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The Effect of Employer Brand on Talent Management

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Abstract

The main purpose of the study is to explore the need of building a successful employer brand and its effect on attracting and retaining talent in the organization in a context of high turnover and skill shortage. Critical analysis of the theoretical concepts and a historical review is made. The article gives examples how big companies build their employer brand (L'Oréal, Netflix, Salesforce). Examples are given for the Bulgarian market with companies which operate here like Southerland, SAP Labs, etc. A comparison of good practices with a well-established employer brand is made and guidelines are given for organizations in Bulgaria in which no such practices have been observed. The methods which used for gaining the information are Internet secondary data and direct observation in companies. This article will serve to the readers and employers to understand why the topic is so important these days and eventually to prevent some loses if they implement some of the good practices described in the research.

Keywords: employer brand, retaining talent, good practices.

1. Introduction

Nowadays building and employer brand to attract talents is a must. In days where every company has problems with finding and retaining the right talents, high turnover, skill shortages and lack of sufficiently qualified people, employer branding gets the most important instrument for attracting talents. All the companies that want to attract the top talents must take care for the image of their brand. Building an employer brand gets more and more popular and those who haven't built an attractive image as an employer have lower chance to be visible, to be the employer who is able to gain talents in a world with employers with more popular brands.

2. Philosophy of the research on the effects of employer brand

The goal of the research is to explore the need for employer branding in the context of shortening skills and the situation with attracting and retaining talents which is getting more and more complicated. The proof is in giving examples of popular organizations which brand is already build and presenting their point of view. How employer branding affects attracting talents, there are any positive results as a result of the positive image of the organization as an employer, does the lack of employer branding harms the achieved results in talent acquisition process- these are all questions concerning the research.

The research is a Qualitative one. It reports a detailed description of the problem to building an employer brand that attract talents by gathering secondary data by experienced companies, direct observation in small typically Bulgarian company and analyzing it with the help of the theoretical framework provided at the beginning of the analyzes. The uses of the research will serve the needs to understand the theme, why it is important to the modern world and what motives the companies to build a positive image as employers. It provides insights about the problem and it may inspire future quantitative research which can analyze with punctual data and statistics the effect of employer branding on talents.

What differs this Qualitative Research from others is that it uncovers trends, opinions and thoughts how building an employer brand affects the attraction of talents providing arguments thanks to the explored literature and the evidence in media. The research can also be characterized as an Analytical one because it analyzes the results of the companies which pay attention to the employer branding and it makes comparisons between best practices.

In order to provide as much representative information as possible were selected for analysis six of the international companies who have the most popular employer branding strategies and are hiring top talents so I can explore the effect of employer branding on the attraction of employees.

The importance of employer branding which is applied in our country is also analyzed through secondary data about the companies which operate within the Bulgarian market. No interviews were needed because companies which are branded as good employers have a lot of information on their corporate websites and on social media.

The added value of the research is the fact that the already published data are analyzed and placed in a broader context.

The last part of the study is direct observation, a typical small company in which the author temporarily had access to the company's practices. Unfortunately, negative effects were found from the lack of care of the management staff for the employer's brand of the organization – high 3 turnover and dissatisfaction of the employees. That doesn't mean that because we are not branded as a good employer, they quit, but it raises questions and suggests some steps and measurements that could be taken into consideration.

Statistics (mainly from the professional network LinkedIn and from Glassdoor) and theory for the employer branding support thesis of the importance of the topic nowadays and the examples of good practices are valuable for the research analyzes.

3. Historical review and critical analysis of theoretical concepts for employer branding

The term “employer brand” was first introduced to audience of managers in 1990 (Barrow, 1990). After that, Tim Ambler (Senior Fellow in London School of Business) gives a definition for employer brand in the *Journal for Brand Management* in 1996. Within it the authors define the employer branding as a package of functional, psychological and economic benefits which are provided in the employment process and are identified by the employer (Barrow & Mosley, 2005).

Until 2001 the Conference Board in North America (<https://www.conferenceboard.org/events/talent>) searched approximately 140 companies and approximately half of them claimed to be engaged in employer branding and that it affects them in a positive way. Another survey was conducted in 2003 by *The Economist* among their readers, 61% of which know what employer branding is from, which 41% are non-HRs (Gupta at al., 2014). The first book on employer branding was published in 2005 and there was a second one in 2006.

The growing status of employer branding was once more confirmed in 2008 by Jackie Orme who is the general director of the Institute of Personnel Directors in the UK. His opening status to annual CIPD conference was stating that at the beginning of his career nobody was discussing the employer branding and many people even didn't know what it is. According to him at that moment employer branding is integral to the business strategy. Companies will tend to talk, integrate and establish more and more strategies related to employer branding (Schuhmacher & Geschwill, 2008).

If we accept that Orme was right 13 years ago, now employer branding has to be extremely growing trend, even a must, executed by many companies. Still some changes should be made within the companies to achieve better results but now at least everyone knows what employer branding is. According to Stephan Rathgeber (2017) by Manpower Germany retaining talents is not an easy task but those employers who want to achieve good results should keep some golden rules and best practices for the employer branding. Rathgeber emphasizes on that the successful employer branding includes several parameters which are of higher importance to attract talents. At first employers should ask themselves "why should anyone work for you?". This provides them the chance to think what can be improved and once they formulate it, they can answer employees' questions why they should work for them and will provide arguments for them. The company's mission, vision and values should be defined very well and properly communicated. LinkedIn surveys also support Stephan's these that employees are attracted if the company has a purpose (Vesty, 2016).

Moreover, employer branding should be visible. Employers must think digital. They need well-structured website where all the career opportunities are described. If it is mobile and user friendly, the chance to attract a talent is higher. Some studies show that 89% of those who search for jobs use their mobile phones. The easiest way to know more about a company is when you travel with the public transport and use your mobile device, to take a look on the corporate website. The corporate website provides the opportunity to develop e of the employer branding. It is the first step which develops the brand and it can provide image of the company which is interactive, structured and cohesive.

Depending on the audience successful employer branding includes involving the social media. According to researches 62 percent of the applicants visit the social media and 76 the corporate website. Social media help not only to communicate the employer brand but also to involve employees and talents in order to build an interactive employer brand. The brand should be defined but flexible according to Stephan. In other words, employers should not be afraid to criticize themselves and to admit their mistakes. There's no perfect employer brand. The imperfections give a chance for development.

Part of the recruitment process is the onboarding. This is a process which can be both positive and stressing. If the process is made to be smooth it can turn into long-term engagement. Involving the new employees in the processes builds strong relationships between all members. The strategy of onboarding can also be integrated within the corporate website. There could be a place on it where employees can share their positive examples so they can attract talents.

Stephan Rathgeber (2017) relates building successful employer brand to attract talents with building a community. He emphasizes on that community matters to the positive brand. According to him many of the companies with employer branding strategies like Mars, Google and P&G apply their strategy connecting it to the community. The branding approach focuses on social and 5 stakeholders' company responsibilities. Of course, companies should not use popular topics but things which are related to company characteristics.

Other authors define the employer branding like a number of benefits. Like Van Dam (2006: 13) who states that "employer branding is a logical process through which companies reach one main goal: to have a strong appeal on their current and future ideal employees." Companies

who fit into this definition offer number of features: positive image on the labor market, high recognition, employees in touch with the psychological contract, economic and psychological packages, special attention to the employees, differentiation from the other employers, policies that provide stability. Thus, the effects on employer branding will result in organization identity, loyalty and productivity which will attract other employees.

Statistics also support building an employer brand as a key aspect of the attraction of talents. To measure employers' reputation is becoming more and more important component of building an effective strategy. According to a survey in 2016 by Glassdoor (Glassdoor U.S. Site Survey, January 2016; *Updated from 94%, Glassdoor survey, October 2014) 69% of the respondents are more likely to apply for a job where the employer take care for it brand by updating their profile on social networks, shares updates on their culture of work. Moreover, 76 percent of them want to learn more information what makes the company attractive employer. They want to earn more about the salary, additional benefits, basics of company's products and lastly but still about the values, mission, vision, etc. People tend to be emotionally attached to the brand that the employer provides. The statistics by Glassdoor also shows that 84% of people are ready to leave their jobs for organizations that have better corporate reputation.

4. Good practices

Amongst the companies with higher employer reputation are General Electric (<https://www.ge.com/>), L'Oréal (<https://www.loreal.com/>), Netflix (<https://www.netflix.com/>), Lithium Technologies (<https://www.crunchbase.com/organization/lithiumtechnologies>), Salesforce (<https://www.salesforce.com/>). All of them have updated websites, social media profiles. Of course, all they have bigger budgets than the small companies for employer branding but some of their practices are possible to be applied anywhere else (Guest Blogger, 2017).

General Electric are working on a strategy where they publish a video introduced by an average developer who is trying to convince his close friends and family that his job is exciting. The problem is that no one understands his profession. That is why General Electric takes time to understand their audience and create high quality video which has a button for job applying. They also have special career site where all the open positions are available. They use the approach of actively communication with their future employees by understanding their psychology which is a guarantee for a profession that worth.

Interesting example is L'Oréal, a company who has many followers because of their products. It turned out that 70% of their followers on LinkedIn are potential job seekers who are interested in working in the company. At that time L'Oréal took advantage of this opportunity and ran a campaign called "Are you IN". During the campaign the advocates of the company shared their story in the company. This resulted in long-term strategy for engaging the top followers into building their employer branding and in acquiring many talents. They also have a YouTube channel where their employees show what is to work there. Of course, in their case not only the employer branding works for them but also their famous products. Still the employer branding is important because it adds value to the brand.

