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ORIGINAL SCIENTIFIC PAPER

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IMPLEMENTATION OF THE CIRCULAR ECONOMY PRINCIPLES IN THE TEXTILE INDUSTRY

Abstract

With the rapid rise of instability in the global economy and more intensive depletion of resources, there is a need to adopt a new economic model that is becoming a business imperative. In order to improve resource performance, many companies have taken action to find ways to reuse products or their components and restore inputs of production, materials, energy and labour. Many companies today have begun to use the principles of the circular economy to create products that are more durable, easy to reuse or recycle, and more profitable. Having in mind that the textile industry is one of the most environmentally harmful industries, the purpose of this paper is to point out the advantages that the transformation of the traditional (linear) production model into a circular model of industrial activities has for increasing the environmental sustainability of this industry.

Keywords: *circular economy, textile industry, sustainable development, H&M Group*

JEL classification: *Q53, Q54, Q56*

ПРИМЕНА ПРИНЦИПА ЦИРКУЛАРНЕ ЕКОНОМИЈЕ У ТЕКСТИЛНОЈ ИНДУСТРИЈИ

Апстракт

Наглим порастом нестабилности у глобалној економији и интензивнијим исцрпљивањем ресурса, јавља се потреба за усвајањем новог економског модела који постаје императив пословања. У циљу побољшања перформанси ресурса, многе компаније су предузеле активности ка проналажењу начина за поновну употребу производа или њихових компоненти и обнављање инпута производње, материјала и енергије. Многа предузећа су данас почела да користе

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принципе циркуларне економије ради стварања производа који су трајнији, који се лако поново користе или рециклирају, и који су профитабилнији. Имајући у виду да текстилна индустрија спада у једну од еколошки најштетнијих индустријских грана, сврха овог рада је да укаже на предности које трансформација традиционалног (линеарног) модела производње у циркуларни модел индустријских активности има за повећање еколошке одрживости ове индустријске гране.

Кључне речи: *циркуларна економија, текстилна индустрија, одрживи развој, Н&М група*

Introduction

Companies that successfully design products for a circular economy have to reorient business models and practices in order to capture considerable value and create lasting, rewarding relationships with customers.

Innovations in the way clothes are made have not kept pace with the acceleration of how they are marketed. The textile industry is characterized by a relatively low-tech production system which has huge environmental effects. However, the early 21st century has been good for the textile industry. Some estimates show that the number of garments purchased each year by the average consumer has increased by 60 per cent. By compressing production cycles, companies have enabled shoppers to expand their wardrobes and refresh them quickly. In nearly every apparel category, consumers keep clothing items for about half as long as they did 15 years ago. McKinsey's estimates suggest that consumers treat low-priced garments as disposable, discarding them after just seven or eight wears (Bouton et al., 2016).

1. The circular economy: moving from theory to practice

The UN Sustainable Development Agenda 2030 has defined basic development goals where a transition to the circular economy is one of the goals in the field of environment and climate (Radukić & Kostić, 2019, p. 435). The circular economy is considered an instrument for achieving the goals of sustainable development and it involves long-term investment in raw materials and energy efficiency, reduction of pollutant emissions, use of renewable energy sources, and implementation of sustainable production and trade models, thus closing the circle "product-waste-product" (Petrović-Ranđelović & Radukić, 2022, p. 324).

Marković et al. (2020, p. 3) state the concept of sustainable development is considerably wider than the concept of a circular economy. Because of that, there are many similarities and differences between them. Key similarities are intra and intergenerational commitments, global models, multi-/interdisciplinary research fields, innovative business models, technological solutions etc. Basic differences are: circular economy is a newer and narrower concept, circular economy emphasizes economic and environmental benefits, while sustainability provides a broader framework etc.

Instead of the linear model of production (take–make–dispose), the circular economy is restorative by design—using throughout the life cycles of finished products. The circular model offers an opportunity for companies to increase the productivity of resources, decrease dependence on them (as well as waste), and raise employment and growth. Companies can also reduce operating costs, strengthen relationships with customers, employees and providers, and can improve macro and micro competitiveness.

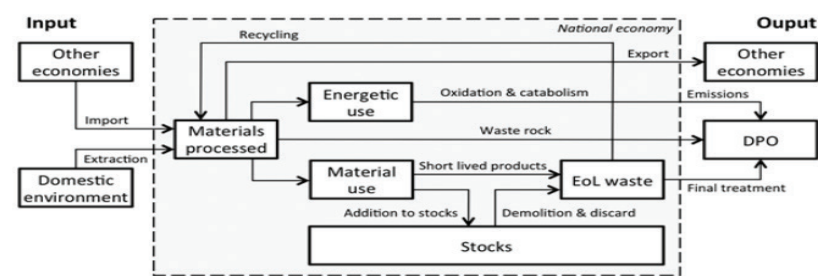
On the other hand, higher levels of circularity may incur substantial economic costs for companies. Accompanying risks include higher commodity prices, waste, environmental impact, resource scarcity and earth overuse. In this regard, it is important to point put the principles of the circular economy: durability, renewability, reuse, repair, replacement, upgrades, and reduced material use. Some authors systematize these principles and define three main principles (Bouton et al., 2016):

1. Preserve and enhance natural capital by controlling finite stocks and balancing the flow of renewable resources.
2. Optimize resource yields by circulating products, components, and materials in use at the highest possible levels at all times.
3. Make the system more effective by eliminating negative externalities.

Figure 1 shows a simple model of economy-wide material flows and depicts the different flows and processes to assess the circularity of the economy. This presented model is based on the conceptual framework and the system boundaries applied in economy-wide material flow accounting. It defines the flow of materials from extraction and import, by processing, immediate consumption, or temporary accumulation in material stocks to recycling or final treatment before all materials finally leave the system as waste and emissions. All flows in the model can be quantified in order to assess the key characteristics of the circular economy (Haas et al., 2015).

Figure 1: Circularity model at the macro level

Figure 4.1. Model for the estimation of circularity at the macro scale



Note: DPO = Domestic Processed Outputs
Source: Haas et al. (2015: 769)

Notes: EoL waste = end-of-life waste; DPO = domestic processed output.

Source: Haas et al., 2015.

Indicators highly depend on the underlying definition of a Circular economy. MacArthur (2013) defines a circular economy as an economy in which material flows are made up either of biological materials, which after discard are integrated into ecological

cycles, or of materials designed to circulate within the socioeconomic system (MacArthur, 2013). Based on this definition, some researchers developed a set of six indicator pairs, which allows measurement progress towards a circular economy in terms of closing material cycles (Table 1).

Table 1: Circular economy indicators

| | Dimension | Input-side indicator | Output-side indicator |
|-----------------------|--|--|---|
| Scale indicators (t) | In and output flows | Domestic material consumption DMC | Domestic Processed outputs DPO |
| | Consumption based perspective | Raw material consumption RMC | |
| | Interim flows | Processed materials PM = DMC + secondary materials | Interim outputs IntOut = EoL waste + DPO emissions |
| Circularity rates (%) | Socioeconomic cycling SC | Input socioeconomic cycling rate ISCr = Share of secondary materials in PM | not applicable |
| | Ecological cycling potential EC | Input ecological cycling rate potential IECrp = Share of DMC of primary biomass in PM | Output ecological cycling rate potential OECrp = Share of DPO biomass in IntOut |
| | Non-circularity NC | Input non-circularity rate INScr = Share of energetic use of fossil energy carriers in PM | Output non-circularity rate ONCr = Share of energetic use of fossil energy carriers in IntOut |

Source: Mayer et al., 2019.

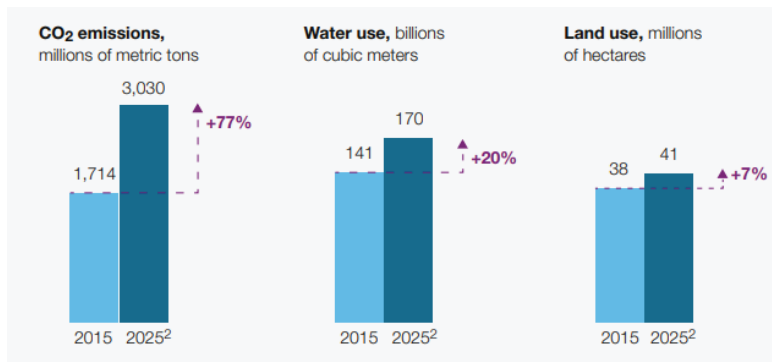
The indicators shown here are distinguished between scale indicators, which provide measures for the overall size of the social and industrial metabolism (O'Neill 2015), and circularity rates, which measure socioeconomic and ecological cycling relative to input and output flows. Providing independent measures for flows on both the input and output sides is necessary due to the delaying effect that input stocks of materials have on output flows.

The challenge of introducing a circular economy approach in developing countries is the low current level of waste management because of “the absence of proper environmental legislation, financial management and administrative capacities” (Ilić & Nikolić, 2016, p. 191). As a consequence, there is an increase in the amount of waste without its treatment that does not allow the exploitation of resources from waste, creating a huge loss of resources and the environment and human health threats. Therefore, this problem needs innovative solutions related to waste management drivers in the context of a circular economy in order not to restrict sustainable development.

Many companies that have been identified as polluters have had to change their business strategies and apply the principles of sustainable development in accordance with environmental legislation (Radukić, Perović & Petrović-Randelović, 2019). Some authors explore how business strategies can help companies to capitalize on the opportunities of the

circular economy. Cross-functional collaboration and customer-focused design thinking can help companies to get more value from the resources they use. With respect to the circular economy, design thinking means asking how to provide value to consumers using a minimum amount of material. Companies have to consider what happens to their products after they are purchased. Instead of considering only functionality and costs, companies should look at how they might manage the entire life cycle of their products in order to maximize value. As consumer spending increases, especially in emerging economies, the textile industry's environmental impact could expand greatly. Figure 2 shows the increases in environmental impact if 80% of emerging markets achieve Western *per capita* consumption levels.

Figure 2: Environmental impact of the textile industry in emerging markets



Source: Bouton et al., 2016, p. 34

In this part, we point out additional steps that companies can take to remove some of the environmental risks that are commonly part of the fast-fashion model:

- Develop standards and practices for designing garments that can be easily reused or recycled.
- Provide suppliers with guidance and resources for meeting new labour and environmental standards.
- Invest in the development of new fibres that will decrease the environmental effects of production.
- Encourage consumers to care for their clothes in low-impact ways.
- Support the development of mechanical and chemical recycling technologies.
- Establish higher labour and environmental standards for suppliers and set up mechanisms to make supply chains more transparent.

2. Characteristics of the textile industry

Industry, as an economic activity, is in many ways connected with other economic activities and it is considered a leading area of business. It has a dominant role in the formation of gross domestic product (GDP) and growth, participation in production funds, employment and investment (Veljković & Jovičić, 2015).

Modern industrial production is characterized by high consumption of raw materials, energy and water, but also excessive emissions of pollutants into the air, as well as into surface and groundwater. As a result, this economic activity, which has a material-intensive character, is in multiple connections with the state of the environment. The change in the state of the environment, which is caused by the exploitation of natural resources and the processing of natural substances industrially, is reflected in the destruction of vegetation and physical change of the landscape while increasing environmental pollution is caused by large amounts of industrial waste.

The textile industry is one of the oldest and fastest-growing industries in the modern world economy. It is a basic industry for developing countries that follow an export-oriented growth strategy. Being a labour-intensive industry, the textile industry offers opportunities to create new jobs that will absorb the surplus of low-skilled labour in developing countries. This statement is confirmed by the experience of some countries, such as Bangladesh, Sri Lanka, Vietnam and Mauritius, where the development of the textile industry in the initial stages of industrialization has allowed them to achieve a development leap, i.e. high growth rates in that industry, which enabled them to turn from poor countries into middle-income countries.

There are a number of reasons justifying the significant role of the textile industry in economic development. First, the textile industry absorbs a huge amount of unskilled labour, primarily from the agricultural sector, and as a result, it is a significant source of employment. Second, the expansive growth of the textile industry is a source of capital to finance investments in technology-intensive industrial activities. Third, a higher growth rate of the textile industry can contribute to the import of more advanced technology, which is financed by revenues generated from the export of clothing.

We cannot imagine a world without textiles and clothes, which are an indispensable part of everyday life. Everyone wears clothes and for many, it is an important expression of individuality. With annual revenues of over \$ 1.3 billion, the textile industry employs more than 300 million people along the value chain, while just cotton production accounts for nearly 7% of total employment in some countries at a lower level of economic development. Clothing represents more than 60% of the total textiles used, and it is expected that this trend will continue in the future. In the last 15 years, the production of clothing has almost doubled, due to the faster growth of the fast fashion industry, which expands the choice for consumers, thanks to shorter production cycles, faster turnover of styles, and the increased number of collections offered annually at lower prices.

As a resource and energy-intensive industry, the textile industry leaves far-reaching environmental, economic and social consequences. Textile industry emissions are estimated at 1.2 billion tons of CO₂ equivalent per year, close to the level of emissions from the automobile industry (World Economic Forum, 2019). The textile industry is expected to increase CO₂ emissions by more than 60% (approximately 2.5 billion tons per year) by 2030, with water consumption increasing by about 50%. The ecological footprint of the industry, especially the impacts of textiles and related chemical waste, remains a global challenge and opportunity to undertake research and development activities in order to innovate processes and products and achieve sustainable development. As a result, "various initiatives emerged: one of these is the Fashion Industry Charter for Climate Action, signed by leading fashion brands, suppliers and other partners under the auspices of the UN's climate change initiative. Signatories, including the Lenzing

Group, are committed to a 30% reduction in greenhouse gas emissions by the year 2030” (World Economic Forum, 2019).

