

Today's world of networked digital devices provides opportunities and challenges for criminals and investigators, governments, institutions, business, communication, as well as for the users who are aware of the importance of privacy preservation. We live in a digital world where most information is created, intercepted, transmitted, stored and processed in digital form. Digital information affects and is used in every aspect of life. Our starting point is that it is particularly used in criminal activities, including the offenses of corruption. Many people who maliciously use information and communication technologies assume that it can get lost, simply misplaced, in a sea of desk-top and laptop computers and network computer equipment used in the world, and that they are safe from criminal liability. However, if abuse of digital devices (mostly a computer) is discovered, it can be searched for evidence and analyzed, and it is possible to determine the responsibility of the person who committed the misdeed. This is exactly what experts of digital forensics do.

Cybercrime is a form of criminal behavior, in which the use of computers and other information and communication technology and information



systems is manifested as a method of committing the crime, where a computer or computer network is used as a means or purpose of committing the criminal offense. Computers and other information and communication technologies can be abused in various ways, and the crime that is committed by using a computer may take the form of any of the traditional forms of crime, such as theft, fraud, embezzlement, and the data that are obtained by unauthorized misuse of information system, can be used in various ways for obtaining illegal benefits. It can be stated that cybercrime is a form of criminal behavior with a cyber environment in which computer networks appear as a mean, objective, evidence or environment of committing a crime.[7] Digital evidence of the commission of crimes can be collected from multiple sources. Common sources are: personal computers, mobile phones, digital cameras, hard drives, optical media, USB storage devices, settings of digital thermometers, car black boxes (if any), RFID tags<sup>3</sup>, websites, etc. The process of digital forensics, from the moment an incident or offense occurs, goes through four basic stages:

- Gathering of information, data, and material evidence  
When performing a forensic investigation, it is necessary to take special measures if the evidence should be admissible in court. One of the most important measures is to ensure that evidence is collected properly and that the chain of evidence possession from the crime scene to the laboratory, and finally to the court, has been respected.  
Digital device over which the criminal offense was committed or which was the tool for its conducting, should be brought to a forensic laboratory for analysis in the condition it was found. The data are copied from it using forensic tools, and this copy is the foundation of the investigation. It is called forensic copies. The investigation is never done on the original device because it has to serve as evidence. Therefore, none of the data it contains can be altered. The copy must be credible to be the object of investigation. Sometimes the digital device can not be transferred to the laboratory and the copying must be done on the site of the commission of the offense. After various methods had proven the authenticity of copies, the data are collected and then analyzed.

<sup>3</sup> RFID (Radio-Frequency Identification Device) is the wireless non-contact use of radio-frequency electromagnetic fields to transfer data from the RFID tag on an object (mostly on goods in self-service stores) to a computer or another device that is able to receive and process the data.

- Search for and review of relevant information
- The analysis focused on finding answers in the specific expert evaluation/expertise
- Preparation of reports (which is done partly also in the first three parts). The report is a synthesis of the collected documents, identified evidence and the results of the analysis. The report should contain the time and date of the analysis, results described in detail, it should be written in simple language to be easily comprehensible years later. In preparing a report, it is good to sort out two things: what was done and what was found. The report is the most important phase of digital forensics, and if it is incomplete or does not follow closely the documentation of tools, processes, and methodology, all the work is made in vain. Therefore, in the part that describes what was done, each step taken in the collection of data should be accurately described and provided with arguments, a precise time journal should be kept, skipped steps should be explained, and each test carried out in order to prove that evidence was not compromised, should be recorded.

The results of the investigation are presented to the person who asked for the investigation in an appropriate way, i.e. in a trial in which the forensic expert (permanent court expert) becomes a witness. In court, the results of the investigation conducted by the forensic expert should be presented to the lawyers, the judge and the jury in written form (report) and orally (during the examination of witnesses). Regardless of who asked for findings and opinion, the forensic expert has to explain the results of the investigation in a simple way, taking into account that the same can happen again, or that someone else can come to the same conclusions. Often, lawyers, judges, and juries pass basic courses in digital forensics as a quality preparation for the trial.