Netflix go far beyond the typical employer branding. They announced their policy for parental leave in 2015. It means that its employees have unlimited time with their children within the first year of their birth. The company is rated as one of the top employers in Glassdor so it looks like their parental leave concept works with the combination of good salary and additional social benefit packages. Another company which has high rating on Glassdoor is Lithium. They publish videos which are filmed very well with the name "Kickin" t at Lithium. They just film really funny and inspiring atmosphere in order to attract talents. All the companies which I mentioned build their positive image as an employer in Social Media. Salesforce is a company which is

followed by 750 million users. They are using a hashtag #dreamjob. The employees are actively engaged in posting about their “dream job”. They are using real people from the company to post their real stories. They use high quality photos on their Instagram page. They even won an award Employee’s Choice, Best Workplaces for Working Parents.

Getting an award and being publicly appreciated always scores high in employer branding and brings top talents. Speaking about awards the company which won “Employer brand of the year” in Bulgaria for 2018 is Southerland Bulgaria (<https://www.sutherlandglobal.bg/bg/>). They are multinational company with thousands of employees. Of course, they have a high turnover as a call center and they need to hire new employees every month which means that they need to be really attractive. On Bulgarian level the labor market is really small and they should be paying 7 much attention on how employees – current and future – see them. The specifics of the award are that the company contributes to the relationship between the leaders, the implementation of the HR strategies which plays an essential role for attracting talents.

Their website describes how they take care for their employees. They have published detailed information about the benefits like excellent salary, excellent office environment and working conditions, relocation package, flexible working hours, team buildings, career development opportunities and additional social benefits. Moreover, they announce that they are always open to new talents offering them a variety of positions. This action is really important for employers that offer positions. They even state that they answer within a short time which is always a good sign that the organization is responsible and takes care for its current and future members. There is even a place where people can upload their CV.

“We invest in our people. Our teams are at the heart of each process transformation.” is the quote on their top page. No matter if it is true or not such quotes which share that it is in company’s values to invest in people attract talents who want to develop. They even share employee stories on their website just like L’Oréal and Salesforce. What they do is not only to share stories about their top management and how they developed within the company but they also share about the experience of the support. Such roles are not the key one which transform processes but are roles which are often needed within the organization it is important for such people to know that they are important.

Another international company with office in Sofia which has also won „Employer brand of the year” award in 2015 is SAP Labs Bulgaria (<https://www.sap.com/bulgaria/about.html>). According to Glassdoor (2016) they have 5-star rating. The pros according to the employees is that there are many training opportunities, great work environment and culture, fascinating projects, free lunch, many opportunities. They are top employer and many developers are attracted by the company but providing top products means that they have to hire and attract top talents. That is why they are paying much attention to present themselves as a good employer.

They provide publicity to their vision, mission and strategy for talent management both in social networks and on their website. Their talent management strategy emphasizes on that they take care for their top talents, they advertise themselves as a good employer, the information how they treat their employees is a public one. It looks like their vision is not only on paper because they have very low turnover – about 2% of their employees quit annually and their employees stay in the company average 5 years. Some of the reviews in Glassdoor are that they have really nice culture. This means that they really have achieved to build a brand which attaches emotionally their employees.

Big international companies have higher budgets for employer branding. Smaller one like the one I work for find some difficulties in building a brand which is popular and appreciated by the talents. We don’t have a big budget for advertising and our corporate website is created to

serve our clients and it is managed outside Bulgaria. Still, we can make some changes and we have a plan what should be done.

At first, we should become visible at least on social networks. We can post in linked in and in Facebook not only about the open positions in the company but also about the activities like teambuilding which we organize for our team members. All the additional social benefits should also be visible on our website or on social networks. If we build strong connection among our employees, they can be involved in the processes. Actually, it is easier to publish positive information about our organization online which is presented well than to achieve real results and to be employer which deserves its employees.

Many organizations nowadays rely on recommendations when they are on the search for new employees. We should ask ourselves are our employees satisfied by us so they can recommend us as a place which is worth to work for. The answer is no because there is a high turnover and high dissatisfaction of the employees but some steps must be taken into consideration. The first step of good employer branding is defining values, goals and a direction. Then it is easier to present it to the people who work for you and to convince them you want to invest in their development. A specific thing which we do which is a step for the employer branding is the referral bonus that our employees get when they recommend a friend. That helps them to give them the chance to work in environment with their friends. Once they feel valued, part of the community they will spread positive information about us and the employer branding will execute its main role – to attract talents.

5. Critical analysis of the results of the study

Our understanding of the employer branding is that this is the term which is used to describe the employer's reputation and what is its value to the employees. Employer branding differs from the reputation of the organization as a whole or as the reputation of its products. Employer branding means that the employer has a positive image on how it threatens its employees and how it presents its values and how others see them. Employer branding is closely related to attracting talents because nowadays people are not searching only for salary, remuneration package but they want to be emotionally attached to the organization they work for. They want to feel respected and that their leaders are taking care for their development, work-life balance and well-being.

To summarize employer branding is a combination of values, written and unwritten norms of the organization. Such a "strategy" needs a lot of communication in order to attach emotionally employees and to make them believe that they are valued in their organization. If the organizations have employees who value them the process of attracting talents is just getting started. Employer branding works for the employer from the process of understanding something for the organization, to applying for some of the open positions, through recruiting, spreading positive information about the company, to attracting friends and professionals to join the organization. People tend to invite people who are appropriate for the organization only if they are also sure that the organization is appropriate for them so in order to be in touch with the employer branding, organizations should pay attention to building its brand every day.

"Once employees feel valued, part of the community they will spread positive information about us and the employer branding will execute its main role – to attract talents" – is the quote of the research that summarizes the importance of the role of the employer brand on the attraction of talent. The research confirms why employer branding is so important nowadays by giving examples of popular practices in big companies. It shows the relation between the employers that have built a successful brand and their positive results of attracting top talents. It

also shows the negative aspects of the lack of effective employer branding which results in turnover.

Typical examples as a proof for the results are companies like L'Oréal, Salesforce and etc., who take advantage of their followers and turn the job seekers into potential future employees of their companies. They show that the steps to success are telling real stories of people in their companies and engaging them into the employer branding process.

Such strategies are really beneficial nowadays:

- (1) At first, they are innovative,
- (2) Secondly, they are visible, and
- (3) Thirdly they are attractive and make employees feel valued.

In such situations the effect could also be reversal because social networks are always showing only the positive side of the things and when an employee enters such organization get really disappointed there because this is work after all, not heaven.

More important than the positive image of the organization on their websites and social networks is the real feel they provide. It really works for building a successful employer brand.

The conclusions drawn by the researches are that to keep your talents, employers should take care of the following steps in building a successful employer brand: defining purposes and explaining them to the team members, admitting mistakes and being flexible, taking care for the onboarding process and building a community with strong leaders. These steps should not be only taken into consideration but also should be explained to the employees so they can feel secure, empowered, productive and part of a community.

In support of my research the statistic shows that 84% of the people are ready to search a job with better corporate reputation.

Though years ago, no one has ever heard of employer branding, nowadays as Orme predicted in 2008 employer branding is part of big companies' business strategies and a must. Those who don't share their values with their employees are in big problem with retaining their talents.

6. Conclusions and recommendations

Proving the need of employer branding in every company is significant in order to understand the contemporary business world. The times now are very dynamic. All the companies need skilled workforce to achieve its goals and know that if they don't treat employees properly with a competitive remuneration package, additional social benefits and good attitude they will leave. That is why people are interested in joining organizations where the work environment is good. This is the thing which can defer them from the others.

Moreover, nowadays the information whether the working atmosphere is good or not is very easy to be found. Employees are always ready to speak about their organization and if someone is not treated fair enough, this may result into losing talents because of bad reputation. The process of building a successful employer brand is exhausting and it can't be made just for the social networks. The truth behind the social networks positive image as a good employer is more powerful because here the results are speaking. Satisfied employees bring another satisfied employee.

The need of employer branding in the context of skills shortage and the situation with attracting and retaining talents, keeping them satisfied is proved by the positive examples, by the secondary data and the statistics. The fact that more than the half of the employees are ready to leave organizations which have bad reputation means that people are attracted by the famous employers. Why not to be attracted by companies who take care about your development and give you work-life balance for example is the raised question with the clear answer that everyone should be which at the end will contribute to the processes.

Future researches may go deeper providing more evidence to the case. Now we have explored the need of employer branding and the relation of the process with attracting talents with the data and the information we have thanks to internet sources. The next research can widen the process by doing a questionnaire in a few companies and explore which are the main aspects of the employer branding which attract them. The qualitative research can turn into a quantitative one and can measure the exact results of the effect of employer branding on talents in numbers. Like after its implementation what is the turnover, the number of new attracted employees, what is their loyalty and their attitudes can be summarized and turned into statistic

7. Self-evaluation, critical analysis and study limitations

This research report has help to widen knowledge about employer branding and abilities to analyze and make relations between the employer branding and its effect on talents. The statistic background and the theory has helped for the analyzes. Still some more theoretical information could be included in the analyzes. The methodology can also be upgraded. The qualitative research can include questionnaires to the respondents (employees and how are they affected of the employer branding), interviews (to HR managers and talent acquisition specialists). The interviews can reveal information from the “kitchen” of famous companies. What we can see from the internet is only a positive information. The negatives and the parts that have to be improved should also be part of the research. Employees can also be a great source of such information. Moreover, the research focuses more on the positives and the good practices. Some information about the failures in employer branding can also be revealed and analyzed.