Within the textile industry, the awareness of the business community about the global impacts of the current linear production system is growing. The negative effects of the linear model occur during the extraction of raw materials and production inputs to distribution and use, which results in large amounts of generated waste and environmental degradation. In recent decades, the activities and interests of economic policy makers and the business sector in the direction of developing sustainable practices and the application of environmentally friendly technologies have increased. The main goal is to enable the transition from a linear to a regenerative circular system in which the use of products and materials is stored and maintained in closed-loop cycles, and associated waste, energy and emissions are minimized and gradually eliminated. Such practices range from resource extraction and material production to business models, design and perception principles, and consumer engagement.

Facing environmental challenges in the textile industry requires the development of environmentally friendly technology and processes at all stages, from the production of raw materials to the management and design of waste streams. Textile recycling technology is a key element in the transition to a circular system, especially by establishing flows from fibre to fibre. In addition, the issue of the influence of chemicals from the dyeing and finishing processes used to make textiles for clothing should be considered.

3. Environmental performance of the textile industry

The textile industry is one of the oldest branches of industry, which deals with the processing of fibrous raw materials and the production of fabrics, knitted products and yarns. The key source of input for the textile industry is agricultural production, from which they get raw materials, such as wool, linen, cotton, silk, jute, etc. Its development is largely determined by climatic conditions and the availability of raw materials in a national economy.

The textile industry is one of the longest and most complicated industrial chains in the manufacturing industry. It includes actors not only from agricultural production, but also actors from the production of chemical fibres, the production of dyes and chemical production, the textile industry, the retail and service sectors, and waste treatment (Curteza, n.d.). The textile industry covers a wide range of production activities, and its diversity is reflected in terms of the use of raw materials and production techniques, as well as chemicals in the production process and the final product of the textile industry, i.e. the production of various clothing and fabrics.

Viewed from the aspect of environmental protection, the textile industry is, in addition to the oil industry, the most environmentally harmful branch of industry in the world economy. It participates to about 10% of the total world’s CO₂ emissions, while various harmful substances (about 25% of the total) and a significant amount of water are used in the production process.

The basic processes that take place in the textile industry relate to the following:

1. production of yarns and fabrics (i.e. spinning and weaving),
2. chemical treatment (i.e. dyeing of yarns and fabrics, sizing, rinsing, bleaching, treatment, finishing of fabrics),
3. clothing (i.e. production and finishing of clothing).

Environmental problems that accompany the textile industry relate to (1) the use of toxic chemicals, (2) pollution of water resources due to the discharge of wastewater from the production process, (3) energy consumption, (4) air pollution, and (5) waste production. Two main categories of environmental impact from textile production and processing are pollutant emissions and water and energy consumption (UNEP, 2011). Releases of pollutants can lead to air, water and soil pollution due to the use of chemicals. However, air emissions are a small, but not a negligible source of pollution, while water pollution is a major problem due to the release of chemicals and auxiliaries into wastewater (Cvijić et al., 2021, p. 37).

The textile production process is characterized by high consumption of resources, such as water, fuel and various chemicals in a long process that generates a significant amount of waste, including liquid, gaseous and solid waste, some of which are very hazardous. The nature of the generated waste depends on the type of installed capacity, production process and applied technology, as well as the type of fibres and chemicals used.

The textile industry uses large amounts of water during its operations, from washing fibres to bleaching, dyeing and washing finished products. On average, about 200 litres of water are needed to produce 1 kilogram of textiles. The textile industry is characterized by the use of not only a large amount of water needed to perform various operations but the use of various chemicals for various processes in order to obtain the desired quality of fabrics. According to World Bank estimates, dyeing and finishing processes account for 17% to 20% of industrial water pollution (Kant, 2012). It has also been found that a number of chemicals used in the textile production process evaporate into the air, some dissolve in wastewater released into the environment, and others are absorbed by human skin using textiles.

In the process of chemical treatment and finishing of clothes, a huge amount of wastewater is created, since these processes themselves are based on the use of water. These wastewaters can impair the quality of the environment, as they are highly alkaline and risky for the quality of groundwater and the entire ecological system. Consequently, the development of technologies for wastewater treatment generated in the process of chemical treatment of textiles is of great importance for solving environmental problems in this industry. Of all the steps involved in textile processing, it is the wet treatment that generates the largest amount of wastewater. There are a number of wet treatment phases that require the use of water, chemicals and energy, and that involve the generation of waste at each stage. Inadequate wastewater treatment before discharge into the environment can cause significant environmental damage.

This statement is confirmed by the following data. The average water consumption in a textile factory that produces about 8,000 kg of fabric per day is approximately 1.6 million litres. Of that, 16% is spent on dyeing (somewhere around 30-50 litres of water per kilogram of fabric), and half is spent on printing. In total, during the dyeing of the yarn, about 60 litres of water are consumed per kilogram of yarn. Wastewater discharged during the dyeing process makes up about 1/5 of the total wastewater. During the conventional dyeing and finishing processes of 1,000 kg of fabric, about two hundred thousand kilograms of water are contaminated in these phases, and a large amount of steam and hot water is used for energy (Toprak & Anis, 2017, p. 435). Countries such as China, India, the United States, Pakistan and Turkey put the greatest pressure on water resources today.

The toxicity of wastewater from the textile industry varies considerably among the installed capacities. Sources of wastewater toxicity may include salts, surfactants, ionic metals and their metal complexes, toxic organic chemicals, biocides, and toxic anions. Most

textile dyes have low toxicity to water. However, surfactants and related compounds, such as detergents, emulsifiers and dispersants, are used in almost every process and can significantly contribute to water pollution.

Textile processing consumes a lot of energy for heating, drying and operating machines that cause an increase in greenhouse gas emissions and carbon footprint. The processes of yarn and clothing production consume a huge amount of electricity, as the main source of energy in the textile industry. It is estimated that this consumption amounts to about 3/4 or 4/5 of the total energy needs in the textile factory, while about 15% to 20% of electricity is spent on starting various machines in wet textile processing. Energy efficiency can be achieved by using renewable energy sources in the textile industry, including the following: (1) installation of Turbo Ventilators on the roofs that rotate by wind, (2) use of direct solar energy for fibre drying, (3) use of solar energy for water heating in the textile industry (Hasanbeigi, 2010, p. 110).

Air pollution is also one of the environmental problems facing the textile industry, as most technological processes produce emissions into the atmosphere (dust, oil mist, acid fumes, odours and exhaust gases from steam boilers). In particular, this problem becomes more pronounced during the final phase, where different procedures are used for coating fabrics. After applying the coating, the procedure of treating the coated fabrics, and heating in ovens, dryers, frames, etc. follows. As a result, organic compounds evaporate into high molecular weight substances, usually hydrocarbon compounds, but also emission of larger particles, mainly fibres.

Solving this environmental problem faced by the textile industry is possible by undertaking the following activities: reducing emissions of organic solvents; using a device to collect contaminant particles; optimizing the operation of steam boilers to reduce emissions of nitrogen and sulphur oxides; checking the toxicity of chemicals before their use, using material safety data, to ensure that the chemicals are non-toxic; identifying sources of air pollution and quantifying emissions; creation of such products whose production does not emit toxic or dangerous air pollutants; improving working conditions by improving the system for minimizing emissions into the air caused by chemical spills.

Primary waste, which includes residues of fabric and yarn, unspecified yarn and waste from fabric and packaging, is not environmentally harmful. The textile industry also generates the type of waste generated during the storage and production of yarns and textiles, such as chemical storage tanks, cardboard reels for storing fabric and compartments used to hold yarns for dyeing and knitting. Waste in the cutting room creates a large amount of fabric residue, and it can be minimized by increasing the efficiency of using the fabric when cutting and sewing.

Recent years in the textile and clothing industry have witnessed the transfer from the linear economy model to the circular economy model because of several trends: fast fashion and consumerism affecting the shorter active life of clothing, expanding global population and middle class, and the falling prices of clothing that increase in the demand for relatively inexpensive textile and clothing products. The textile and clothing industry faces new challenges concerning a transition towards a circular economy: waste prevention and the minimization of landfilled waste. Koszewska (2018) suggests three crucial phases for the circular economy model: product design and development, waste collection and sorting and effective recycling.

4. The circular business model of H&M Group

Companies that apply linear business models face significant environmental risks, among which the following stand out in terms of importance:

1. resource constraints and resource scarcity,
2. variability and increase in prices of resources and energy,
3. regulatory requirements and environmental protection standards,
4. change in market demand in the direction of increasing the sustainability of products and services,
5. impacts of environmental degradation.

Such environmentally risky business can cause potentially great damage to companies in the textile industry, by reducing their reputation among consumers, and also by reducing their competitive advantages and opportunities.

As public awareness of the importance of environmental protection increases, also the pressure on companies in the textile industry to take action to change dominant business models and produce environmentally friendly products is increased. For this reason, many companies in the textile industry are introducing new, environmentally friendly production methods based on a circular approach. The circular economy approach means “to being more profitable (Lancaster, 2002) while also less harmless for the environment” (Sariatli, 2017, p. 32). In order to create sustainable textiles, it is necessary to use environmentally friendly materials, which will generate less non-hazardous waste, reuse or recycle materials, and use less energy, water and chemicals. This statement is confirmed by the positive business practice of some companies in the field of the textile industry, such as H&M Group, which has gone through a transition from a linear to a circular business model and has made remarkable progress in industrial environmental protection.

The textile industry is undergoing an accelerated process of transformation and development, as has the H&M Group itself. The company has been continuously working to increase the sustainability of its business for a full 20 years, and in 2017 an ambitious strategy was launched to redefine the business approach. Significant activities have been undertaken for the complete transformation of the business strategy. H&M Group’s vision is to achieve a transition to a circular and climate-positive fashion while remaining an honest and fair company (H&M Group, 2021). The Change-Making Program translates H&M Group’s vision and strategies into concrete actions through goals, guidelines, standards and monitoring methods. This program enables H&M Group brands and functions to integrate the sustainability strategy into everyday business processes, by creating their own sustainability goals and activities. The company’s strategic activities are aimed at solving key problems in the industry, which is a significant driver of another strategic ambition: to become a completely circular and climate-positive, and at the same time an honest and fair company. These changes should be achieved through three key areas: (1) innovation - identifying and assessing new ways of working and solving complex social and environmental challenges; (2) transparency - informing the public about how the company’s business is realized, informing about its performance and challenges, as well as disclosing more details about the company’s products; (3) rewarding sustainable actions - working with consumers, employees and suppliers to encourage sustainable behaviour.

The company focuses its activities on two key areas (H&M Group, 2021, p. 29): achieving full circularity and solving the problem of climate change, i.e. becoming climate positive.

First, the application of circular models involves optimizing resources and minimizing waste, so that resources remain in use for as long as possible before being recycled. The goal is for the company to fully implement a circular business model, which includes every phase of the value chain, from design and production to consumer use, reuse and recycling, using only sustainable, renewable and recycled resources.

Recycling extends the life of used fabrics, while recycled fibres reduce the consumption of raw materials, the use of chemicals, energy and water. The company uses many recycled materials, including cotton, polyester, wool, nylon, plastic, down and feathers, cashmere and silver.

The application of the circular approach is not limited to products, but also to non-commercial goods, such as packaging and items that stand in the interiors of stores, offices and other buildings. Namely, the linear packaging model has a great impact on the environment, especially when it comes to plastics. In order to completely switch to a circular business model, it is necessary that retail facilities, distribution centres and offices be built and fully regulated according to the principles of the circular economy.

The company's circular business model also includes undertaking activities to eliminate waste, namely operational waste (the goal is to reuse or recycle waste generated in offices, stores and distribution centres), production waste (more efficient waste management generated by suppliers), and waste generated by product defects and surplus goods (using artificial intelligence tools to match demand with production).

Second, the company aims to become climate positive by 2040, by reducing carbon dioxide emissions. The application of the circular model is becoming an important instrument for achieving this goal, along with taking steps to reduce energy use through the value chain, using renewable energy and finding natural and technological reservoirs for the accumulation and storage of carbon-based chemical compounds.

Conclusion

In recent years, there has been an increase in the production and consumption of textile products as a result of population growth and improved living standards. As a consequence, there is an excessive use of resources for the needs of the textile production process, as well as an increased impact on the environment through an increase in the amount of generated textile waste and pollution.

Recently, the concept of circular economy has been developed within the concept of sustainable development with the aim of eliminating the negative impacts of the economy on the environment. The application of this concept requires a change in the business strategies of companies and the transition from a linear to a circular model of production and consumption of products while stimulating innovation and new technological solutions.

In recent decades, the activities and interests of economic policymakers and the business sector in the direction of developing sustainable practices and the application of environmentally friendly technologies have increased. The main goal is to enable the transition from a linear to a regenerative circular system in which the use of products and

materials is stored and maintained in closed-loop cycles, and associated waste, energy and emissions are minimized and gradually eliminated. Such practices range from resource extraction and material production to business models, design and perception principles, and consumer engagement.

The textile industry is one of the oldest and fastest-growing industries in the modern world economy. It is a basic industry for developing countries that follow an export-oriented growth strategy. Being a labour-intensive industry, the textile industry offers opportunities to create new jobs that will absorb the surplus of low-skilled labour in developing countries.

Two main categories of environmental impact from textile production and processing are pollutant emissions and water and energy consumption. Companies that apply linear business models face significant environmental risks and such environmentally risky business can cause potentially great damage to companies in the textile industry, by reducing their reputation among consumers, and also by reducing their competitive advantages and opportunities.