## TRAINING AND EDUCATION TO PREVENT CORRUPTION

The main goal of preventing corruption is to prevent its occurrence. Therefore, according to the Strategy, the most important thing is to establish adequate anti-corruption programs to ensure the education and training of all, to protect society and minimize the effects of corruption. To achieve this goal, it is necessary to create conditions that minimize opportunities for corruption and minimize its effects. In addition to effective prosecution of perpetrators of corruption offenses, the introduction of stricter rules and procedures in conducting administrative processes in the public administration and local government, there are other also conditions that should be created to reduce the effects of corruption

to a minimum, according to the Strategy for the Fight against Corruption in Bosnia and Herzegovina (2009-2014), such as: simplification of rules and procedures before administrative and judicial bodies, establishing and strengthening of the effectiveness of law institutions and institutions for the prevention, full transparency and strengthening of responsibility in the administration, and elimination of patronage, nepotism, and favoritism. As a goal to be fulfilled until 2014, it was stated that the Agency for Corruption Prevention and Coordination of the Fight against Corruption will work to prevent corruption, to raise public awareness about the problem of corruption, and among other things, to take special measures in education and training. This education should receive all those who are involved in the implementation of the new rules. Also, all public servants in B&H will take at least one training in ethics and anti-corruption based on the adopted programs, which will be regularly evaluated. Additionally, all primary and secondary schools and universities should in their curricula have the same training programs in the field of ethics and anti-corruption.

It is an undeniable fact that the anti-corruption efforts will be sustainable only if specific measures in the field of education and training are taken. The change in the rules is not enough. People who need to implement the new rules should be properly trained and united in common positive values. It is essential to take targeted measures to ensure that all public officials understand that corruption is not an acceptable way to achieve personal interests and that every attempt of that kind will be drastically punished. By the end of the period of implementation of the Strategy the awareness of society as a whole should be raised, and also of individual professional groups about the damaging effects of corruption.

#### **A PRAGMATIC MODEL FOR THE PREVENTION OF CORRUPTION AND CYBERCRIME**

The model for the prevention of corruption and cybercrime in B&H, which is here suggested, should be implemented in the complete secondary and higher education system. This model, which would consist of education and training for the prevention of corruption and cybercrime, would be as follows:

- Mandatory 2-3 populist lectures on the “grey” and “black” economy, measures of prevention, methods to mitigate the consequences of corruption, which in B&H takes 60-70% of the legal economy (measured in terms of annual gross domestic product), should be included at all faculties and higher schools of economics, in the final year of study, and in the final grades of general secondary schools and secondary schools of economics.

- Mandatory 2-3 populist lectures on cybercrime and corruption should be included at all faculties of law and economics and in the final grades of general secondary schools and secondary vocational schools.
- Mandatory 2-3 populist lectures on ICT – Information and Communication Technologies and the way they are used in the performance of cybercrime and corruption should be included at all faculties of technical sciences and faculties of natural sciences and mathematics and in the final grades of all secondary schools. Then, mandatory 2-3 lectures on hacking, spamming and destruction in computer and information science in general (viruses, false names, etc.).

The basic idea of this model of training and education in the fight against corruption and crime and their prevention lies in the fact that all students (from secondary schools and faculties) should learn about the “other side” of the technical, legal and economic reality, i.e. about the areas that are not taught by current curricula, but which exist in reality and are extensively used by destructive and criminogenic people for any act of corruption and criminal offenses in order to obtain personal gain at the expense of others, or for personal satisfaction again at the expense of others.

We have called the model “pragmatic” because it can be easily explained in one, although a bit long sentence: “Let all those against whom is directed this model for the prevention of corruption and cybercrime now know that we know what they use and abuse, how they cause damage to society, and that means to us that we morally condemn them because of that, but we remain on the right side of the scientific and technical reality, and we will use all forces and all legal means to try to stop them in their further criminal activities and “efforts” of destruction and to mitigate the negative consequences that such (criminal) activities of theirs cause”.

However, the idea of this model is faced with the problem of its practical implementation, and that is the question: Who can, who will be able and is it possible to find candidates who can authoritatively and professionally run this special education and training on the “other side of reality”? It is desirable that this education and training are conducted by the most qualified people, and those are, as we know, people who have a great experience in one of these special areas, but they are mainly people who have already been convicted of similar (miss) deeds or other people who are on different grounds of conflict of interest in serving on this honorable operation of education and training, or who are serving a sentence just because of such acts of crime and corruption. And most of them could not meet the minimum qualifications required for teachers of secondary schools and faculties, because most of them do not have adequate qualifications, and

especially because they do not meet any other requirements and criteria that teachers in our elementary and secondary schools and faculties must-have. However, the solution can be found by hiring experts from the European Union that solved the problem of the prevention of corruption long ago. The European Union has its laws and directives which regulate poorly defined and undefined aspects in the field of corruption and cybercrime.