The research shows examples of employers who have big budgets. It is a good idea for future researches to analyze how to apply such strategies in Bulgarian old-fashioned companies.

In the same time the research does not aim to be as detailed as possible. It just proves its thesis and goals successfully.

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Effects of Advertising Through Different Digital Marketing Channels on Consumer Buying Behavior in Bosnia and Herzegovina: A Research Project

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Abstract

Advertising today is different from what is used to be before the revelation of digital marketing channels. The ultimate switch from traditional advertising channels to digital marketing channels has seen a vast expansion, expansion that has been observed in the amount of time users spend on digital devices. We can easily say that advertising is everywhere around us today, with the help of increased usage of technology, smartphones and other electronic devices that are constant during the day-to-day basis of people's lives. Therefore, it becomes very interesting to research and conclude whether this constant exposure of advertisements on different digital marketing channels have an effect on consumer's buying behavior towards advertisements of products or services. The main aim of this study is to identify and explain whether through different digital marketing channels advertisements can change the attitude of people regarding products or services and their purchasing behavior from a stand point view of consumers in Bosnia and Herzegovina. To achieve this goal, the analysis of data is based on qualitative data derived from a survey as a primary form of data collection. A research model with three independent variables (social media marketing, email marketing, and mobile phone marketing) and one dependent variable (consumer buying behavior) was developed based on the literature review. The outcomes of this research are going to provide insights of what effects through online advertisement can make changes on the consumer buying behavior.

Keywords: advertising, digital marketing channels, consumer buying behavior

1. Introduction

In the era that we live in, communication technology has occupied all facets of life. The development of technology has created new delivery platforms for both marketers and advertisers. With technological changes, digital advertising has experienced rapid growth throughout the years as it is virtually used in all sectors. Digital advertisement does not only include search and display ads but includes marketing communications executed with the use of the web, social media platforms, or mobile applications (Enginkayaa & Cinar, 2014). Digital advertising has been explained as an effective way to deliver offers and relevant messages to their audience. Digital advertisements don't only impact the way consumers consume a product, but it changes the consumers' attitude with which they look at the product.

It started playing an important role in affecting the consumer's preferences, attitude, and buying process in advertisements. Digital advertisements have become a highly attractive marketing communication tool to reach consumers through different digital marketing channels and in different geographical locations.

Traditional media marketing was considered to be very important until a few years back when digital media started rapidly growing and has become an important mode of communication in marketing and advertising. Digital marketers interact and communicate effectively and inexpensively to consumers by applying the mechanism of different marketing channels. According to Ahmed et al. (2019), different marketing channels reduce the costs of advertising. More interestingly, computers are no longer required, rather high-tech mobile phones, wireless laptops and through portals, the exchange of information can be transmitted anywhere at any time, and that's why consumer behavior is considered as an important element. Companies now tilt more towards different marketing channels because they are more cost-effective, easier to track and measure progress, provide a broader demographic reach, and lastly, higher engagement compared to traditional marketing and instantaneous feedback regarding products of services. Organizations can reach out to their consumers and interact with them and their interactions and can stimulate their purchase behavior through different media channels and measure multiple modes.

This research examines how advertising through different digital marketing channels affects the consumer's buying behavior of consumers in Bosnia and Herzegovina. The main research objectives of this study are the following:

- To find out whether consumers are aware of digital advertising and the different digital marketing channels influence on their buying decision;
- To examine the implication of digital advertising in consumer buying behavior;
- To analyze which digital marketing channels are most effective for advertising to impact consumer buying behavior in Bosnia and Herzegovina.

The following sections of this paper are organized as follows: section 2 is the literature review for this study. The third section includes the research hypotheses and research model that explains the core of this research. Lastly, section four brings focus on methodology, data, and findings which will consist of a sample and the variables used in this study to reach results, and draw a conclusion in section 6.

2. Literature review

2.1 *Advertisement*

We are all exposed to advertisements in our daily life. A simple and understandable definition of advertising would be the act of telling people publicly about a product or service and be able to persuade them to buy it. It can also be viewed as a paid form of nonpersonal communication that is directed to the consumers through various forms of media to prevent or promote any good, service, or idea. Advertisers and agencies believe that advertising is what creates magic in the market place and consumer's mind (Rahman, 2012). We cannot deny and say it does not create magic because advertisements do impact the needs and want of the consumers, and sometimes it creates needs among the people (Fatima & Lodhi, 2015).

The world is changing around us and the development of marketing methods as well as the techniques of reaching consumers and collecting information. Throughout the past decades,

companies depended on traditional methods for advertising, such as TV advertisements, radio ads, newspapers, and magazines. Unfortunately, companies have been adapting to lots of new marketing changes in the 21st century since the advances in technology. The usage of communication and information technology has increased regularly by companies to sell their products and get to know their consumers. This increase in communication and information technologies was linear throughout the years (Durmaz & Efendioğlu, 2016). Lombard and Snyder-Duch (2001) observed that the internet and other developed technologies made it a more straightforward process to create advertisements that are more targeted, but more personal, which allow consumers to participate and engage in the experience. Along with the exponential growth in the number of internet users around the world, the World Wide Web has been the fastest growing digital advertising medium over the last decade. This increase not only marks the importance of online advertising to the advertising and media industry, but the rapid development of technology in online advertisement and display formats require researches to help the media and markets focus on new medium and society to recognize the growing effect of the medium.

According to Mathwick and Wiertz (2008), companies are switching to online advertising due to cost-effectiveness and a wider reach audience, which will provide more profits than traditional advertising. Digital advertising today is defined as a form of promotion through the internet used for delivering marketing messages, ideas, experience to attract consumers (Enginkayaa & Cinar, 2014). According to Miller (2011), digital advertising is broken down into various kinds with various technologies. Digital advertising can include video, animation, and audio, and is at least as convincing as TV ads. Today consumers use digital tools and networks more than ever, and it is easy to say that digital advertising is the most suitable way to reach and affect them.

2.2 Digital marketing channels

They say that digital marketing is being recognized as a new branch of marketing that provides new opportunities for businesses. Hence, additional attention is being given to different digital marketing channels as a means of effectively advertising to consumers. Digital marketing channels refer to the use of digital communication channels to establish an integrated, focused, and measurable communication mechanism that helps businesses attract and maintain customers whole, creating deeper relationships with them (Karjaluo, Mustonen & Ulkuniemi, 2015). Today, companies and brands use different marketing channels for advertisement and provide different offers to consumers in order to promote their products, services as also to remain their competitive advantage and increase purchasing preferences. Advertising activities conducted through different marketing channels allow advertisers to direct communication with consumers at a rapid velocity regardless of their location.

When we talk about digital marketing channels, what comes to intellect is e-mail marketing, mobile phone marketing, search engine optimization, display ads, affiliate marketing, and social media marketing, and many more. This study will keep the focus on the selected four for this research. The explanation of the following digital marketing channels is defined below.

In the observation of Ahmed et al. (2019), it has been shown that e-mail marketing is a significant digital marketing channel because it enables direct communication between the customer and seller. E-mail marketing is an online digital marketing channel that uses e-mail to send advertisements or commercial information. It is a digital marketing channel that is used to reach new customers or make those that are already loyal to one brand.

Mobile phone marketing is the transmission of a message via mobile devices related to a product or service. Since the enormous increment in the mobile phone's advertisers discovered another medium of advertising in the way to connect with their clients viably. The most

utilized mobile phone advertising is through SMS (short message benefit), and it is viewed as the most productive tool compared to traditional advertising.

Social media marketing is an excellent channel for advertising, especially for building significant relationships and social interactions between consumers and sellers. It involves the use of paid advertisements on social networking sites such as Facebook, Instagram, Twitter, YouTube, and many others. Social media is booming in terms of numbers of usage and the variety of platforms established.

2.3 Consumer buying behavior

Most consumers don't go looking for advertisements. The role of the marketing and creative department is to create ads that will appeal to the audience's curiosity. Advertisement is not meant to be promoted for consumer's needs; however, advertisements are great tools to find out about a new product or service they do need. Understanding how advertising affects consumer buying behavior will allow you to create more reliable and more engaging ads. We can easily say that consumer buying behavior is a broad study field. Consumer buying behavior signifies more than just the approach of consumers towards buying a product. Qazzafi (2019) defined consumer buying behavior as a set of activities in which an individual purchase a product or utilizes a service that is based on their emotional and mental need. The complete understanding of the buying behavior is still impossible because it is very close to the human mind. If we consider understanding the behavior on a digital platform, it is quite possible through several analytical software.

According to Kotler (2001), consumer behavior is examined as a study of how individuals select, purchase, or use products or services and how different experiences or ideas satisfy the consumer's needs and wants. Solomon (2012) states that customer satisfaction is the overall measurement of customers' experience after purchasing products or utilizing services.

Several factors in the background that play a significant role in bringing the customer to its final decision. We can define it as a process that involves an individual or groups that select or use products, services, ideas, or experiences to satisfy their needs or wants. Marketing efforts, therefore, are a big key player in the consumer's consumption of products/services, ideas, and activities. How a consumer determines which products to buy is extremely important for marketers. According to Schofield (2020), many organizations give high importance to understanding consumer behavior and the set of decisions of what they buy, why they buy it, when do they buy it, and how much and how often do, they buy. Organizations focus on the needs and want, the latest trends, and potential opportunities in the market. Marketers must know how their consumers react to different products, price changes, advertisement patterns to hold their competitive advantage.