Positive business practice in the field of the textile industry is recorded by H&M Group, which has gone through a transition from a linear to a circular business model and has made remarkable progress in industrial environmental protection from 2017 when an ambitious Change-Making Program was launched to redefine its business approach. The company's strategic activities are aimed at solving key problems in the industry, which is a significant driver of another strategic ambition: to become a completely circular and climate-positive, and at the same time honest and fair company. These changes should be achieved through three key areas: (1) innovation; (2) transparency; and (3) rewarding sustainable actions. The company focuses its activities on two key areas: achieving full circularity and solving the problem of climate change, i.e. becoming climate positive. The example of the H&M Group in the application of the circular economy model and its business success should serve other companies as well so that the application of this model in the textile industry would be widespread.

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IMPACT OF DIGITAL MARKETING ON SUSTAINABLE BUSINESS – CASE OF THE UNILEVER COMPANY

Abstract

Digital marketing, placed on the application of the Internet and digital tools, is one of the means to achieve business sustainability, as well as competitive advantages in the market. This paper presents the basis of the concept of digital marketing, as a new phase in the development of marketing, and its connection with the concept of sustainability. This paper aims to point out how much impact digital marketing can have on business sustainability and the creation of positive business outcomes, shown through the example of Unilever and its Dove brand. The paper analyses the digital marketing activities that this company has undertaken in the development of its Dove brand, which has resulted in its successful positioning in the market, as a brand that is sustainable and socially responsible on the one hand, and profitable on the other.

Keywords: *Unilever, Dove, sustainable business, digital marketing*

JEL classification: *M310*

УТИЦАЈ ДИГИТАЛНОГ МАРКЕТИНГА НА ОДРЖИВО ПОСЛОВАЊЕ – ПРИМЕР КОМПАНИЈЕ УНИЛЕВЕР

Апстракт

Дигитални маркетинг, заснован на примени Интернета и дигиталних алата, једно је од средстава за постизање одрживости пословања, као и конкурентске предности на тржишту. У овом раду приказана је основа концепта дигиталног маркетинга, као нове фазе у развоју маркетинга, и његова веза са концептом одрживости. Циљ рада је да укаже на то колики утицај дигитални маркетинг може имати на одрживост у пословању и на стварање позитивних пословних исхода, што је и показано на примеру компаније Uniliver и њеног брэнда Dove. У раду су анализиране активности дигиталног маркетинга које је ова компанија предузела у развоју свог брэнда

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Dove, што је за резултат имало његово успешно позиционирање на тржишту, као брэнда који је са једне стране одржив и друштвено одговоран, а са друге стране профитабилан.

Кључне речи: *Unilever, Dove, одрживо пословање, дигитални маркетинг*

Introduction

The modern market is characterized by the presence of fierce competition, as well as a high level of consumer involvement in the creation of values, that are delivered to the market. In such conditions, firms compete for survival and stay on the market (Jevtić, Riznić & Milovanović, 2021; Zucchella & Magnani, 2016). It pressured them to re-evaluate their business models and offerings, in accordance with the challenges and opportunities they represent. That is what is commonly called digital transformation. (Daspić, 2017; Killian and McManus, 2015; Onetti et al. 2012; Moi and Cabiddu, 2020). In other words, companies must learn how to rapidly adjust to new business scenarios. Digital transformation is demonstrated by the incorporation of digital technologies into all operational aspects of any organization's activities. In general, offering customers the ability to search and buy online requires companies to re-specify their business models (Leefflang, Verhoef, Dahlström & Freundt, 2014, p.5).

According to Ziółkowska (2021), the new phenomenon can be observed today. It is referred to as the "digital revolution". It is based on changes in consumers' behaviour, but also on changes in the organization of economic relations. It affects changes in all business areas including marketing.

Modern informational technologies create a new market area, which is wider reachable compared to traditional marketing channels. It blurs the boundaries between physical distance and time mismatching, making a wider marketplace for customers over the globe. With the implementation of digital technologies in marketing and business generally, a lot of transactions are simplified, like purchasing, communication, payments etc.

In the digital economy, customers are now empowered with a high level of company transparency. This transparency results that a brand can no longer make false, mistrustful promises. Companies now focus their attention on building digital relationships with their customers (Kannan, 2017).

Marketing is an area that is continually evolving with the market. One of the most influential marketing phases is digital marketing, which fundamentally relies on technological development. Digital marketing is a term that has evolved over time. It describes the marketing which is used for digital products and services. They are distributed using digital channels, as a new way to win consumers' hearts and build their preferences, promote brands, increase sales etc.

Digital marketing is related to sustainable business, and there are many examples of how it works in practice. The structure of this paper is as follows. After a short introduction, the second part of this paper gives a brief overview of digital marketing (r)evolution and its relations with sustainability, with practical examples of how the company Unilever increased sales of their brand Dove, using direct marketing.

1. Digital marketing (r)evolution

Marketing has changed significantly in the past decade. The American Marketing Association (AMA) has changed its definition of marketing several times. The new 2007 definition implies that “Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large” (AMA, 2007). Wind (2008) highlighted that marketing transits through different concepts during the period of time (i.e. the four Ps: product, price, place, and promotion; the three Cs: company, customers, and competitors; customer satisfaction; relationship marketing; permission marketing, and collaborative marketing). Each of the listed concepts is being questioned and affected by a world of empowered consumers, fierce competition, globalization, improvement in technologies, and the interdependencies of these forces.

Chaffey & Smith (2017) point out that digital marketing is a new way of thinking and a useful tool for creating a business which is customer-led. That means that digital marketing involves customers in all activities, through constant dialogue.

Digital marketing is an evolving concept, whose popularity has been rising since the 1990s and 2000s (Paul, Bhuimali, Aithal & Bhowmick, 2018). Nevertheless, there are a lot of different definitions that describe this phenomenon. The American Marketing Association (AMA) defines digital marketing as the application of digital or social channels to boost a brand or reach consumers. This type of marketing may be performed over the Internet, social media, search engines, mobile devices and other channels. It requires new ways of marketing to consumers and understanding the impact of their behaviour.

According to Kotler, Kartajaya & Setiawan (2017) “digital marketing is not created to replace traditional marketing. Instead, the two should coexist with interchanging roles across the customer path” (p. 52). Because digital marketing is more agile, their goal is to generate results when traditional marketing cannot.

Besides AMA, there are a lot of organizations whose business is based on marketing practice. These organizations create their own definitions of marketing and its elements and phases, which are noticed by some authors. Some of them give the definition of digital marketing, also. The Digital Marketing Institute defines digital marketing as “the use of digital technologies to create an integrated, targeted and measurable communication which helps to acquire and retain customers while building deeper relationships with them” (Smith, 2007). Simply Digital Marketing defines the term: “Digital Marketing is a sub-branch of traditional Marketing and uses modern digital channels for the placement of products, e.g., downloadable music, and primarily for communicating with stakeholders e.g., customers and investors about a brand, products and business progress” (Royle & Laing, 2014, p.65).

Deighton & Sorrell (1996) alleged that digital marketing consists of direct marketing and interactive marketing. Direct marketing’s function is to consider customers as individuals and to pay attention to their personalities and to their actions, as one entirety. On the other hand, interactive marketing has the capacity to speak to customers and to collect and retain that customer’s answers. According to Kotler, Kartajaya & Setiawan (2017), digital marketing and traditional marketing are intended to exist side-by-side in Marketing 4.0. Their definitive goal is to achieve customer trust and loyalty.

Simplified digital marketing can be defined as reaching marketing goals through the application of digital technologies and media.

Holder (2008) and Wind & Mahajan (2002) assert in their research that digital marketing is basically direct marketing which is implemented through new media - as a new marketing channel model. There is a significant difference which is noticeable between direct and digital marketing. Digital technologies raise the interaction with customers to the highest possible level. That results in firms' achieving less audience wastage.

One group of authors explains digital marketing as a completely new marketing, not the traditional one which is upgraded by digital channels, communication, etc. (Taiminen & Karjaluo 2015; Järvinen, Tollinen, Karjaluo & Jayawardhena, 2012; Liu, Karahanna, & Watson, 2011; Rowley, 2008).

Chaffey & Ellis-Chadwick (2016) point out that digital marketing in practice implies the management of various forms of the firm's presence online, which includes websites, social media pages, online communications with customers, etc.

According to Wymbs (2011), the primary application of digital marketing so far has been Internet-based research marketing and digital promoting. In that sense, digital marketing's future is going to be based on customers' wants in order to follow them everywhere they go. Today's consumers are becoming more and more mobile and socially engaged. For one of the biggest generations – Millennials, digital marketing is the guarantee for them to be reached (Okazaki, Katsukura & Nishiyama, 2007; Smith, 2012). One of the greatest digital marketing missions is providing the required information for the customers at the place they want it and at the time when they need it. The adage "If a company cannot be found in Google, it does not exist" completely describes this new generation's attitude (Taiminen & Karjaluo 2015). They are the main audit group related to this, new marketing era, especially because they are influenced by online marketing channels, and also, they are influencing each other constantly (Smith, 2012).

There is no suspicion that digital marketing is a serious revolution that has changed marketing to the core. (Wind & Mahajan, 2002). And it should be changed because buyers are changing. In that sense, the future evolution of marketing is obvious. Besides the evolution, marketing is adjusting to new business ideas, and one of them is sustainability. The relationship between these two will be discussed below.

2. Digital marketing and sustainability

The global idea of sustainable business is not new, it lasts for decades. According to Van Dam & Apeldoorn (1996), the significance of the effects of economic activity on the environment started to grow in the early 1970s. For decades, proponents of the early idea have argued that environmental and ecological strategies could actually lead to competitive advantages and better financial performance. (Sharma, Iyer, Mehrotra & Krishnan, 2010). Savitz and Weber (2006) point out that a sustainable company is one that can generate profit for its stakeholders while protecting them through care about the environment.

Rapid and extensive industrialization and urbanization around the world in recent years have created a number of serious environmental problems in almost all countries across the globe (Radivojević, Krstić & Stanišić, 2018, p. 25). Both, sustainability and sustainable development became unavoidable dimensions in all business activities. In that sense, the relationship between sustainability and marketing is one of them.

Many authors agree that sustainability and marketing have a lot of contributions to each other. A lot of papers in these two fields testify to that (about 2000 papers since the 1990s). Thus, the gap between them is still prevailing. This gap can be explained as a difference between behaviour and beliefs between society and marketing on the one hand, and the firm's potential to follow and adjust to a sustainability trend, on the other hand. Digital marketing can have a key role in connecting them. (Diez-Martin, Blanco-Gonzalez & Prado-Roman, 2019).

According to Dumitriu, Militaru, Deselnicu, Niculescu & Popescu (2019) sustainability has a positive impact on business, decreasing potential risks by enlarging brand equity and reputation – empowering companies to get through difficult times. Companies that meet consumers' needs and environmental protection requests have a clear environmental positioning on the market. These companies are mostly listed as the most successful ones.

Winsemius & Guntram (1992) highlighted that environmentally responsible actions include building a green supply chain and empowering companies in developing distinct advantages over the competition present on the market. Their key role is to create customer satisfaction because only a satisfied customer is willing to buy other offered goods and services (Sun, Garrett & Kim, 2016).

With the increased impact of environmentalism, customers are more interested in buying products which generate the least impact on the environment (Chang & Fong, 2010). In that sense, customer satisfaction as a business imperative transmits to a new level, so now we can talk about green satisfaction. That is an acceptable level of consumer satisfaction, according to their environmental, sustainable and green expectations and needs (Vafaei, Azmoon & Fekete-Farkas 2019). Therefore, for the companies, there is a new market opportunity: to be green, and green marketing can be a tool used to win it.

Green Marketing becomes implemented in practice by many companies, that wanted to improve their performance of companies and minimize their impact on the environment (Souri, Sajjadian, Sheikh & Sana, 2018). According to Hunt (2011), green marketing can be classified into ecological marketing (1970s), environmental marketing (1980s) and sustainable marketing (1990s). Sustainable marketing is considered as a current, third age of the green marketing concept. Its focus is on developing sustainable improvement and a sustainable economy (Hunt, 2011). In this concept consumers, green consumers, are one of the main initiators of sustainability marketing.

All listed can be implemented and combined with new IT. In that sense, we have a completely new approach to digital marketing. Many companies worldwide recognized its importance. In this paper, the example of how digital marketing can be used for successful business and sustainability at the same time will be discussed. The practical example, which will be explained below, is based on the business practice of the company Unilever, and it is the brand Dove.

3. Practical implementation of digital marketing to achieve sustainability in business – the example of Unilever Company and its brand Dove

3.1. Unilever strives for sustainability

Unilever PLC is a UK multinational corporation headquartered in London, England. The company was founded in 1929 as a small family business. Thanks to rapid progress and successful cooperation with partners, Unilever is a leading company in various business areas worldwide. Unilever has over 400 household name brands, and a 25 million-strong global network of retailers. Unilever sells its products in over 190 countries, and 2.5 billion people every day use them. It has three principal product divisions: Home care, Beauty & personal care, and Food & Refreshments, and each division has hundreds of successful brands.

Unilever started by establishing a socially responsible business in 1995 when it published its Code of Business principles. Since then, the company has sought to ensure that companies comply with laws and regulations, as well as protect trademarks and images, and prevent wounds to people or the environment. Unilever started the implementation of this Code through two main courses: The Nutrition Enhancement Programme (includes 16,000 products which are estimated for levels of trans-fats, saturated fats, sodium and sugars, and, where necessary, action is taken) and the so-called Sustainability Programme.

The first steps in implementing sustainability in business started in the following years when the company started to use sustainable raw materials in their production (e.g., sustainable sources of fish, palm oil, and tea). In 2009, Unilever launched its Compass strategy, which relies on the genuinely sustainable business model: to double the size of its business organization while reducing its environmental impact. That was recognized and rewarded by the public. By 2010, Unilever had won numerous awards related to sustainable business (i.e., the Dow Jones Sustainability Indices, for the 12th consecutive year, in 2015, for the 15th year, Unilever is named the leader of the Food, Beverage & Tobacco industry group with a score of 92 out of 100). Their activities continue by adopting the Unilever Sustainable Living Plan, encouraging sustainable agriculture at the World Economic Forum in Davos, contributing to the launch of the UN's Sustainable Development Goals (SDGs) and joining global calls for action at the 2015 Paris Climate Conference (COP 21).