## CONCLUSION

In this study, we investigated the phenomenon of corruption, its areas in Bosnia and Herzegovina, then devastating and harmful effects that it causes, and the ways how the problem of prevention and combating of corruption was solved in the region, in the European Union, the OECD, the OUN, and Transparency International. Corruption is equally harmful in societies at all levels of development. In societies on the path of democratic transformation and transition, the problem is bigger and more difficult, because new needs require several tasks, and the means and methods for their completion are still underdeveloped or insufficient.

Areas of corruption in B&H are: judiciary (judges, prosecutors and other members of the judiciary), the police (as the second-largest segment of the public administration), politics (state officials, including members of parliament and other officials in governments, government agencies and other state and para-state institutions), health care, legal entities and private businesses, schools and universities.

The effects of corruption are classified as economic and socio-political. The economic consequences include: jeopardizing the market economy, reduction of the gross domestic product, impairment of investments, increased indebtedness and the increasing poverty of the citizens. The social and political consequences include violations of democratic institutions, increased expenses of government, lack of trust in the institutions of the state, expansion of organized crime, destruction of the moral values of society and a sense of hopelessness and apathy of citizens.

We have accepted the division of corruption prevention into situational and social as just and legitimate. Situational prevention of corruption means an effort to eliminate situations in which corruption occurs and social prevention is an integral part of the overall development strategy and includes measures of social, economic, legal, educational, and other policies, i.e. the inclusion of the entire society to reduce this phenomenon. We concluded that significant progress in the fight against corruption in B&H was made in December 2009 with the development of the Strategy for the fight against corruption and the adoption of the Law on the Agency for Corruption Prevention and Coordination of the Fight against Corruption. The

long term goal of the Agency, among others, is to raise awareness among the population about the dangers of corruption and the education program for the prevention and fight against corruption in public institutions.

We concluded that we can not fight corruption alone, that the fight against corruption must be an organized and time-consuming process of applying systematically designed measures for its prevention and control. It was also concluded that the current fight against corruption was mainly dealing with the improvement of the legal and institutional segments. Considering those informatics as science also has its problems with crime and corruption, it has developed a separate field called computer forensics, which is now generally called digital forensics. All those technologies that carry the information revolution are at the same time the carriers of the evolution of digital forensics. It has grown in its evolution to such an extent that it can now show and prove how people using information and communication devices can commit a crime or leave the marks of committing a crime on a medium.

Considering how we can give our contribution to the fight against corruption and its prevention, in this paper we have opted for sensible and efficient use of digital forensics in the preparation of accurate forensic reports, which are used as evidence by the courts against the perpetrators of the crime.

Also, we have examined possible ways of combating corruption and its prevention in developed societies and the region and have seen that there are no effective means and methods of this fight and no idea about the possible ways of preventing corruption. In our society, this means that for the fight against corruption we have only, as before, the legal and statutory regulation of this matter. Informatics has given an outstanding contribution to this fight in recent years using the methodology of creating a portal on the Internet calling for reporting findings on corruption and crime and information on committed criminal offenses. In order to make a contribution to the effective fight against corruption and its prevention, we have developed and suggested in this paper a model of prevention of corruption and crime using informal education and training in the formal education system - in all secondary schools and faculties, which can and should support the achievement of one of the long-term objectives of the Strategy on Establishment of the Agency on raising public awareness about the problem of corruption in B&H. We called the model pragmatic because it wants to achieve pragmatic goals and ideals of moral values in society.



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## COMMUNICATIONS

Professor Lazo Roljić, Ph.D.

Editor-In-Chief

### COMMUNICATION

Some days ago as the author of one article published in the last issue of the International Journal of Sales, Retailing, and Marketing-IJSRM, I got an invitation letter from the editor of one journal from the US.

Since I am proud of a compliment I have got in this letter, I present it to you in an original form in this issue of the IJSRM.

Dear Lazo Roljić,

I'm Sophia Walker, the editor of *Journal of Business Theory and Practice* (ISSN 2372-9759 (Print) ISSN 2329-2644 (Online)). I have had an opportunity to read your paper "GAME THEORY IN SALES, RETAILING AND MARKETING PRACTICE" which is published in *International Journal of Sales, Retailing and Marketing*, and can tell from your work that you are an expert in this field.

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