As mentioned previously, there are several factors in the background that make a consumer behave in a precise manner. Such factors affect the consumer knowingly or unknowingly; that may be within or beyond the buyer's reach. In order to perceive a better understanding, Schofield (2020) identified three key factors influencing consumer buying behavior: psychological, personal and social.

Khaniwale (2015) states that psychological factors are referred to as different perspectives, motivations, learnings, beliefs and attitudes of consumers as an individual. It describes their views and perceptions towards needs, wants and desires. This perception affects the consumer attitude towards, for example, advertising, products or services.

The value of an advertisement, product or service for any individual depends on how they perceive it, what the consumer believes about it, the motivation behind the purchase, and

attitudes towards the product. Therefore, it is necessary that companies bear in mind that they are providing the right marketing campaign, product or service for the suitable audience. Creating a negative feeling influences the human's perception as also buying behavior.

The personal factor plays a significant role in consumer buying behavior. Variables such as age, occupation, financial status, unique habits, interests, lifestyle, and opinions influence the decision that the consumer makes. For example, consumer behavior is profoundly different between young boys and older men; their needs and desires are different, as also the elements of the product.

Social factors also impact consumer buying behavior. The factor includes variables such as reference groups, role, status, and family. Social criteria concern the impact that the purchase makes on the personal relationship with other people and impact the social norms of a consumer. Marketing activities can influence these social factors marketing activities and the consumers' reaction; for example, when organizations decide to use a celebrity to represent them, the results can come out to be positive and make an impact or not work at all depending on if they relate to the right target audience. Therefore, studying the social factors of their audience will help improve the marketing effectiveness of firms.

3. Hypotheses and research model

The problem being investigated in this study is comprised of the relationship between online advertising through different digital marketing channels and the consumer buying behavior in Bosnia and Herzegovina. The research hypotheses are the following:

H1: Online advertisement through email marketing has a positive and significant influence on consumer buying behavior in Bosnia and Herzegovina;

H2: Online advertisement through mobile phone marketing has a positive and significant influence on consumer buying behavior in Bosnia and Herzegovina;

H3: Online advertisement through social media marketing has a positive and significant influence on consumer buying behavior in Bosnia and Herzegovina.

We have presented our research model based on the literature review in the figure below.

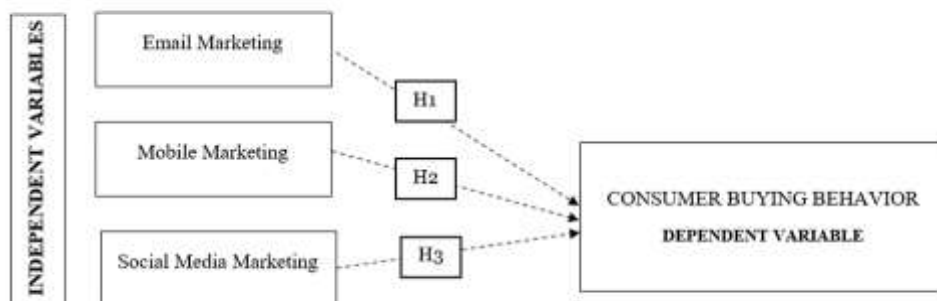


Figure 1. Proposed research model

4. Methodology

This part of the research proposal will explain the data collection activities, variables included in the study and the research methods that will be used in this study to examine the relationship between firm-specific determinants and profitability.

4.1 *Research design and measurement instrument*

Quantitative research is a study that involves the use and analysis of numerical data using statistical techniques. They pose many questions related to who, what, when, where, how much, and how many (Iftikhar & Khan, 2017). This study is descriptive research. It will give us a clear picture of the effectiveness and consumer behavior of online advertising through different digital marketing channels as compared to the traditional form of advertising. For this research, a quantitative approach will be adopted, and data will be collected through a structured questionnaire. Data will be collected from both primary and secondary sources. Primary data will be collected based on the structured questionnaire from consumers who are active users of digital communication technologies, as secondary sources will be collected from different sources like journals, books, dissertations, and will be cited in the research study.

4.2 *Population and sample*

The target population is the entire number group of individuals from which the sample may be drawn. A sample is a group of participants that take part in the investigation (Balnaves & Caputi, 2001). For this research, the selected population will involve consumers that understand the digital world. As the sample size of this research will include consumers that are active users of digital communication technologies.

4.3 *Data analysis*

For the purpose of this research, Statistical Package for the Social Sciences SPSS 20.0 software will be used to analyze survey data and provide the results in numerical percentages. In SPSS analysis tests such as descriptive statistics, correlation analysis, and regression analysis will be used to present results and conclude findings.

5. Conclusion

Digital advertising is rapidly increasing worldwide. Traditional advertising used to be the dominant medium for reaching consumers, but now digitalization and the internet changes mediums to reach consumers effectively. Digital advertisements are one of the primary tools for spreading various information and keeping consumers informed about new products, services, and campaigns. With the help of different digital marketing channels, advertisers can reach consumers at any time and any location with different content. Consumers' behavior and attitudes are essential indicators of advertising effectiveness.

This study aims to evaluate how consumers in Bosnia and Herzegovina respond to advertisements through different digital marketing channels. Can we consider digital marketing channels to be as effective as traditional advertising? As the sample size of this research will involve consumers that are active users of digital communication technologies. Data will be collected from secondary sources and through the means of a questionnaire and analyzed through SPSS software.

This study will bring finding that are beneficial to several key groups. The first key group is marketers. They can examine the effectiveness of digital marketing channels from the analysis of the results of this study and incorporate the channels in their marketing strategies. Advertising agencies can perceive a better understanding of different digital marketing channels and include in their advertisements to facilitate their consumers in a better way. The research will help serve many professionals in making effective and clear decisions how to impact the consumer buying behavior via an online channel.

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The authors declare no competing interests.

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Impact of Manufacturing Industry Performance on Economic Growth of Bosnia and Herzegovina in the pre-COVID-19 Period

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Abstract

In this research, our primary goal is to examine the impact of specific performance of the manufacturing industry on the economic development of Bosnia and Herzegovina. In view of the above, we examine the factors that are considered relevant and that have an impact on economic development, namely the gross domestic product of Bosnia and Herzegovina. Some specific performance of the industry can be reflected through the number of companies, the number of employees in the industry, the amount of exports, as well as investments within the manufacturing industry. The analysis is based on the collected quantitative data published in bulletins, releases and publications of statistical organizations in Bosnia and Herzegovina for the manufacturing industry over a period of five years (2015-2019). In accordance with the mentioned topic, a research model with essential variables, four independent variables (number of companies, number of employees, volume of exports within the industry) and one dependent variable (gross domestic product) were developed. This research will give us the results as well as insight into the specific performance of the processing industry that affects one of the most important indicators of economic development, that is, the gross domestic product of Bosnia and Herzegovina. The results that will emerge from this research will serve as a good basis for further research that could treat this topic with somewhat more identified variables. Also, it is expected that the results of this research will be useful to economic policy makers in Bosnia and Herzegovina, potential investors in some sectors of the manufacturing industry, but also educational institutions as generators of adequate staff.

Keywords: manufacturing industry, number of employees, number of enterprises, exports, gross domestic product, manufacturing industry.

1. Introduction

In addition to numerous economic activities and sectors in Bosnia and Herzegovina, within the industry, the manufacturing industry occupies a very important place. It consists of a number of economically important sectors, some of which are the production of food products, the production of tobacco products, clothing, furniture, chemicals, furniture and many others. That the manufacturing industry is extremely important is also shown by the allegations of the official institutions of Bosnia and Herzegovina that the manufacturing industry accounts for about 11% of the country's GDP, about 20% of total employment and almost 90% of BiH. export of goods (Directorate for Economic Planning of BiH, 2016). The manufacturing industry thus forms one of

the main economic sectors in Bosnia and Herzegovina (Foreign Trade Chamber of BiH, 2013). In view of the above, there is a significant reason to examine the impact of manufacturing performance on the main macroeconomic indicator, i.e., gross domestic product. One of the fundamental goals of every country is economic development. Economic development represents the success of an economy. It is a complex economic process by which a country gradually gets rid of economic underdevelopment and poverty, reaching ever higher levels of development. Thus, it consists of economic growth and changes in the economic structure (Devetaković, Jovanović & Rikalović, 2011). States strive to achieve the highest possible gross domestic product, which is an aggregate that shows the monetary value of total goods and services during one year (Ristić, Komazec & Ristić, 2016). Industrial production is considered an important prerequisite for the economic development of almost every country (Obadić, 2001). It follows from the above that there is a need to identify the specific performance of the industry, in this case the manufacturing industry that has an impact on the economic development of the country. Analyzing these impacts is of great importance for the creation of both industrial policy and the creation of state economic policy. This study examines the impact of specific performance of the manufacturing industry and its factors on the economic development of the state of Bosnia and Herzegovina through gross domestic product, before the coronavirus-induced pandemic, for the period from 2015 to 2019. The main objectives of this research are:

- Examine the impact of specific performance of the manufacturing industry on the gross domestic product of Bosnia and Herzegovina.
- Examine the relationship between the number of enterprises in the manufacturing industry and the gross domestic product of Bosnia and Herzegovina.
- Investigate the relationship between the number of employees in the manufacturing industry and the gross domestic product of Bosnia and Herzegovina.
- Establish a link between the exports of the manufacturing industry and the gross domestic product of Bosnia and Herzegovina.
- Examine the relationship between investments in the manufacturing industry and the gross domestic product of Bosnia and Herzegovina.