In 2016, Unilever won another industry record by sending null non-dangerous waste to landfills across more than 600 sites in 70 countries, including factories, warehouses, distribution centres and offices. In 2017, the company undertook a study that included 20,000 adults on how their sustainability worries result in their choices in-store and at home, and the results showed that a third of consumers (33%) choose to buy from brands they believe are doing business well socially or environmentally (Unilever, 2017). During that year, Unilever was involved to guarantee that all their plastic packaging is fully reusable, recyclable or compostable by 2025, and called on the Fast-Moving Consumer Goods industry to do the same. By 2019, Unilever had achieved to use of 100% renewable energy across five continents.

Through three product divisions, this company's achievement in environmental protection is significant. Besides environmental protection, this company cares about people all over the world. In this paper, we will analyse one of the Beauty & personal care brands, which is the most successful one, Dove. Special consideration will be given to this company's digital marketing campaign. The main question we are going to answer is what Dove does in its marketing and where it succeeds.

3.2. Digital is what Dove is all about

Dove is one of Unilever's biggest brands which is present worldwide. It was founded in 1957 in the US when they began the innovative beauty cleansing Bar. Since that year, it has grown rapidly, and today they offer various types of products such as body washes, hand and body lotions, facial cleansers, deodorants, shampoos, conditioners and hair styling products.

Products based on moisturizing are what makes Dove different, and that is the reason why it is strongly supported by dermatologists across the world. Inspired by women, Dove strives to provide superordinate care to all women, heightening real beauty.

For more than a decade, Dove has been working to make beauty become a source of confidence, not anxiety (Unilever). Its special mission is to ensure that the next generation is self-esteem and grows in positive energy and achieves their full potential. But Dove's care is not committed only to people, they care about animals, too. In 2018, Dove gained accreditation by PETA, which marks it as a brand that commits not to lead any tests on animals anywhere in the world.

Dove has a significant marketing position. Through courage and innovation, this company sells more than just beauty. In 2004, Dove launched The Dove Self-Esteem Project (DSEP), which was dedicated to educating young people and their parents about what real beauty should be like. The results of Dove's recent global study - The Global Beauty Confidence Report, 2016, showed that attitudes are changing slowly and that women's and girls' anxiety about their bodies is the greatest ever.

In 2021, the Dove brand was esteemed at approximately \$5.1 billion U.S. dollars and its digital campaigns have won influential awards on both national and global levels over the last 15 years (Digital marketing institute, 2021; Lisafen, 2021).

The constant presence online and carefully created digital marketing campaigns, special projects and programs made the strong base for success. What Dove did to be successful will be presented below.

3.3. Dove: An excelling approach to digital marketing via Self-Esteem Project

The Dove Self-Esteem Project, which has been implemented for more than a decade enabled Dove to become the best-selling Unilever brand. Dove provoked revolutions in the field of female beauty. This project was realized through digital marketing media, and in several campaigns. In using digital marketing Dove is the absolute pioneer. It did not sell the products, but the real beauty of choosing the new approach to customers. It turned out as a good decision because the used media was adjusted to the target group, and the messages they sent provoked a great public response.

Through several campaigns, Dove became recognizable by promoting real female beauty, while emphasizing their imperfections. The campaign took place in several phases, and the goal of all phases was to attract as much public attention as possible through provocative activities. Showing women in their real light, without makeup was a revolutionary move, which attracted a lot of attention. With its activities, Dove provoked revolutions in the field of female beauty. A strong message was sent to women all over the world about self-confidence. Thanks to the Real Beauty campaign, Dove's sales multiplied from \$2.5 billion to \$4 billion during the first ten years of the campaign (Digital Marketing Institute).

Back in 2004, Dove initiated talks on a very sensitive topic that concerns women around the world. Through a revolutionary approach - a concept that emphasizes true beauty, Dove has begun to build a strong community of its consumers. According to one of the announcements that this company made public, this started a new phase in the 60-year celebration of female beauty and care.

The first step forward is Dove with the Real Beauty campaign. Showing women in their real light, without makeup was a revolutionary move, which attracted a lot of attention. Characteristic of this campaign was the installation of billboards with images of women and provocative messages like "Wrinkled or Wonderful" invited passers-by to vote. The results were shown on the billboards directly.

The second phase of the campaign began in 2006 when a project was launched to help improve young people's self-esteem through online articles, video forums and workshops on topics such as self-esteem, body positivity and bullying, via a web portal. Their goal was to educate more than 15 million young people on how to be self-confident. In the same year, Dove initiated the idea of a self-portrait "True Sketches of Beauty". Throughout this phase of the campaign, it was shown that there is a significant difference between how women see themselves and how others see them. Special attention was drawn to a series of videos where daughters describe their mothers for Mother's Day in 2013.

A new step forward in terms of communication with customers happened in 2015, and it is about cooperation with the social network Twitter. The struggle for the acceptance of natural female beauty became even stronger then. The goal of the collaboration which Dove established with Twitter was to reduce the number of negative tweets about body image. "To launch the campaign, Twitter and Dove teamed up to create a video ad about the shame of the body that aired during the 2015 Oscar premiere. During 2015, women used #SpeakBeautiful more than 168,000 times and left 800 million impressions on social media about the campaign" (Digital Marketing Institute).

The next phase in this project was a photo campaign realized in 2017. This campaign included a partnership with Shutterstock. The photos showed "real women", determined and brave, with the message #realbeauty. With this, Dove encouraged other brands to come forward with the same goal. Another campaign, called #showus, was launched to collect as many photos of women from different backgrounds as possible, including those from 2017, as a reminder to the media to join their women's empowerment program around the world.

Special attention is paid to young women, who are daily influenced by the content on social networks, and, among other things, by the influence of emphasizing perfect bodies. The new 'No Distortion' campaign was launched in 2018 and was intended for

women aged 16 to 25. With the introduction of the “No Digital Distortion” label, Dove products have become synonymous with their commitment to the #realbeauti concept. This symbol appears on all Dove content placed through both traditional and digital channels.

The next step in the project is a partnership with the Cartoon Network series “Steven Universe” to educate young people about the importance of trusting your own body.

This short retrospective describes one program that lasts more than decade. With several campaigns realized through the program, Dove reached a lot of women. In the 2017 Dove Global Girls Beauty and Confidence Report, the biggest academic report by Dove to examine the effect of body esteem, pressures and confidence on girls everywhere showed some results. Over half of the girls around the world do not have high body esteem, 82% of them think every girl has something about them that is beautiful. Their mission is not over yet. Worldwide by 2020, Dove is going to double its social impact through the Dove Self-Esteem Project by reaching the lives of another 20 million young people around the world. (Dove, Self-Esteem project)

3.4. The keys to Dove’s success

Through connection with customers, Dove encouraged women to talk about their insecurities. They spent a lot of resources to reach an audience. The marketing campaign they implemented was based on channel integration to send a strong message. Besides social media, the website, and digital marketing channels, they used mass media communication. The result was that Dove became a brand which is tightly related to several associations, which are used in their campaigns: #realbeauty, #selfesteem, and #showus movements.

By involving other companies in its campaigns, Dove made a significant partnership. The most prominent one is the partnership with social media Twitter. This partnership brought benefits for both sides. The #SpeakBeautiful hashtag succeed in affecting women to talk online by reducing negative twits about beauty and body image. Dove was helping their partners to effect a change in global advertising, not just in their ads.

For brand promotion on other social media, Dove encouraged different people to present its products as they want them. Their accent was on their variety. They also rely on peer-to-peer recommendations. The website which supports the Self-Esteem project is still viral, and open for new participants to join, as a teacher or students.

These are just the initial steps regarding the focus on real beauty, that is, what their brand has become. The continuation of Dove’s campaign began under the name “It’s On Us”, which made it clear that it was continuing its mission. Dove has committed to hiring real-world models in its further campaigns, as well as to co-finance the campaigns of its competitors if they decide to hire Dove models. In January 2020, Unilever also committed itself to include several different groups in its campaigns to work with on the campaign. Whether the campaign will continue to achieve the expected effects or not will be seen in the future. What is certain is the great determination of the Unilever Company to release young women and girls through its Dove brand from the restraints and imperatives of beauty that they encounter on social networks. That is why this issue

is central to their website. For Dove to succeed, great support from people is needed, which we believe will not be missed, because the key thing that Dove did is hit the target - they deal with a big social problem through beauty promotion, which becomes even more important by involving young people and children.

Conclusion

The growing demands that the market and the environment impose on companies make their business activities more difficult. They face great challenges to respond to all that. At the same time, new tools and ways of doing business are being developed, which, if used in the right way, can greatly contribute to companies. In addition to the already established market and environmental requirements in the form of making a profit and sustainability in business, the use of digital tools has a significant role in business. Digital marketing, as one of the areas that use digital tools, enables companies to more easily achieve the set goals while respecting various requirements from the environment.

This paper shows that digital marketing is a tool that has a lot of potential in achieving successful business results while achieving sustainability. Much attention has been paid to this topic, both in literature and in practice. The new, digital channels it uses to make it much easier to reach consumers, as well as offer them more than just the products themselves. Undoubtedly, digital marketing is especially suitable for accessing the younger generations.

An example of Unilever's business practice, presented in the line, indicates that a socially responsible and sustainable business has been built for many years. Numerous awards and achieved records only further support the already mentioned fact. It is also shown that the combination of digital and sustainable can be crucial in creating a sustainable competitive advantage in the market. Unilever is a good business example of how the correct use of digital marketing can lead to a wider market, better positioning, building a good image, and the image of a socially responsible company.

The success of the Dove brand, Unilever, is proof of the positive impact of digital marketing on business. Through the Self-Esteem campaign, Dove has become a world-renowned brand, which not only cares about women's beauty but also encourages women around the world to celebrate their natural beauty. The increase in sales that the company has achieved from the sale of products is only one of the indicators of success. In addition, a large number of participants in the campaign, followers on Twitter, and activists only further confirm the success of the Dove brand. Upon considering all the previous points, it can be concluded that Dove made a revolutionary move by entering the market boldly with innovative ideas. This is exactly what enabled the company to achieve an unbreakable connection with its consumers through caring for people, of whom there are more and more every day.

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SUSTAINABILITY AND PRODUCT LIFE CYCLE IN CIRCULAR ECONOMY

Abstract

Circular economy and business according to its principles are gaining in importance in increasingly competitive business conditions. The main goal of the company is to make a profit through respect for the environmental and social dimensions. Through sustainable development and the application of the zero-waste principle, the emphasis is shifted to production that saves resources and uses renewable energy. The aim of this paper is to emphasize the connection between sustainable development and circular economy, as well as the possibility of extending the life of products and raw materials through the concept of the circular economy. The importance of this topic stems from the need to align economic goals with the goals of preserving resources and the environment. The main purpose is to show the connection between sustainable development and the circular economy, as well as to point out how compliance with standards and recommendations can help in the transition from a linear to a circular way of doing business.

Keywords: *sustainability, sustainable development, product life cycle, circular economy, standards*

JEL classification: *Q56, Q57, M21*

ОДРЖИВОСТ И ЖИВОТНИ ЦИКЛУС ПРОИЗВОДА У ЦИРКУЛАРНОЈ ЕКОНОМИЈИ

Апстракт

Циркуларна економија и пословање према њеним принципима добијају на значају у све конкурентнијим условима пословања. Основни циљ компанија јесте остварење профита, али кроз поштовање еколошке и социјалне димензије. Кроз одрживи развој и примену принципа нула отпада, акценат се

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преноси на производњу која штеди ресурсе и користи обновљиву енергију. Циљ рада је указивање на повезаност одрживог развоја и циркуларне економије, као и на могућност продужења животног века производа и сировина кроз концепт циркуларне економије. Важност ове теме проистиче из потребе за усклађивањем економских циљева са циљевима очувања животне средине и ресурса. Основна сврха јесте приказ повезаности одрживог развоја са циркуларном економијом, као и указивање на то како поштовање стандарда и препорука могу помоћи у преласку са линеарног на циркуларни начин пословања.

Кључне речи: одрживост, одрживи развој, животни циклус производа, циркуларна економија, стандарди

Introduction

As a new business concept of a growing number of countries and international companies, the circular economy contributes to greater competitiveness, with the goal of smart and rational spending of resources and energy. The essence is to take resources from nature, spend them in the process of reproduction to create products that serve the purpose and, after the end of the product life cycle, return them to processing, recycle and get new input for the production process. By investing in the use of waste and the use of renewable energy sources for processing and production, the company uses raw materials and energy from nature, but also protects nature and its environment from excessive devastation, and pollution and behaves socially responsibly to all future generations. The circular economy is a kind of sustainable development strategy based on economical and responsible treatment of the environment and natural resources. For decades, the need to improve and create conditions for sustainable development and coping with increasing environmental pollution and scarcity of non-renewable energy sources and raw materials has been emphasized. Developed economic activity in the world leads to numerous environmental problems that require an urgent solution and eradication of their causes. But the answer to the question of how to stop economic development when it is the engine of development and survival of society is only - to change the way it moves; to direct economic growth and economic activities towards respect for the principles of social responsibility and ecological balance through the more rational use of natural resources and maximal utilization and use of waste and recyclable materials. Such behaviour brings not only increases profits through numerous savings but also creates a good basis for economic prosperity in the future.