SPSS Statistics 20.0 software will be used for analysis purposes. The software will be used to perform quantitative analysis (regression analysis, correlation, multiple regression). Also, elements of descriptive statistics will be applied, as well as the comparison method. Secondary data for selected variables will be taken from official institutions for data collection, analysis and dissemination in Bosnia and Herzegovina, primarily from the Agency for Statistics of Bosnia and Herzegovina. In its publications, the Agency for Statistics of Bosnia and Herzegovina includes data related to the manufacturing industry, as well as data on gross domestic product. The time period that will be included in the analysis is a period of five years, from 2015 to 2019.

2. Literature review

In modern conditions, the purpose of every economy and society is to fully satisfy the overall material, social, cultural and other needs of the entire population. In order to achieve this in the most successful way possible, it is necessary to constantly improve all forms of living and working conditions for people, in order to improve the overall economic development. This would increase per capita income and increase living standards. This can be achieved through better development of the primary, secondary and tertiary sectors. That is why the purpose of every modern and contemporary country is to maximize economic growth. It is a process in which the

aim is to achieve the highest possible growth rate of production. This significantly contributes to the achievement of other goals and tasks of development. Among these goals it is especially important to emphasize: increasing employment, influencing the growth of labor productivity and capital efficiency, development of economic relations with foreign countries, meeting all forms of consumption, structural harmonization of the economy, solving regional development issues, achieving political stability and international reputation. In this way, employment opportunities are expanding not only in industry, but also through multiplier effects in many other sectors. Industry is the main branch and driver of the whole economy. Therefore, through economic policy measures, especially industrial policy, great efforts are made to bring the industry of a country as close as possible to the development, and thus growth in terms of positive trends that would result in positive trends in GDP and overall welfare. We can define industry as a set of activities whose main goal is the production of goods and their sale. The development of industry had a great impact on the growth of living standards and well-being, which further encouraged the process of industrialization. Throughout history until today, the industry has undergone numerous processes (transition, privatization) and today in the 21st century it is going through technological development that has affected the economy of each country. Numerous experts and scientists have conducted research on the impact of industry or the manufacturing industry on economic development. By economic development they meant improvements of various economic aggregates, such as gross domestic product, national income and the like. Industrial development has played a very important role in the economic development of countries such as China, Korea, Taiwan, Indonesia. Growth in the industrial sector is key to sustainable long-term economic growth and poverty reduction (Kniivilä, 2007). One of the papers states that industry has a significant impact on all dimensions and sustainable development - economic, social, environmental and institutional. When it comes to the European Union, somewhere around 24% of GDP is generated by industry, it also employs about 50 million people (Behun, Gavurová, Tkacova & Kotaskova, 2018). Within the industry, the manufacturing industry is considered to be an extremely important component. According to official information (World Bank, 2021), in 2004 the manufacturing industry accounted for 17.2% of world GDP, while in 2018 it accounted for about 15.2% of world GDP. In a paper related to the UK, it was pointed out that the manufacturing industry makes great contributions to the national economy thanks to certain sectors that add value to the gross domestic product. Industrial exports increased, which in turn affected economic development (Dean Group, 2018). One study also confirmed that the growth of production within an industry is the foundation for economic development, especially in middle-income countries (Nelson, Reis & Araújo, 2016). The research (Fagerberg & Verspagen, 1999) did a regression of the real GDP growth rate and the growth rate of the manufacturing industry. Fagerberg and Verspagen realized that production was a typical engine of growth in developing countries in East Asia and Latin America. They found that there was no significant effect on output in advanced economies. In another paper (Fagerberg & Verspagen, 2002), they examined the impact of the share in service output and economic growth in three periods, 1966-1972, 1973-1983, 1984-1995, for a sample of 76 countries. They found that the effects were much more positive before 1973 than after. They found that even after 1973, with the development of information technology, productivity increased, especially in the 1990s. According to a limited sample of Asian and Latin American developing countries, growth was examined (Szirmai, 2012). The focus was on high intensity, production growth and labor productivity. In this way, it confirms the hypothesis regarding the driver of growth. Rodrik (2009) regresses GDP growth rates to the shares of industry in GDP, for a period of five years. He finds a significant positive relationship and interprets the growth of developing countries in the post-war period through the argument of structural change. He concludes that in fact modern industrial activity acts as an engine of growth. Thus, he states that structural transformation is one of the explanations for accelerated growth and development. In one econometric analysis for India, (Chakravarty & Mitra, 2009) reveal that production is clearly one of the determinants of overall growth but also find that services are becoming increasingly important for production growth. In a domestic analysis, Hadžić (2019)

states that the manufacturing industry in Bosnia and Herzegovina is one of the most important pillars of the economic system. According to the presented data, the manufacturing industry employed about 142,580 workers at the end of 2017, which was an increase compared to 2015. The above data actually shows that about 18.9% (2017) of the total number of employees work in this industry. The number of companies has also increased and especially in smaller companies, companies with fewer workers. The author also states that this industry can become an even more important factor for achieving faster economic development (Hadžić, 2019). In a review article (Obadić, 2001), the author states that the manufacturing industry derives its importance from several elements. First, the productivity of the manufacturing industry is significantly higher than that in traditional agriculture because the products are more diverse and more suitable for exchange, which enables specialization. Industrialization has contributed to greater urbanization and the transition of workers from one sector to another. Industrial development affects the faster development of agriculture and other industries, it also affects the development of infrastructure, technological progress, development of services and which leads to economic development. Furthermore, he believes that the economic development of a country can be observed by observing the movement of national income of individual countries. As a result of the Industrial Revolution in Great Britain, from 1780 to 1860 British per capita income doubled, from 1860 to 1990 it quadrupled. These data only confirm how strong the strong growth in the first eighty years was, but it was only a precursor to the future growth of modern industrialized countries. Authors in a study entitled “Manufacturing as an engine of growth: Which is the best fuel?” they proved that in fact industrialization, higher production is the engine of growth in some regions, while in others it is not. More intensive improvement of industrial production promotes growth through productivity and the share of employment in the manufacturing industry. In the mentioned research, among other things, one of Kaldor’s laws was confirmed, that production is the basic engine of growth. They find that intensive rather than extensive industrialization is closely related to GDP (United Nations Industrial Development Organization, 2014). Various studies address some aspects of this topic, however when it comes to a model formed in this way, studies are not available. By systematizing some previous research, it is most often mentioned that industry, as well as the manufacturing industry itself, significantly determines the economic development of the country because they have a stimulating effect on gross domestic product.

3. Methodology

All the necessary data to be used in this research relate to size, performance within the manufacturing industry, as well as a key economic indicator in Bosnia and Herzegovina. Data were collected from the database and publications of the umbrella statistical institution in Bosnia and Herzegovina, the Agency for Statistics of Bosnia and Herzegovina. The data of the Agency for Statistics of Bosnia and Herzegovina are relevant given that it is the main carrier, disseminator and coordinator of the official statistics system in Bosnia and Herzegovina. The period covered by this analysis covers a time interval of five years, from 2015 to 2019 for the manufacturing industry and the state of BiH.

In order to explore how the manufacturing industry performance reacts to economic development of Bosnia and Herzegovina, we developed a model in which we used different variables (one dependent and four independent variables) selected on the basis of relevant theory and literature. This research study includes variables that affect the gross domestic product (GDP) in Bosnia and Herzegovina. In order to understand whether GDP can be predicted based on number of companies, employees, export, investments we use multiple regression. Multiple regression is an extension of simple linear regression. It is used when we want to predict the value of a variable based on the value of two or more other variables. The variable we want to predict is called the dependent variable (or sometimes, the outcome, target or criterion variable). The

variables we are using to predict the value of the dependent variable are called the independent variables (or sometimes, the predictor, explanatory or regressor variables).

3.1 Hypothesis

The primary problem investigated in this paper is the impact of industry-specific performance, namely the number of companies, the number of employees in industry, the amount of exports and investments in the manufacturing industry on economic development and gross domestic product of Bosnia and Herzegovina.

Hypothesis #1:

H1: There is a significant relationship between the number of enterprises in the manufacturing industry and the gross domestic product in Bosnia and Herzegovina.

Hypothesis #2:

H2: There is a significant relationship between the number of persons employed in the manufacturing industry and the gross domestic product in Bosnia and Herzegovina.

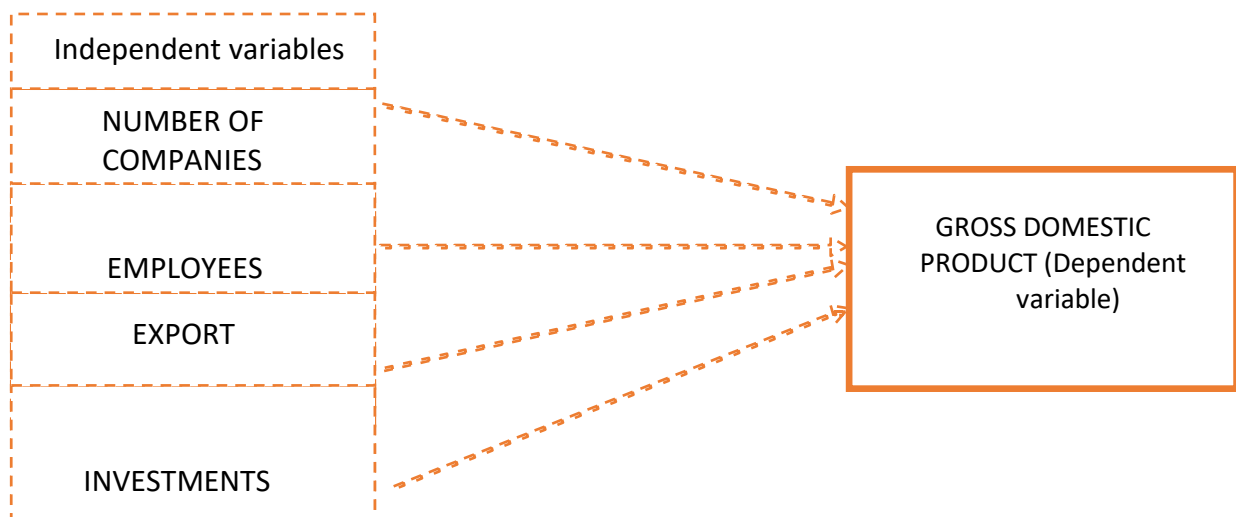
Hypothesis #3:

H3: There is a significant link between exports within the manufacturing industry and Bosnia and Herzegovina's gross domestic product.

Hypothesis #4:

H4: There is a significant link between investments in the manufacturing industry and the gross domestic product of Bosnia and Herzegovina.

3.2 Model



3.3 Contribution of the study

The key contribution of this study arises from the application and refinement of the framework for the empirical analysis of the case studies and in order to understand how the interplay between number of companies, employees, export and investments affect GDP.

4. Results

As mentioned earlier, the processing industry is one of the most important elements of the economic development of Bosnia and Herzegovina. In previous years, the processing industry has been growing stronger, both in Bosnia and Herzegovina and in the world. In this section, we will discuss several key indicators that will indicate the state of the processing industry in Bosnia and Herzegovina. Data collected for selected variables were taken from official institutions for data collection, analysis and dissemination in Bosnia and Herzegovina, primarily from the Agency for Statistics of Bosnia and Herzegovina. In its publications, the Agency for Statistics of Bosnia and Herzegovina includes data related to the processing industry, as well as data on gross domestic product. The time period we covered when collecting data is the period from 2015 to 2019.

The data of indicators that have been collected and that are of the greatest importance to us are:

- (1) Number of companies,
- (2) Number of employees,
- (3) Exports from the processing industry,
- (4) Investments in fixed assets,
- (5) Gross domestic product.

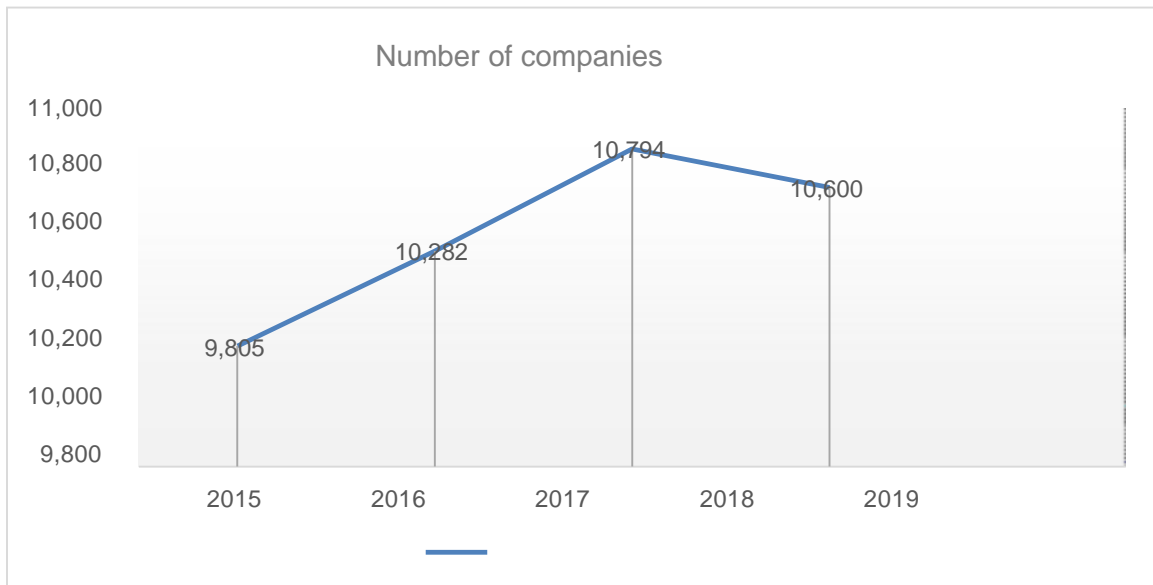
Data for the number of enterprises, number of employees, gross domestic product for the manufacturing industry for the years 2015, 2016, 2017, 2018, 2019 were taken from the publications “Bosnia and Herzegovina in numbers”. Further, from the publications “National Accounts: Investments” “Data related to investments in fixed assets have also been taken over for the previously mentioned years. The number of enterprises includes all legal and natural persons engaged in market production and who are registered in the business register in the population that is the subject of observation. Number of employees is defined as the total number of persons working in the observation unit (including working owners, partners who regularly work in the unit and unpaid family members who regularly work in the unit), as well as persons working outside the unit to which they belong and who pay them (e.g., sales representatives, suppliers). Investments in fixed assets include the acquisition of companies and other organizations to acquire new assets, increase the value or replace existing fixed assets (residential buildings, other buildings and structures, equipment and devices of a more permanent nature, afforestation and erection of long-term plantations, mining and mineral exploration, and software). Acquired fixed assets can be purchased in the country and abroad; procured through financial leasing; can be acquired by barter; received as a capital transfer in kind or produced and retained for own use. All types of investments in new capacities are included, as well as for expansion, reconstruction and modernization of existing ones and replacement of obsolete, worn out or destroyed capacities. Investments in intermediate consumption, regular and current maintenance, repairs, procurement of weapons, acquisition of fixed assets through operating leases, changes in inventories, acquisition of fixed assets for final consumption of households, ownership gains and losses on fixed assets resulting from disasters are not included. Payments for investments in fixed assets represent cash investments during the reporting year, regardless of the time when the construction, production or acquisition of fixed assets was performed (Agency for Statistics of Bosnia and Herzegovina, 2019). The number of enterprises, the number of employees, exports from the manufacturing industry, investments in fixed assets are shown in the table below, Table 1.

Table 1. Number of companies, number of employees, exports, investments of the processing industry

Prerađivačka ind.	2015	2016	2017	2018	2019
Number of companies	9,805	10,282	10,794	10,600	
Number of employees	140,762	150,177	159,871	167,785	
Exports (in thousands of KM)	8,124,184	8,474,124	9,866,485	10,621,006	10,265,028
Investments (in 000 KM)	840,812	845,862	938,692	979,103	966,433

Source: Agency for Statistics of Bosnia and Herzegovina; <http://www.bhas.ba/> (Retrieved: 22.05.2021)

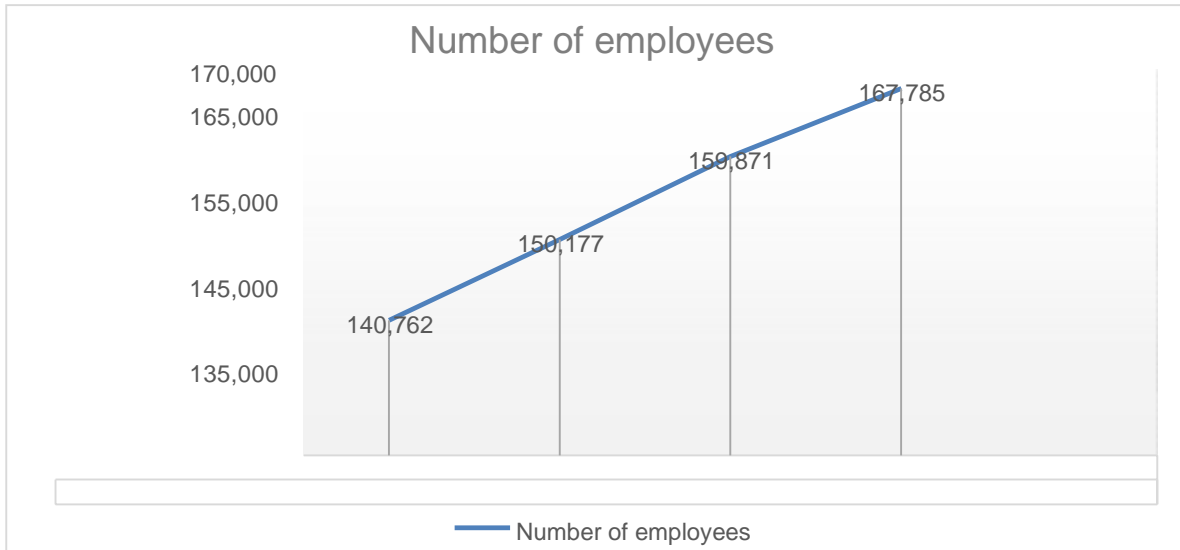
The number of companies within the processing industry has been increasing since the first year covered. From 2015, when the number of companies is 9,805 people, until 2016, the number increased by 477, when it amounted to 10,282 companies in the manufacturing industry. In 2017, there is another increase when the number of companies increases to 10,794. Unfortunately, the number of companies, for example, decreased in 2018 by 194 companies and amounted to 10,600. The data are also shown in the following chart (Chart 1).