Many companies are moving from a linear to a circular economy because of the perceived benefits of this way of doing business. First, there are greater savings in the procurement of raw materials through the use of recycled materials, then energy savings through the use of renewable sources such as sunlight, wind power, construction of its own hydropower plants, and through increased competitiveness and job creation. Above all, a socially responsible business, which means respecting the principles of environmental protection and a responsible attitude towards the population, provides

a better position in the market and respect for such a company by consumers, which ultimately reflects on the company's business results. On the other hand, by constantly "circulating" raw materials and materials through the production process, the value of materials and products is "retained" longer, so even after the life cycle of the product they can either be reused or returned to their original state through the processing of their components.

The field of the circular economy requires a comprehensive, holistic approach to understanding and involving a larger number of stakeholders. Various institutions, economic entities, but also the entire social community, have numerous interests in achieving the positive effects of the circular economy. The application and respect of the principles of circular economy enable the improvement of living standards, living conditions and business results of companies. The basic principle of circular economy is that, within the limits of technological possibilities, waste materials from the production process or after use by consumers are processed and recycled, in order to be found again in the process of reproduction. Along with it, the principle of consuming renewable energy sources and energy savings enables the realization of the principle of social responsibility of each individual or society as a whole. Numerous methods and tools applied to implement the principles of circular economy and combine all three aspects - social, economic and environmental, facilitate the use of analytical frameworks such as LCSA (Life Cycle Sustainability Assessment) which in synergy with circular economy principles can lead organizations to achieve positive business results.

Through understanding the basic characteristics of the relationship between sustainable development and circular economy, it is important to know their synergistic action and orientation towards identical goals that require a well-conceived strategy and measures for their implementation. One way is to retain value within the system, extending the life of products and materials. The education and training of stakeholders, the entire community and individuals are essential issues for the survival of the economy and a healthy environment in the future.

1. Interconnection of circular economy and sustainable development

The world economy and the most developed countries face shortages of resources and the growing negative impact of climate change and environmental pollution. The transition from a linear economy to a circular model of business and reproduction is necessary. The time when raw materials were in abundance and the environment was ecologically unpolluted and full of power is far behind humanity, so the principle according to which the best is extracted from nature, processed and sold for a big profit and then thrown away, is no longer valid. The linear principle is dominant, but the circular economy and the circular flow of business are attracting more and more attention. The reasons for such behaviour and change of consciousness are financial, environmental, but also social (Lewandowski, 2016). Due to increasing competitiveness, as well as the increasingly sophisticated needs of consumers, faced with a shortage of raw materials and energy, many companies are turning to savings through the application

of a circular business model. Profit-oriented, but on the other hand, through this social and environmental dimension and socially responsible, companies accept a new business pattern and think “circularly”. Thus, the question arises of how to process and turn the same resource as many times as possible through the process of reproduction, to make an identical product from waste and thus multiply the value of the material and the waste material itself (De Sousa Jabbour, 2019). The connection between economic development, environmental protection and the development of a social community is the reason why companies harmonize their business development with real social development and consider the impact of their activities on the environment. The Sustainable Development Guidelines strike a balance between the goals of these three important business dimensions - economic, social and environmental.

The concepts of sustainable development and the circular economy are inseparable, and when it comes to implementing one or the other, in fact, all the goals, strategies and tools for their application are closely linked. It is the respect of the ecological, social and economic dimensions of business in the circular economy that leads to the comparative respect of all the principles of sustainable development of society. The circular economy, through the rational use of resources and the use of waste secondary raw materials, with the adequate use of renewable energy sources, acts in the direction of achieving sustainable development, because it behaves responsibly towards the natural environment and the community. The concept of sustainable development strives to achieve economic goals by preserving or improving the quality of the living environment. At the same time, the paradigm of circular economy is based on a production system respecting the principles of sustainable economic development, without harming the environment (Marković et al., 2020).

Economic activities such as industry, mining, energy or agricultural production contain reproductive processes that pollute the environment and, often, products that end up as waste. All this causes serious environmental problems that only increase from generation to generation. It is the Sustainable Development Strategy from 1992, in response to growing environmental problems in the world that emphasizes the achievement of three important goals: preservation of ecological balance, fair distribution of natural resources between generations and insufficient development (Žikić et al., 2016). Viewed in this way, the circular economy is a good framework for the realization of goals and strategies for sustainable development. In fact, it supports and emphasizes the postulates of sustainability, emphasizes the importance of the natural environment and living space and emphasizes the preservation of ecology for future generations, through the rational use of non-renewable and scarce resources, and increasing engagement of renewable energy sources.

There are three possible links between sustainable development and circular economy: 1. Circular economy is a prerequisite for sustainable development; 2. The circular economy is useful for sustainable development; 3. Circular economy and sustainable development have a compensatory relation (Suárez-Eiroa et al., 2019).

It is of crucial importance to note which dimensions of sustainable development are identical to the dimensions covered and affected by the circular economy. The circular economy has predominantly economic and environmental goals, and the overall concept of sustainable development refers to the achievement of economic goals while respecting environmental principles and the principles of environmental protection.

Circular economics pays much less attention to social goals (Sauvé et al., 2016).

Both concepts require the involvement of various stakeholders who have interests for successful implementation - both entities with economic interests and those with non-economic goals, in achieving socio-economic development. Also, with legal regulations and incentives, it is possible to realize and achieve the goals of both concepts in parallel.

Although at first glance these two concepts have a lot in common, there are some differences between them. First, the concept of sustainable development has a significantly higher number of goals. In addition, the circular economy is based on resource efficiency and reducing waste, while the concept of sustainable development is much broader. Circular economy emphasizes at the same time economic and environmental benefits. Compared to linear, it observes the comprehensive benefits of a new way of doing business based on respect for the principles of social and environmental responsibility (Schroeder et al., 2018).

Figure 1: Sustainable development and circular economy goals (Agenda 2030)



Source: Adapted to the Ministry of Environmental Protection (2020)

The 2030 Agenda for sustainable development is based on 17 sustainable development goals, the main purpose of which is poverty eradication, social and health protection, economic growth and solving climate problems (Ministry of Environmental Protection, 2020). Among the goals of sustainable development, seven goals are directly related to the application of the circular economy and they are declared as the primary goals of this concept. These include Goal 7 – affordable and clean energy, Goal 8 - decent work and economic growth, Goal 11 - sustainable cities and communities, Goal 12 - responsible consumption and production, Goal 13 - climate action, Goal 14 - life below water, Goal 15 - life on land.

2. Product life cycle in the circular economy

In the circular economy, products are expected to be designed and engineered in a way that enables durability, repairability and reuse, or recycling of the material from which they are made, after the end of their useful life (Bogetić et al., 2021). Circular economy products can be reused after the end of their life, although in most cases they are recycled and the raw material that is the basis of new production is obtained. This is the essence of the postulates of the circular economy and the product-waste-product relationship, which emphasizes the creation of conditions for uninterrupted production while reducing the amount of waste in the environment and reducing the exploitation of natural resources. The products are therefore purposely designed and engineered in a way that they can be easily dismantled later and that their components can become part of recycling and then the production cycle again.

Figure 2: Product life cycle in the circular economy



Source: Adapted to Balkan Green Energy (2021)

Through product design, a company determines which materials it will use in the production and how to combine resources that can be replaced, reused and finally recycled and reused as a secondary raw material in identical production. Through the

very choice of materials and raw materials for production, it greatly influences the profitability and increase of the company's income, i.e. the reduction of the costs of materials in production.

The circular economy requires action at all stages of the product life cycle, from the choice of design, through the procurement of materials and raw materials, production, distribution and sales, but still - reuse or production and waste management (Figure 2). By applying the principle of circularity, the life cycle of the product is extended, because the product gets a new look after the end of its life cycle, is repaired, and is ready for new use (depending on the type of product, material and purpose) or through disassembly of components by the recycling process serves as an input raw material for new production. Indeed, the percentage of waste that cannot be used in the circular economy is quite small.

For the sake of sustainability and success of a circular economy, economic, environmental and social aspects of circularity are jointly taken into account and, in that sense, the LCSA framework - Life Cycle Sustainability Assessment is used as a framework for estimating the circular economy strategy (Niero & Rivera, 2018). In addition to this framework, there is also an environmental life cycle assessment (E-LCSA), a life cycle cost (LCC) and a social life cycle assessment (S-LCSA). By synergy and joint integration of the LCSA framework and the circular economy, positive results can be achieved at the level of the organization or even the sector. Therefore, the application and integration of the BS 8001: 2017 standard (Niero & Rivera, 2018) entitled "Frameworks for the implementation of the principles of circular economy in organizations" is suggested.

3. BS 8001: 2017 standard - Framework for the implementation of the principles of circular economy in organizations

BS 8001: 2017 is a standard that is not suitable for certification and is not intended for it, but is useful to enterprises as a support in terms of the introduction of the principles of circular economy and sustainability in their business. This standard observes the circular economy as regenerative in order to maintain the utility and value of the materials and components of the product itself at the highest level at all times. Thus, the goal is to have a product of high value and usefulness, made so that even after the end of its useful life, its components and materials retain their value through reuse. The standard suggests that it is important to notice through its application because it is important to think circularly - how to implement the principles of the circular economy within the organization in order to create a higher level and quality through the process of product reproduction or innovation.

This standard is guided by compliance with the minimum principles crucial for achieving the defined objectives, presented in Table 1.

The stated principles of the standard are used to determine and assess the state of circularity in the organization through certain phases of the framework presented in the standard. In the first phase, it is important to realize the importance of the concept of circularity for the organization. Then, in the second phase, the vision and strategic plan

for the implementation of the concept are defined. The third phase is designed to generate ideas and then assess feasibility. In the fifth phase, business models are considered and prototypes are made. This is followed by implementation and monitoring and the audit phase.

There are several ways to apply the principles of this standard in an organization and to improve the process of transition from a linear to a circular economy to be more successful:

1) Sharing platforms’ model instead of buying the product itself - a model based on a platform for providing services and sharing products among consumers, which means that the user of the product is not its owner and has no responsibility for it after use. It is used in the automotive industry, tourism, construction;

2) Resource recovery model - a model that contributes to the disappearance of waste through the reuse of materials and components of products that have expired. This model directly increases the economic efficiency of the use of raw materials and reduces the disposal of either raw materials or waste;

3) Product life extension model - in the model, the value of the product and consumed materials is “retained” longer because various repairs and redesign of existing products affect the extension of its life. The company has significant savings both in materials and in all other costs that occur in the value chain;

4) Product as a service - the basis of this model is the lease agreement, and the product is still the property of the manufacturer. It is especially suitable for all products with a longer useful life (Ministry of Environmental Protection, 2020).

Table 1: Principles according to the BS 8001: 2017 standard

| <i>Principle</i> | <i>Description</i> | <i>The objective of the principle</i> |
|---------------------------|---|--|
| <i>Systemic thinking</i> | Applying a holistic approach | Understanding how individual characteristics affect the system of which they are an integral part |
| <i>Innovation</i> | Undertaking anything that is new and changed and that results in redistribution of value | Creating value through enabling sustainable resource management based on product designs and business models |
| <i>Management</i> | Management of impacts of the organization's activities within the broader system of which they are part | Considering the economic, environmental and social influence of the organization's activities in the supply chain system |
| <i>Cooperation</i> | Different forms of cooperation – formal, informal, internal and external | Creating common values between organizations |
| <i>Value optimization</i> | Storage of all products, their components and materials in greatest value and usefulness | Examine what waste or systemic loss would be, determining opportunities to take into account new potential for new investment through them |
| <i>Transparency</i> | Be open to decisions and procedures that enable the transition to a circular economy and the readiness to communicate in a clear, timely, and fairway | Building trust at all levels, in public relations, suppliers and customers |

Source: Niero & Rivera (2018)

Models can be used separately or combined. Companies decide on this based on the analysis of internal characteristics and external opportunities, respecting their own

business strategy and the principles of circularity that they strive for. Manufacturing companies start their circular business mode in the phase of designing products, in which the direction of development of the entire process is determined.

Conclusion

Business conditions in the world impose the need for reorientation of companies from a predominantly profit point of view to wider aspects, in which there is interest in environmental and social needs. Companies are using the circular economy as a new way of achieving economic and financial goals and are gradually replacing the linear concept with a circular one. In their business so far, they have been forced to invest money every day in materials, distribution channels and other business segments. At the same time, certain types of production and product ranges require the exploitation of scarce resources, the use of expensive energy sources and the storage of waste that had no purpose. Circular economy uses waste as a new raw material, saving on resources, energy and time. In addition, the circular economy supports the concept of sustainable development, a development that does not harm either the current or future natural environment. Therefore, the connection between these two concepts is harmonious - by respecting the principles of sustainable development and striving to achieve its goals, the goals of the circular economy are achieved - according to Agenda 2030, in which 7 out of 17 goals of sustainable development are circular economy goals.

Through recycling and use of already used raw materials or through reuse of products (overhaul, redesign, replacement of product components), the product life cycle is extended. Companies, already in the product design phase, are thinking about how to make the product recyclable, desirable for the environment and assembled in a way that facilitates its use or disassembly into its constituent components. Today, modern materials are used that can be reused. The aspiration is directed towards the use of renewable energy sources, wind, sun, and water, with the necessary respect for ecosystems and the non-disturbance of natural resources.

The application of the LCSA framework enables the integration of the economic, social and environmental dimensions of circularity. The professional literature advocates the application of the BS 8001: 2017 standard, which is more of a recommendation but is useful in introducing and respecting the principles of the circular economy. Its six principles seem simple, but they actually reflect the essence of such an important process: the principle of systemic thinking, the principle of innovation, management, cooperation, the principle of value optimization and transparency. It is important to apply the principles on a personal level, but above all, on the level of the organization, and to be equally committed to each of them, because that is a guarantee of success. Companies can apply some of the business models, such as sharing economy and a service delivery model instead of buying products, reusing resources, extending life, or modelling products as a service. It will depend on the type of production, the type of product and the goals of the company itself.