Source: Creation of author based on data from the Agency for Statistics of Bosnia and Herzegovina; <http://www.bhas.ba/>

Chart 1. Number of companies within the processing industry of BiH

The number of employees is the next indicator shown in the table. Data for the number of employees refer to the time range from 2015 to 2019. In relation to the number of companies, the number of employees has been constantly growing since 2015. In 2015, the number of employees in the manufacturing industry was 140,762. A year later, the number of employees increased to 150,177. In 2017, the number of employees continued to grow and reached 159,971 employees, which is an increase compared to the previous year of 9,694. In 2018, the number of employees was 167,785. In order to facilitate the perception of this trend of increasing the number of employees, Chart 2 was created, which also shows.



Source: Creation of author based on data from the Agency for Statistics of Bosnia and Herzegovina; <http://www.bhas.ba/>

Chart 2. Number of employees within the processing industry of BiH

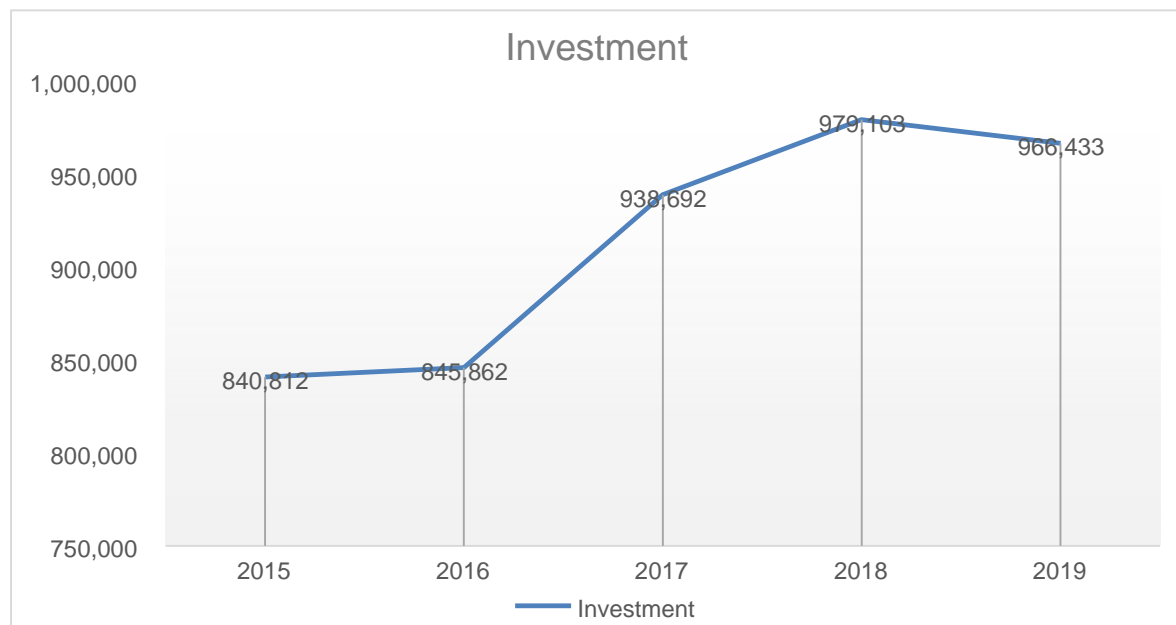
Exports from the manufacturing industry is another item that supports the claim of progress in this activity in BiH. Chart 3 shows the exports that companies in the manufacturing industry have achieved over the years. Exports in 2015 amounted to 8,124,184 thousand KM, in 2016 it further increased to 8,474,124, and in 2017 it amounted to 9,866,485 KM. Exports increased again in 2018, when they reached the value of 10,621,006, after which the decline in exports began in 2019, when it amounted to 10,265,028. The decline in 2019 was caused by the spread of the coronavirus pandemic when many countries, like Bosnia and Herzegovina itself, closed their borders. Therefore, based on the previously presented data, we can say that in parallel with the increase in the number of employees, as well as the increase in the number of companies, the export of companies from the processing industry also increased. This certainly confirms the importance and the very potential of this activity in Bosnia and Herzegovina.



Source: Creation of author based on data from the Agency for Statistics of Bosnia and Herzegovina; <http://www.bhas.ba/>

Chart 3. Exports realized within the processing industry of BiH

Chart 4 shows us the investments that increased from 2015 until 2019. In 2015, investments amount to 840,812 KM. Next year, the investments will reach the value of 845,862 KM. Furthermore, in 2017, investments increased to the value of 938,692 KM. Companies operating in the manufacturing industry in 2018 also increased their investments to 979,103 KM. Already in 2019, investments are decreasing and then amount to 966,433. More specifically, the presented data refer to payments for investments in fixed assets, according to the activity itself. We mentioned earlier that investments in fixed assets involve the acquisition of companies and others in order to acquire new assets, increase the value or replace existing fixed assets. It is important to note that on average, 71% of investments are actually from own sources, much less from financial loans, pooled funds, leasing and the like.



Source: Creation of author based on data from the Agency for Statistics of Bosnia and Herzegovina; <http://www.bhas.ba/>

Chart 4. Investments in the processing industry of BiH

The manufacturing industry in 2019 also achieved a reduction in production which is important to note. Given the structure of production within the manufacturing industry in Bosnia and Herzegovina, which has a high degree of export orientation and economic trends in the external environment, the decline in production in the manufacturing industry is not surprising. Namely, according to the preliminary data of BHAS for 2019, within the manufacturing industry in Bosnia and Herzegovina, a decrease in production of 5% compared to the previous year was registered. The key determinant of these trends within the export-oriented manufacturing industry were developments in the international economic environment and major trading partners, as well as problems faced by some companies that represent the backbone of the manufacturing industry in Bosnia and Herzegovina. Thus, according to EUROSTAT data for 2019, there was a decrease in the physical volume of industrial production in the EU28 by 1%. Observed by countries, the most significant reductions in the physical volume of production were recorded in Germany 4.4%, Italy 1.4%, Turkey 0.8%, Croatia 0.3%, while in Serbia stagnation was recorded 0.3% (Directorate for Economic BiH planning, 2019). Table 2 shows the data related to the gross domestic product of Bosnia and Herzegovina for the period from 2015 to 2019. GDP data are of great importance to us given the joint analysis of previous data with GDP data. Two indicators of gross domestic product are shown in the table below, gross domestic product in absolute amount as well as gross domestic product per capita. In 2015, the gross domestic product of Bosnia and

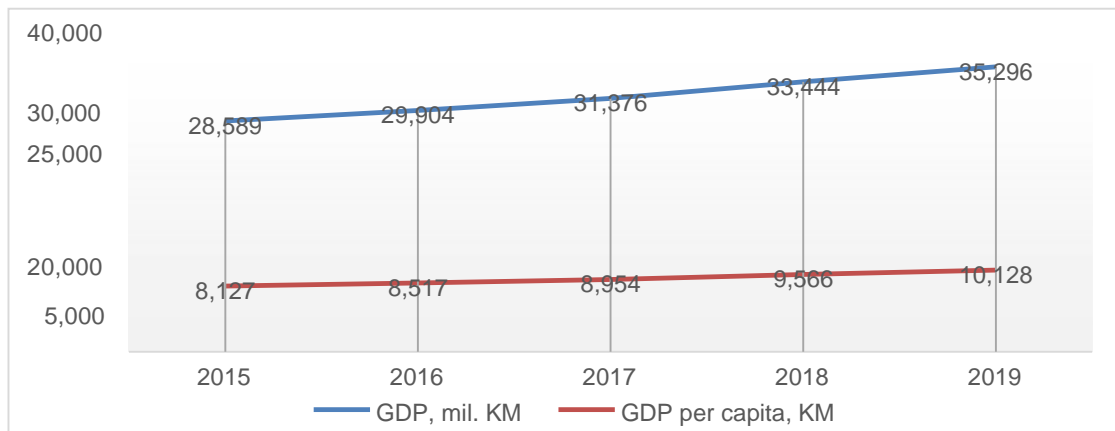
Herzegovina amounted to 28,589 mil. KM, in the following year 2016 amounted to 29,904. Gross domestic product increased in the following years as well, so in 2017 it amounted to 31,376 KM, in 2018 to 34,444 and in 35,296 mil. KM. For us, it is perhaps a more important indicator that shows the gross domestic product per capita, more precisely the gross domestic product per capita.

Table 2. Gross domestic product of BiH

	2015	2016	2017	2018	2019
GDP of BiH, mil. KM	28,589	29,904	31,376	33,444	35,296
GDP per capita, KM	8,127	8,517	8,954	9,566	10,128

Source: Creation of author based on data from the Agency for Statistics of Bosnia and Herzegovina; <http://www.bhas.ba/> (Retrieved: 22.05.2021.)

Gross domestic product per capita in 2015 amounted to 8,127 KM, but in 2016 it amounted to 8,517 KM. Further in 2017, the gross domestic product per capita amounts to 8,954 KM, in 2018 it will increase to as much as 9,566 KM. Gross domestic product increased in 2019 when it amounted to 10,128 KM. Chart 5 shows the gross domestic product of Bosnia and Herzegovina per capita in parallel with the gross domestic product expressed in absolute terms from 2015 to 2019.