Major environmental problems in the world, such as climate change, shortages of clean water, and increasing pollution of land, water and air, require not only an urgent response from the public but also a systemic and permanent solution, as offered by the

concept of the circular economy. The transition to new business principles and respect for not only economic but also social and environmental premises is important for business success, and long-term economic development, but also for the health and well-being of the entire society.

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EVENTS AND SUSTAINABILITY: WHY AND HOW TO ORGANIZE GREEN EVENTS?

Abstract

This paper aims to identify the importance of organizing green events from the perspective of different stakeholders, as well as possible solutions that event organizers can use to make their events greener. The large number of people who gather, the short duration, and the significant impact they have on the environment in which they are held, have led to the fact that events are often considered the “antithesis of sustainability”. This paper seeks to review the literature to determine the relationship between events and sustainability, and then, on the example of the Belgrade Beer Fest, to identify ways that, even events that are not primarily organized for this reason, can contribute to improving the sustainability of the destination.

Keywords: *tourism events, green events, green festivals, sustainability*

JEL classification: *Z32, Q51*

ДОГАЂАЈИ И ОДРЖИВОСТ: ЗАШТО И КАКО ОРГАНИЗОВАТИ ЗЕЛЕНЕ ДОГАЂАЈЕ?

Апстракт

Овај рад има за циљ да идентификује значај организовања зелених догађаја из перспективе различитих стејхолдера, као и могућа решења која организатори догађаја могу искористити да своје догађаје учине „зеленијим”. Велики број људи који окупљају, кратко трајање и значајан утицај који имају на окружење у коме се одржавају, довели су до тога да се догађаји често сматрају „антитезом одрживости”. Овај рад настоји да прегледом литературе утврди везу између догађаја и одрживости, а затим да на примеру Београдског Beer Fest-а, укаже на начине на које, чак и догађаји који нису примарно организовани из овог разлога, могу допринети побољшању одрживости дестинације.

Кључне речи: *туристички догађаји, зелени догађаји, зелени фестивали, одрживост*

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Introduction

Almost two decades ago Ottman (1993) noticed that being “green” could bring a competitive advantage to the organization. Smith-Christensen (2009) notes that this trend is especially used in event promotion. Events take place in a specific economic, political, social and environmental context, producing both positive and negative effects. The prevalence of negative effects can lead to the event creating negative publicity, but also losing the support of the local community. While the economic effects of events are mostly positive, social effects combined, and environmental effects are mostly identified as negative. For an event to be sustainable in the long run, negative effects must not outweigh positive ones in any aspect (Holmes et al., 2015). Therefore, events increasingly strive to proactively contribute to sustainable development and are promoted as “green”, “sustainable”, or “carbon-neutral”, thus emphasizing their environmental awareness (Smith-Christensen, 2009). An event that “has a sustainability policy or incorporates sustainable practices into its management and operations”, Laing and Frost (2010, p. 262) consider a green event. Although the original idea of the concept of green events was to minimize negative impacts on the environment, it has expanded over time to include economic and social impacts as well (Holmes et al., 2015).

By organizing green events companies strive to gain a competitive advantage and fulfil their social responsibility (Wong et al., 2015). Ottman (1993) identifies that a sense of social and environmental responsibility is also present among green event attendees. Wong et al. (2015) found that participants, who are actively involved in the green initiatives implemented by the event, tend to develop a sense of social and environmental responsibility, but also a sense of loyalty to the event that provides them with this opportunity (Koenig-Lewis et al., 2021). In this way, events are considered “catalysts of positive social development” (Armbrecht, 2021, p. 169).

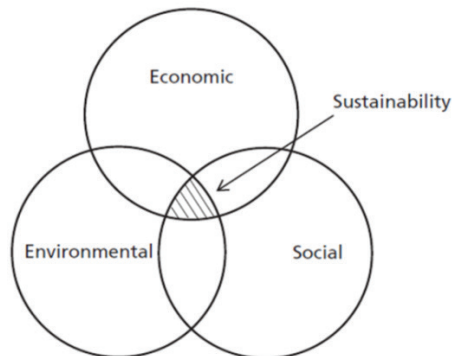
The purpose of this paper is to identify the importance of organizing green events from the perspectives of various stakeholders, as well as possible solutions that event organizers can implement to make their events greener. In order to achieve this objective, the paper was arranged into three connected parts. The first part will analyse the concept of sustainability in order to provide an understanding of the principles of sustainability that need to be incorporated when organizing green events. The second part will address the link between tourism events and sustainability, while the third part will identify ways of organizing green events and present an example of good practice.

1. Sustainability

The term “sustainability” was coined in 1712 by German forester Hans Carl von Carlowitz, who used this term to point out the importance of long-term forest management. However, it was not until the 1980s that the term became more widely used (Scoones, 2007). After the United Nations’ World Commission on Environment and Development’s Report (well known as the Brundtland Report) defined sustainable development as “development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987, p. 43), the term received full

affirmation. In other words, sustainability suggests “an equilibrium or condition of stability in which consumption and renewal of resources are in a balance that maintains conditions for human survival that can continue forever” (Holmes et al., 2015, p. 3). To achieve this, Farrell (1999) emphasizes the “trinity of sustainability”, that is, the integration and creation of a balance between the economy, society, and the environment (Dimitrovski, 2018), as “the three main elements underpinning human society” (Holmes et al., 2015, p. 3). This is usually illustrated in the form of three intersecting circles (representing the economy, environment, and society), with sustainability being placed at the intersection, as shown in Figure 1.

Figure 1. Representation of the sustainability concept



Source: Holmes et al. (2015, p. 3)

Three interconnected “pillars” (Basiago, 1998), “dimensions” (Carter & Moir, 2012), or “stool legs” (Dawe & Ryan, 2003), employed to describe sustainability, imply that sustainability must be understood as a holistic concept (Holmes et al., 2015). That is, in order to achieve sustainability, the following concurrent achievements are necessary (Hall et al., 2015; Holmes et al., 2015):

- *Economic sustainability* – in the form of creating prosperity at different levels of society, through the long-term sustainability of enterprises and related economic activities;
- *Social sustainability* – implies an equitable distribution of benefits, respecting human rights and different cultures, as well as maintaining and strengthening local communities;
- *Environmental sustainability* – refers to the conservation and responsible management of natural resources (primarily non-renewable and vital for the maintenance of life, such as air, water, and land) by minimizing pollution and protecting the environment.

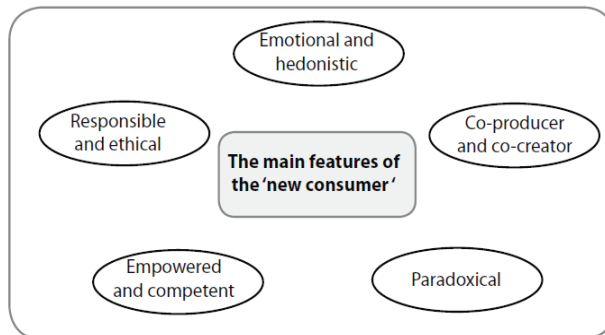
The basic ideas and principles of sustainability have permeated all aspects of society (Zdravković & Peković, 2020; Srebro et al., 2021), and have been applied to tourism (Saarinen, 2006). According to Elmo et al. (2020), “tourism activities are sustainable when they are economically efficient without compromising social well-being and the environment” (p. 2).

2. Tourism events and sustainability

Each planned event, due to its nature, produces numerous positive and negative influences. These impacts, depending on the size and type of event, affect the local community but can have impacts on a much wider scale (Holmes et al., 2015). According to Schlenker et al. (2010), the impact of events is primarily measured from an economic perspective. Negruşa et al. (2016) also note that there is a strong focus in the literature on economic benefits. Holmes et al. (2015) tried to explain this by the fact that the success of an event is measured primarily by its economic contribution to stakeholders and the local community. However, events and festivals also produce socio-cultural and environmental impacts that are very often at the other end of the impact spectrum and require greater consideration.

Based on a literature review, Frochot and Batat (2013) discovered the characteristics of the postmodern consumer, or “new consumer” as they named it (Figure 2). Quan and Wang (2004) point out that the tourist is actually a consumer, whose consumption is realized through the tourism activities he/she undertakes, which allows the consumer behaviour identified by Frochot and Batat (2013) to be placed in the context of tourism. Based on the previous, the postmodern tourist can be described as empowered and competent, responsible and ethical, emotional and hedonistically oriented, paradoxical, and eager to get involved in tourism activities, i.e., ready to co-create or co-produce his/her experience.

Figure 2. Characteristics of the “new consumer”



Source: Frochot & Batat (2013, p. 10)

Zifkos (2015) argues that events and festivals provide an excellent opportunity for “cooperation with the natural order” (p. 6). Raworth (2017) consider festivals as an ideal opportunity for building “norms, rules and relations that enable us to cooperate with and depend on one another”, thus helping us “meet our fundamental human needs such as for participation, leisure, protection and belonging” (p. 76). The study by Choi et al. (2012) showed that the pro-environmental beliefs of tourists affect their motivation to attend the event. As Ryan (2002) explained, the interpretation of experience is extremely subjective, and therefore beliefs will play an extremely important role in interpreting circumstances, forming opinions, and finally, in deciding to take action, that is visiting the event. Additionally, Gratton et al. (2011) believe that events can also provide an opportunity to reaffirm the environmental beliefs of participants.

According to Goldblatt (2012) creating a sense of community among visitors is of great importance as well. As Mair and Jago (2010) point out, it is not enough just to encourage sustainable behaviour towards the natural environment, but it is also necessary to consider social conditions as well. Jones (2017) therefore points out that event organizers have the responsibility to provide conditions that will minimize environmental impact and encourage the creation of social ties.

Mair and Laing (2012) conducted a survey among event organizers to determine their reasons for implementing sustainable practices. The study found that in addition to visitor satisfaction, marketing benefits, image enhancement, desire to educate visitors and economic benefits are the main reasons for organizing green events. According to a literature review conducted by Seočanac (2018), tourists for whom sustainability and responsibility are the way of life, such as LOHAS tourists, are characterized by greater purchasing power, but also a willingness to spend more money to buy products, or visit destinations or events that are in line with their lifestyle. Holmes et al. (2015) noted that “event organisers and managers, as well as event goers, have become more aware of the wider impacts of events and the need to ensure negative impacts is minimized while any benefits are maximized across social, economic and environmental issues” (p. 5). As Getz (2010) points out, the festival experience cannot be fully staged, but it can be suggested and facilitated. Getz and Andersson (2010) believe that if festival managers recognize the existence of a link between environmental beliefs and social interaction, they will be able to design a much better offer for their target market segments.

The unique and unforgettable experiences that events can provide to visitors can have a positive impact on their quality of life, happiness and well-being (Armbrecht & Andersson, 2019; Fredman & Margaryan, 2020; Armbrecht, 2021). Therefore, temporary *communitas* and the events of the experience offer can be a great opportunity to strengthen the individual and group identity of visitors (Richards & Palmer, 2010), as well as to educate and inspire people to adopt a more sustainable lifestyle (Mair & Smith, 2021). Zifkos (2015) suggest that events can act as “incubators of change” (p. 10). White and White (2004) also found that tourism can serve as a “rite of passage”, that is, tourism can encourage tourists to move from the old to the new way of life. Mair and Smith (2021) believe that events represent an environment that can initiate changes in the behaviour of tourists, at least temporarily, since their impact on permanent changes in behaviour has not yet been determined. At the event, people can get new ideas or good practices, which they can incorporate into their daily lives. Smith (2012) for example discovered that temporary experiences of using public transportation during events can impact the future behaviour of car users.

According to Mair and Laing (2012), sustainable event practices should stimulate guest participation in waste management, reduce power consumption and promote the use of public transportation. These authors suggest that even events that are not organized for that purpose can encourage the sustainable behaviour of visitors. Mair and Smith (2021) consider that events need to be integrated “within wider public policy initiatives, rather than regarded as standalone interventions” (p. 6). Only in this way, they believe, the desired outcomes of the event can be achieved.

3. The Belgrade Beer Fest Case Study

One of the most visited festivals in the Republic of Serbia and Southeast Europe as well, the Belgrade Beer Fest, was founded in 2003 and is the most important project of the Belgrade Cultural Network. Until 2008, the location of the festival was in the Lower Town, inside the Belgrade Fortress, after which it was moved to Ušće (*Beogradski Beer Fest*, n.d.). Belgrade Beer Fest gathers people of different nationalities and cultures in one place, who primarily come to the festival because of the atmosphere and opportunity for socialization (*Belgrade Beer Fest 2016*, n.d.). The festival is held every year in August, and on that occasion, about 500,000 people gather during the five days of the festival. In addition to a wide range of domestic and foreign beer brands and over 400 different beer flavours, the festival is characterized by a very rich and diverse music program. Adding to this the free entrance to the festival, this concept attracts visitors from all over the country, the region, and the world.

The event implements several activities aimed at reducing the impact on the environment. In order to raise environmental awareness among festival visitors and reduce the amount of waste, Ekostar Pak (National Packaging Waste Management System Operator) and Pet Eko Recycling (operator for collecting PET and other packaging waste in Belgrade), together with Heineken Serbia, organized an action for proper packaging waste disposal at Belgrade Beer Fest. Cardboard boxes and containers for packaging waste were placed at the festival, and Ecostar Pak volunteers took care of how the waste was disposed of and gave information to festival visitors about proper waste disposal. Every morning, during the Belgrade Beer Fest, waste is picked up from the festival site and taken for sorting and later for recycling. According to data for 2013, at the festival and during its preparation, about 400 kilograms of paper and cardboard, about 250 kilograms of cans, and about 160 kilograms of plastic were collected (Ekostar Pak, 2013). Activities aimed at environmental sustainability are also carried out by the Apatin Brewery. Through the campaign “Recycle and you!”, it strived to raise the awareness of Belgrade Beer Fest visitors in an interesting way about the importance of preserving the environment by properly recycling waste. For that purpose, a football table for recycling was presented, an adapted version of a popular game that uses empty cans instead of tokens. Also, the XO Magic Box, a modernized version of the popular XO game, that uses empty cans for the game, preparing them for recycling, was created.

Through social campaigns such as “Don’t drink and drive” and “Who’s driving home”, the organizers of the Belgrade Beer Fest, in cooperation with sponsors, encourage responsible behaviour and strive to ensure the sustainability of the local community. In cooperation with Apatin Brewery, within the campaign “Don’t drink and drive”, consumers are explained in interesting ways how alcohol affects motor skills and encourage not to drive if they have consumed alcohol, but to get home in alternative ways – to call a taxi or a friend, take a walk or wait for transportation. As part of the “Who’s driving home” campaign, Heineken Serbia, in cooperation with the City Transport Company and the Traffic Safety Agency, organizes transportation from different parts of the city to the Belgrade Beer Fest, as well as a safe return from the festival.

Actions aimed at supporting vulnerable social groups were also organized at the festival. An example is an action “One packet, a lot of love”, which was carried out in cooperation with the Red Cross in 2007 at the Belgrade Beer Fest and aimed to raise

funds for New Year's gifts to children from Kosovo (*Belgrade Beer Fest 2007*, 2007). Another example is the environmental-humanitarian action that was organized for the first time at the Belgrade Beer Fest held in 2018. As a result, 1,500,000 dinars were raised for the "We Live Together" association of people with disabilities. The Recan Foundation, Ball Beverage Packaging Belgrade, and Belgrade Beer Fest participated in the action, with the support of the City of Belgrade ("Limenke u Službi Humanosti," 2018).

4. Discussion and conclusion

As Smith (2009) observed, "at first glance, events appear to be the antithesis of sustainability – they are short-lived, involve the mass movement of thousands of people, and can disrupt existing plans for an area" (p. 32). However, a review of the literature revealed that even events that are not organized with the goal of improving sustainability can encourage sustainable behaviour among visitors, and the Belgrade Beer Fest is an example. Selective waste collection, recycling, and encouraging the use of public transport are some of the examples of activities that the festival conducts in order to reduce the impact on the environment and also to encourage visitors to adopt a more sustainable lifestyle. By involving visitors in various activities during the festival and enabling them to co-create their own experiences, the event encourages the creation of cohesion among visitors as well.

Based on the Belgrade Beer Fest case study, several conclusions can be drawn. Implementing social and environmental actions, creating innovative and unique offers, promoting positive energy and socializing, and cooperating with public and private organizations are activities that encourage positive impacts on the destination and the country, strengthen the image of the country, and consequently contribute to tourism and other sectors. The example of the Belgrade Beer Fest can serve as a guide for other countries to successfully organize events that seek to achieve long-term tangible and intangible benefits for the country, region, or city.

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EFFECTIVE MANAGEMENT OF LOCAL FINANCES AS A ELEMENT IN IMPROVING LOCAL ECONOMIC DEVELOPMENT

Abstract

For normal functioning and development of local self-government, it is necessary to secure financial resources from various funding sources. The basic sources of financing for local self-government are local tax revenues. However, during a period of crisis, local governments cannot rely only on their revenues. To provide the most favourable source of financing, the local government has the task of establishing and implementing an effective debt management policy with the control of its indebtedness capacities. It is by determining this capacity, through various indicators of indebtedness, that it is possible to know what kind of financial health the local self-government has. The paper aims to show the degree of impact of the Pandemic crisis on the indebtedness of local self-governments in 2020. In addition, the paper presents key priority areas for financing local governments during the crisis period.

Keywords: local economic stability, local self-government units, Covid-19, local finance, debt management.

JEL classification: G31, H70, Q56

ЕФИКАСНО УПРАВЉАЊЕ ЛОКАЛНИМ ФИНАНСИЈАМА КАО ЕЛЕМЕНТ УНАПРЕЂЕЊА ЛОКАЛНОГ ЕКОНОМСКОГ РАЗВОЈА

Апстракт

За нормално функционисање и развој једне локалне самоуправе неопходно је обезбедити финансијска средства из различитих извора финансирања. Основи извори финансирања једне локалне самоуправе јесу локални порески приходи. Међутим, током кризног периода локалне самоуправе не могу се ослонити само на сопствене приходе. Да би обезбедила што повољнији извор финансирања, на локалној самоуправи је задатак успостављања и примене ефикасне политике управљања дугом уз контролу сопствених капацитета задужености. Управо утврђивањем овог капацитета, преко различитих показатеља задужености, могуће је спознати са каквим фискалним здрављем

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располаже локална самоуправа. У раду се жели приказати степен утицаја пандемијске кризе на задуженост локалних самоуправа у току 2020. године. Поред тога, у раду се приказују кључне приоритетне области финансирања локалних самоуправа током кризног периода.

Кључне речи: *локална привредна стабилност, јединице локалне самоуправа, Ковид19, локалне финансије, управљање дугом.*

Introduction

Local economic development can be viewed as a continuous process that requires the definition and implementation of strategies and plans for local sustainable development, with the establishment of close cooperation between the local government and business entities, and other non-governmental sectors. In that process, the focus should not be based only on certain sectors of the economy, but it should encompass the entire economy at the local and regional levels. Exactly because of those reasons, it is up to the local self-governments to conduct efficient local policy that creates optimal infrastructure, which nowadays is the basis of attracting foreign direct investments and development. Within that policy, special attention should be brought to local tax policy and debt management policy. Local self-government should approach the aforementioned policies strategically. Both policies must be defined to meet the key needs of the local community. To approach these policies strategically, it is necessary to determine the indebtedness capacity of local self-government through key indebtedness parameters such as the debt repayment ratio, public debt per capita, and the ratio of total debt to the value of taxable property.

The paper points out the importance of achieving continuous economic prosperity in a municipality and the basic instruments that can be used to promote it. Also, in the continuation of the paper, the author highlights the importance of a well-defined policy of economic development. The basic factors that must be taken into consideration when defining the mentioned policy are highlighted. In the last part of the manuscript, the author wants to show how the pandemic affected the parameters of the local government's responsibility. In the focus of observation are two indicators whose value is analysed in the period from 2018 to 2020. The indicators are observed for nine local governments, classified by different development groups. Also, in this part of the paper, it is shown which areas were defined by local self-governments as a priority for financing during the coronavirus pandemic.

2. Key elements of local economic development incentives

Setting economic development as a separate goal is absolutely a wrong move for the local government (Blakely & Brandshaw, 2002, p. 29). Economic development should be seen as a means by which it is possible to reach an appropriate level of well-being within a local community, taking into account the cultural characteristics associated with

the local population (Bryant & Cofsky, 2004, p. 24). Economic growth must be achieved continuously, emphasizing the increase in the level of employment and living standards of the population (Lee & Johnson, 2013). This leads us to the conclusion that the local self-government has the task of implementing a wide range of social policies to maintain economic growth in continuity (Cypher & Dietz, 2004).

Various instruments can be used to encourage local economic development (Batrik, 2003, p. 6; Balaguer-Coll, Prior & Tortosa-Ausina, 2016, p. 518). We can define about three basic instruments available to local self-governments (Đorđević, 2016, p. 95):

1. Instruments of legal nature – improving the quality of the administrative network, increasing the quality-of-service provision, implementing management on a strategic basis);
2. Instruments of financial nature – reduction of tax obligations, provision of loan guarantees, provision of local credit arrangements, etc.
3. Instruments of complex legal form (formations of free zones, equipping an industrial zone, the establishment of private-public partnerships).

When it comes to the available legal instruments, the main purpose of their application is to try to improve the operations of the local administration (reducing excessive administrative procedures, removing unnecessary permits, etc.). By improving the operations of the administrative local network, it is possible to create a more favourable business environment. In this way, it is possible to influence the entire business, i.e., the economic sector. Attracting investments is a very common financial instrument used by local self-governments (Kriz & Wang, 2013). In such situations, local self-governments apply fiscal-type incentives, such as low prices for communal services, assignment of construction land, or provision of certain construction facilities on favourable terms.

The goal of applying financial instruments should be to provide financial resources to economic entities that are the pillars and carriers of local economic development (Žikić & Mak, 2010). A credit guarantee given by the local government is one of the typical examples of this type of financial instrument. With such guarantees, the risk is assumed, that is, the local self-government guarantees with its resources that the loan granted to the business entity will be repaid. In return, the business entity's credit power and the possibility of greater economic activity, and therefore competitiveness, are increased. Providing financial assistance in crises and situations of economic instability can enable them to survive in the market without the need to reduce their activities and the number of employees.

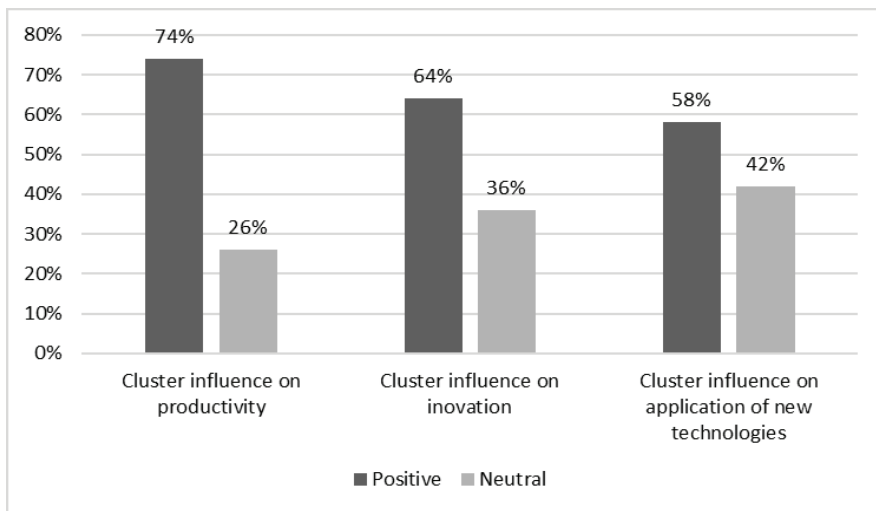
When it comes to complex incentive instruments available to local self-governments, public-private partnerships aimed at improving business-type infrastructure are most often applied. Vasiljević (2012) defines a public-private partnership as: “a long-term contractual relationship (10-30 years) established between entities of a public and private nature to ensure the construction of special purpose facilities and the provision of services under the jurisdiction of the public sector”.

A development policy that is often applied in more developed countries is the policy of business connection through clusters (Skowronek, 2019). Clusters, in addition to having the function of improving cooperation between economic entities, fulfil their role by influencing the growth of exports and the internationalization of the region (Vukotić, Cvijanović & Aničić, 2014, p. 233). The benefits that related companies can

achieve are reflected through the improvement and application of new technologies, the introduction of innovative solutions, the improvement of quality standards, the opening of new markets, and the achievement of economies of scale (Ilić, 2006, p. 81). In addition, companies are enabled to better communicate and exchange information, experiences, and knowledge. Achieving this interaction enables companies to achieve defined strategic goals more efficiently (Pongsiri, 2002, p. 491). In the economies of countries in transition, the implementation of economic policy is based on centralized decision-making without real support for the development of healthy economic competition. In such situations, business entities lose confidence in government systems due to not receiving the right support (Sexton, 2006). In such a state of economic development, donor support for cluster development can be crucial (Ketels, Lindquist & Solvell, 2006).

Research conducted in 2011 showed that clusters can bring great benefits to business entities. It was shown that based on 74 respondents (local self-governments), more than 70% believe that clusters have a positive impact on productivity growth (Figure 1).

Figure 1: Indicators of cluster influence on elements of competitiveness



Source: Author's presentation based on: Vukotić, Ančić & Laketa, 2014

3. Factors of importance for the continuous development of a local self-government

To identify the true effects of economic policy, it is necessary to know the factors that are of the greatest importance for the success of local economic development. According to many authors, the location stands out as a key factor in improving local economic development (Paunović & Zipovski, 2013, p. 75). The importance of this factor depends primarily on the nature of the investment (especially when it comes to new investments) (Adžić, 2013). When considering the decision to embark on an

investment project, investors evaluate the location conditions that are characteristic of the potential investment region (proximity to customers, proximity to suppliers, labour market situation, road infrastructure).

Creating good conditions for the further development of the private sector is another important factor for successful local economic development. Local self-government, through the reduction of tax duties, can encourage the formation of various funds that would help in further local development. The entrepreneurial orientation of public companies founded by local self-government significantly contributes to the creation of a better economic environment at the regional and local levels (Gogić, 2021). This type of orientation implies close cooperation of the public sector with business entities (establishment of public-private partnerships, establishment of business incubators, and other types of cooperation). In this way, it is possible to encourage the establishment of new successful business entities.

In addition to the factors of importance already mentioned, in the literature dealing with local economic development we can also find some of the following factors (Clark, Huxely & Mountford, 2010, p. 23):

1. Natural resources;
2. The inherited state of the economy;
3. Political affiliation;
4. Personnel capacities.

The application of an effective economic policy significantly affects the establishment of sustainable local economic development, the basic concept of which is based on even and continuous economic growth (Pokrajac, 2009, p. 26). Ristić (2014), believes that when achieving sustainable economic development, it is necessary to take care of environmental protection and ecosystem preservation for future generations. The previous definition indicates the need to establish an optimal balance between economic growth, full employment, and environmental protection.

4. Financing of local self-governments on the territory of the Republic of Serbia

The decision on how to finance certain projects of importance to the local population depends on the debt capacity of the same population and the efficiency of the local tax policy. In this regard, the local self-government should provide answers as to whether the local budget is sufficient for the realization of projects of economic importance, or whether they still have to rely on other available sources of financing.