Source: Creation of author based on data from the Agency for Statistics of Bosnia and Herzegovina; <http://www.bhas.ba/>

Chart 5. GDP of Bosnia and Herzegovina

4.1 Hypothesis testing

The table 3 consists of 4 values. The value of the multiple correlation coefficient is 1,000. This coefficient serves to determine the quality of the prediction of the dependent variable, in this case GDP. A value of 1,000 represents a good level of prediction. The table also presents the decision coefficient, R Square = 1,000, whose value represents 0% of the variability of the dependent variable, which cannot be explained by independent variables, so the strength of the connection is weak.

Table 3. Model summary

Model	R	R Square	Adjusted R Square	Error of the Estimate
1	1.000 ^a	1.000	.	.

Predictors: (Constant), Investments (thousands of convertible marks), Number of companies, Number of employees (Source: Author's own work)

The F-value in the ANOVA table, shown below, tests whether the regression model is good for these values. Based on the Table 4, it can be noticed that the regression model is not good for analysis because F values and significance were not measured, for this reason correlation analysis was used in further analysis.

Table 4. Anova

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	33196156.750	3	11065385.583		.b
Residual	.000	0			
Total	33196156.750	3			

a. Dependent Variable: Gross Domestic Product (millions of convertible marks)

Predictors: (Constant), Investments (thousands of convertible marks), Number of companies, Number of employees (Source: Authors' own work)

The following Table 5 shows the effect of GDP on the number of companies, employees, exports, investments. From the table 5 we will note that there is no relationship between the number of companies and GDP because Sig > 0.05 and is 0.1. However, when it comes to the number of employees, exports and investments, the significance is Sig < 0.05 and amounts to 0.02 for the number of employees, 0.03 for exports and 0.05 for investments, and since the correlation coefficient is positive, it means that about a strong positive correlation. Based on that, it can be concluded that if the number of employees, exports and investments increases, then there is an increase in GDP.

Table 5. Variables' correlations

		Correlations				
		Number of companies	Number of employees	Export (thousands of convertible marks)	Investments (thousands of convertible marks)	Gross Domestic Product (millions of convertible marks)
Number of companies	Pearson Correlation	1	.887	.843	.817	.899
	Sig. (2-tailed)		.113	.157	.183	.101
	Sum of Squares and Cross-products	559844.750	13475099.25	1281062698	72803344.75	3876128.750
	Covariance	188548.250	4491699.750	427020899.4	24267781.58	1292042.917
	N	4	4	4	4	4
Number of employees	Pearson Correlation	.887	1	.977	.953	.975
	Sig. (2-tailed)	.113		.023	.047	.025
	Sum of Squares and Cross-products	13475099.25	412671332.8	40332765200	2305196641	114110803.3
	Covariance	4491699.750	137557110.9	13444255067	768398880.4	38036934.42
	N	4	4	4	4	4
Export (thousands of convertible marks)	Pearson Correlation	.843	.977	1	.995	.897
	Sig. (2-tailed)	.157	.023		.000	.039
	Sum of Squares and Cross-products	1281062698	40332765200	4.917E+12	2.928E+11	14751167055
	Covariance	427020899.4	13444255067	1.229E+12	73191021367	3687791764
	N	4	4	5	5	5
Investments (thousands of convertible marks)	Pearson Correlation	.817	.953	.995	1	.878
	Sig. (2-tailed)	.183	.047	.000		.050
	Sum of Squares and Cross-products	72803344.75	2305196641	2.928E+11	17596422629	864237744.4
	Covariance	24267781.58	768398880.4	73191021367	4399105857	216059436.1
	N	4	4	5	5	5
Gross Domestic Product (millions of convertible marks)	Pearson Correlation	.899	.975	.897	.878	1
	Sig. (2-tailed)	.101	.025	.039	.050	
	Sum of Squares and Cross-products	3876128.750	114110803.3	14751167055	864237744.4	54976088.80
	Covariance	1292042.917	38036934.42	3687791764	216059436.1	13744022.20
	N	4	4	5	5	5

*. Correlation is significant at the 0.05 level (2-tailed).
 **. Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' own work

Based on the correlation analysis, we can conclude that there is a significant relationship between the number of persons employed in the manufacturing industry, exports

within the manufacturing industry and a significant link between investments in the manufacturing industry and the gross domestic product of Bosnia and Herzegovina.

5. Data analysis and discussion

Given the data collected and presented in the previous section, we can draw a number of conclusions about the impact of specific performance on the economic development of Bosnia and Herzegovina. The number of companies that increased from 2015 to 2018 was accompanied by an increase in the gross domestic product of Bosnia and Herzegovina, and based on which we can conclude that a larger number of companies managed to influence the increase in gross domestic product. Although, the increase in gross domestic product can certainly be caused by other reasons as well. The number of employees in the manufacturing industry has increased drastically from year to year, with an increase in the gross domestic product of Bosnia and Herzegovina. It is clear that a larger number of companies also employed a larger number of employees because there was a greater need for random power due to the increase in demand. The same results were confirmed by Hadžić (2019). In a domestic analysis, Hadžić (2019) states that the manufacturing industry in Bosnia and Herzegovina is one of the most important pillars of the economic system. According to the presented data, the manufacturing industry employed about 142,580 workers at the end of 2017, which was an increase compared to 2015. The above data actually shows that about 18.9% (2017) of the total number of employees work in this industry. The number of companies has also increased and especially in smaller companies, companies with fewer workers. The author also states that this industry can become an even more important factor for achieving faster economic development (Hadžić, 2019). One of the papers states that industry has a significant impact on all dimensions and sustainable development - economic, social, environmental and institutional. When it comes to the European Union, somewhere around 24% of GDP is generated by industry, it also employs about 50 million people (Behun, Gavurová, Tkacova & Kotaskova, 2018). Undoubtedly, such two increases also led to an increase in gross domestic product. Another indicator that confirms the previous impact is exports from the processing industry. Companies within the manufacturing industry recorded an upward trend, while in 2018 there was a decline, during which time GDP was in constant growth so we cannot confirm here that the number of companies is related to GDP. The same was confirmed by correlation analysis. Exports increased from 2015 to 2018, which certainly contributed to the increase in gross domestic product. Other authors came to similar results. In a paper related to the UK, it was pointed out that the manufacturing industry makes great contributions to the national economy thanks to certain sectors that add value to the gross domestic product. Industrial exports increased, which in turn affected economic development (Dean Group, 2018). One study also confirmed that the growth of production within an industry is the foundation for economic development, especially in middle-income countries (Nelson, Reis, & Araújo, 2016). The research (Fagerberg & Verspagen, 1999) did a regression of the real GDP growth rate and the growth rate of the manufacturing industry. Fagerberg and Verspagen realized that production was a typical engine of growth in developing countries in East Asia and Latin America. They found that there was no significant effect on output in advanced economies.

Investments in fixed assets are also an indicator that has been increasing since the first observed year. By comparing the graphs and comparing the results of the correlation analysis, we can conclude that investments have a certain impact on increasing the gross domestic product of the state. From the above, summarizing the partial conclusions, we can conclude that specific performance in the form of number of companies, number of employees, exports from the manufacturing industry, investment in fixed assets have a significant impact on the economic development of Bosnia and Herzegovina in the period before COVID. along with the increase in gross domestic product, which in our case means economic development.

6. Conclusion

One of the most important indicators of a country's economic development is gross domestic product (GDP), which consists of four basic components: personal consumption (C), investment consumption (I), government consumption (G) and net exports (NX). In order for this indicator to be as good as possible, transparent conduct of macroeconomic policy by policy makers is needed. The aim of this paper was to show how the impact of certain indicators will affect the growth of real GDP of Bosnia and Herzegovina. Therefore, arbitrary variables (number of companies, number of employees, exports and investments) in the five-year period (2015 to 2019) were selected. In our model, real GDP was a dependent variable and we confirmed the following analysis. The number of employees in the observed period has a significant impact on real GDP growth, specifically: a larger number of companies employed a larger number of employees because there was a greater need for random power due to increased demand. Undoubtedly, such two increases also led to an increase in gross domestic product. Another independent variable, the number of companies in 2018, showed a negative impact on real GDP, i.e., their reduction did not affect the decline in GDP because GDP in 2018 reached its maximum growth. Indicators in the time before the COVID-19 virus pandemic were also taken into analysis. It can be seen from the model that all variables are in equilibrium in certain periods and in the last years of the observed period they are growing. In order to maintain their growth at a sustainable level, prudent action by macroeconomic policy makers is needed, primarily through monetary and fiscal policy. A study of the literature for this analysis revealed different observations of the variables used in this analysis. However, based on this analysis, the same or similar results were obtained as in previous research, thus confirming the theoretical background and significance of the model. That is, we concluded that there is a long-run linear relationship between the observed variables. With the obtained results of the conducted analysis, we cannot reject the hypotheses that we set in the introductory chapter of this paper. Looking at the current situation in the Bosnian economy and what analysts are saying to the public, we can see the economic recovery from the effects of the global economic crisis; which affected a not so significant increase in the value of the observed variables. It is considered that in the further recovery period it is important to focus on increasing investment as one of the main components of GDP because only an increase in investment can have a significant long-term effect on GDP growth, which was confirmed by the analysis. Thoughtful action of policy makers would reduce the resulting gap in the value of the observed variables, but would also reduce the economic lag, primarily for EU member states. However, among the holders of macroeconomic policy, the stumbling block is still the transparency of policy action, ie the choice of which policy to pursue in order to preserve the stability of the processing industry of Bosnia and Herzegovina.

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