Due to the process of accelerated urbanization and the need for continuous improvement of the level of development of local self-government, the original revenues become insufficient to finance all important projects. For these reasons, local self-government is forced to use secondary sources of financing. By those sources, we mean relying on (Chen, He & Liu, 2017, p. 54): 1. bank loans; 2. financing through the issue of municipal bonds.

It is specific for local self-governments in countries in transition that they predominantly opt for credit debt, which is not the case for local self-governments

in developed countries (they often use the issuance of various securities as a source of financing) (Nedić, Cvetanovic & Subotic, 2017). Most often, municipal bonds are used. The emission of the mentioned bonds is carried out with a longer maturity period (from 7 to 15 years) and with an open option of possible revocation and additional insurance (Lee, Johnson, & Joyce, 2013). We can talk about different types of municipal bonds. The so-called green municipal bonds can have special importance for local self-government. Green municipal bonds represent a specific type of securities based on which local governments can finance environmental and social challenges that are extremely important for sustainable economic development (Candace & Medda, 2020). The issuance of the mentioned bonds provides funds for the financing of ecologically acceptable and responsible projects (Mihelja & Tica, 2021). It is a financial instrument that first appeared on the securities market in 2007, which soon became an attractive way to finance projects that leave a positive impact on the environment (Partridge & Medda, 2020). The inconsistency of the regulatory framework in countries in transition is one of the main reasons for the insufficient implementation of the aforementioned securities by their local governments (Chen & Zhao, 2021, p. 27). A similar problem was present in the market of the Republic of Serbia. Legal restrictions were removed only at the end of 2007. For these reasons, it was only in 2008 that Novi Sad, as the first city in Serbia, decided to issue municipal bonds.

5. Consequences of the pandemic crisis on local finances and local economic development

Before deciding on the way to finance certain projects, the local self-government must consider its financial capacities. Debt capacity can be viewed as an expression of the total financial resources that local self-government can obtain through various forms of debt, without questioning the effective management of local tax policy (Kriz & Wang, 2013). By analysing the indebtedness capacity, the fiscal state of public finances can be determined.

Papcunova, Hudakova, Stubanova, and Urbanikova (2020) point out that: “the availability and level of the potential borrowing capacity of a local self-government can be viewed from the aspect of assessing the indebtedness capacity of the local self-government itself, i.e., assessing the indebtedness capacity of the entire local community”. To make the mentioned assessments, it is necessary to use and observe some of the following criteria (Wang, 2015):

1. The ratio of total debt to the value of the taxable property - if we consider that local budgets are primarily financed from different types of taxes, then the fact is imposed that debt repayment depends on the amount of income generated from taxes;
2. The number of total debts per capita - a parameter that assesses the debt repayment capacities available to the local self-government;
3. The degree of debt repayment - is an indicator that considers the level of the annual amount of liabilities received and the income that the local self-government achieves. When calculating this ratio, it is possible to put special

categories of income of the local self-government unit available for debt repayment into the ratio.

The first two indicators tell us about the financial capacity of the entire local community, while the last one assesses the indebtedness capacity of the local self-government, determining its ability to fulfil obligations within the legally defined term.

When analyzing these two parameters, it is necessary to observe the values in one of the following ways (Kriz & Wang, 2013; Pest, 2015):

1. Analysis of the movement of the values of the observed parameters in the previous period;
2. Comparison of parameters for local self-government units and the same level of development;
3. Comparison of parameters based on the same credit ranks determined by rating agencies.

In this regard, in the further part of the paper, we will consider how the Covid-19 pandemic affected the second and third-mentioned parameters of indebtedness. The analysis covers the period from 2018 to 2020, for nine local self-government. Local governments are divided into groups according to the level of development. By looking at the value of the indebtedness indicator, we can determine the degree of impact of the pandemic on individual local governments.

Table 1: Debt repayment rate for the period from 2018 to 2020 (%)

| <i>Development level</i> | <i>Local self-government</i> | <i>2018</i> | <i>2019</i> | <i>2020</i> |
|--------------------------|------------------------------|-------------|-------------|-------------|
| First level | Valjevo | 6.5 | 5.4 | 9.8 |
| | Subotica | 13.2 | 13.3 | 14.2 |
| | Užice | 3.9 | 2.4 | 2.5 |
| Second | Ruma | 1.9 | 4.5 | 4.2 |
| | Jagodina | 23.4 | 21.7 | 25.2 |
| | Zrenjanin | 7.5 | 11.7 | 9.9 |
| Third level | Loznica | 4.4 | 3.8 | 3.9 |
| | Bajina Bašta | 11.6 | 7.1 | 7.6 |
| | Leskovac | 16.2 | 14.7 | 11.4 |

Source: Author's presentation based on PPSRS² data, 2022

The debt repayment indicator is an important indicator when looking at the level of indebtedness of local self-government. The value of this indicator can be influenced by various instruments available to the local self-government (revenue collection based on the level of tax rates and making a decision on the level of indebtedness). The value of the mentioned indicator should be below 10% (Wang, 2015). By analysing Table 1, we can see that in 2020 the value of this parameter is higher than the recommended one

² Public Policy Secretariat of the Republic of Serbia

(in Subotica, Jagodina, and Leskovac). An interesting fact is that all three local self-governments belong to different levels of development, with Jagodina having the highest value of this parameter (25.2%) in 2020. Of the nine analysed local self-governments, value growth in 2020 was recorded in six local governments (Valjevo, Subotica, Užice, Jagodina, Loznica, Bajina Bašta). Growth in the value of the observed indicator in the mentioned year was recorded in all three local governments that belong to the first group of development levels. The highest growth in the value of the ratio in 2020 was recorded in Valjevo (4.4%).

Based on this, we can determine that the majority of local self-governments experienced a drop in income or new types of indebtedness. The economic measures that were taken during 2020, to mitigate the coronavirus pandemic, included the reduction of tax rates for local business entities and entrepreneurs who suffered the most negative consequences. In addition, other socioeconomic measures were implemented to help the local population. This fact can be taken as one of the reasons for the increase in the value of the observed indicator in the analysed local governments. Based on this, it is concluded that the Pandemic crisis has increased the level of indebtedness of local self-government.

Table 2: Public debt per capita for the period from 2018 to 2020

| Development level | Local self-government | 2018 | 2019 | 2020 |
|-------------------|-----------------------|--------|--------|--------|
| First level | Valjevo | 32.894 | 36.339 | 35.061 |
| | Subotica | 41.350 | 46.969 | 49.862 |
| | Užice | 37.499 | 41.643 | 44.721 |
| Second level | Ruma | 38.433 | 35.776 | 37.675 |
| | Jagodina | 35.160 | 42.235 | 37.491 |
| | Zrenjanin | 34.593 | 40.322 | 41.403 |
| Third level | Loznica | 26.580 | 28.192 | 29.788 |
| | Bajina Bašta | 33.428 | 34.926 | 35.389 |
| | Leskovac | 29.048 | 28.710 | 30.949 |

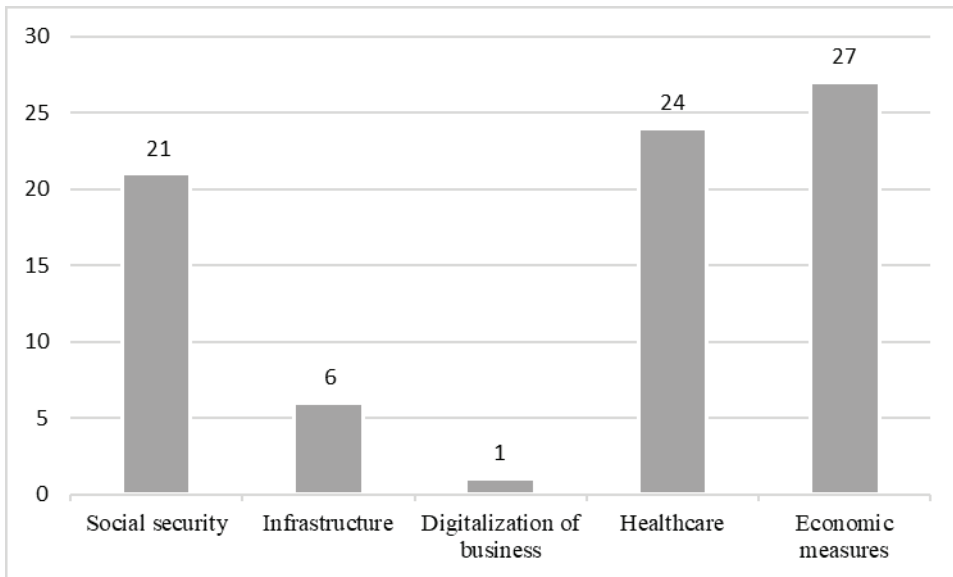
Source: Author's presentation based on PPSRS data, 2022

The total debt per capita is an indicator that can be used to assess the financial resources of the local community. The data from the previous table tells us how the debt per capita of nine local governments moved in the period from 2018 to 2020. In 2020, the growth of this indicator was recorded in seven local governments (Subotica, Užice, Ruma, Zrenjanin, Loznica, Bajina Bašta, and Leskovac).

Specifically, Jagodina recorded a decrease in the value of this indicator in 2020, in contrast to the previously analysed indicator. This fact leads us to the conclusion that the local self-government decided to reduce its obligations due to the drop in income, which caused an increase in the value of the debt repayment indicator. In addition to Jagodina, the decrease in the value of debt per capita was also recorded in Valjevo. The

largest increase in this indicator in 2020 was recorded in the city of Užice. Based on the analysis, we can conclude that the pandemic affected the growth of the obligations of local governments. This fact is to some extent expected, considering the difficulties faced by the local economy and the need to support it through funds from the local budget.

Figure 2: Local self-governments priorities in 2021



Source: Author's presentation based on: Mirić, 2021

The pandemic crisis has affected all spheres of social life. The process of financing projects of importance for further local economic development is difficult for a local self-government. There was a need to provide financial assistance through funds provided by the European Union funds. Through the IPA II funds, the European Union allocated funds of 93 million euros in March 2020 (Mirić, 2021, p. 15). The largest part of the funds was directed towards the achievement of medium-term economic recovery, while 15 million euros was directly intended for emergency humanitarian aid (medical equipment and materials).

In 2021, an examination of local self-governments was carried out regarding priority areas of financing. Answers were received from 59 local self-governments³ (Figure 2). The majority of local self-governments declared that in 2021, their main

³ Belgrade region (Voždovac, Zvezdara, Zemun, Rakovica, Stari Grad, Surčin), Vojvodina region (Sombor, Odžaci, Pančevo, Bela Crkva, Novi Sad, Beočin, Vrbas, Srbobran, Sremski Karlovci, Titel, Kanjiža, Mali Idoš), Šumadije and West Serbia Region (Užice, Sevojno, Nova Varoš, Požega, Prijepolje, Ljig, Mionica, Šabac, Krupanj, Despotovac, Paraćin, Varvarin, Trstenik, Čičevac, Kraljevo, Vrnjačka Banja, Novi Pazar, Raška, Knić, Lapovo, Topola), South and East Serbia region (Majdanpek, Kostolac, Veliko Gradište, Žagubica, Malo Crniće, Petrovac na Mlavi, Boljevac, Sokobanja, Lebane, Pantelejev, Gadžin Han, Merošina, Svrlijig, Pirot, Babušnica, Bela Palanka, Smederevo, Surdulica, Prokuplje, Kuršumljaja).

priority was the successful implementation of economic measures to preserve the local economy (27 local self-government). In addition, many local self-governments declared that the financing of healthcare and social security services is a high priority for them, in contrast to the implementation of infrastructure projects and the implementation of digitization of business.

Conclusion

The majority of local self-governments are forced to use secondary sources of financing during the realization of the most important capital projects. By these sources of financing, we mean credit debt or financing through the issue of municipal securities. In addition, the option of withdrawing funds from various European Union funds is also opened. All these sources can be characterized as long-term debts. Most of the funds provided in this way are necessary for the further economic development of the local community. The way local finances are managed, i.e. debt management, can significantly determine the profitability of planned investments. For the aforementioned reasons, the paper highlights the importance of a well-defined local finance management policy, i.e. debt management.

The paper shows how the Covid-19 pandemic affected the parameters of the responsibility of various local governments. All observed local governments are located on the territory of the Republic of Serbia. The analysed local governments belong to different levels of development. The results of the research indicate the negative impact of the Pandemic on the level of indebtedness of the observed local governments. The reason for the negative trends of the analysed parameters in 2020 can be found in the growth of total debts, i.e., the decline in the income of local self-governments. In local self-government of the first level of development, the negative trends of the mentioned parameters are more noticeable. This fact does not have to exclusively mean that this local self-government led to a bad local finance policy during the pandemic. There is a possibility that local self-governments, through the implementation of various economic measures, consciously renounced a part of their income to improve economic activity. This can lead us to the conclusion that municipalities with a higher level of development have allocated more funds for the remediation of negative consequences in 2020. In the mentioned year, local self-governments pointed out that the priorities for which the most financial resources should be directed are the increase of health capacities and the implementation of economic measures. A significant place was occupied by social security, while the financing of infrastructure projects was not defined as a priority. Based on that, we can conclude that in times of crisis, infrastructure and capital projects do not gain importance. The financing of measures that directly affect the preservation of the existing social and economic situation is in the foreground, while the financing of projects that can further improve economic development is placed in the background.

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THE ANALYSIS OF THE IMPACT OF COVID-19 PANDEMIC ON COMMODITY EXCHANGE OF THE REPUBLIC OF SERBIA WITH WESTERN BALKAN COUNTRIES

Abstract

Doing business in the Western Balkan (WB) is characterized by close connections between member countries as well as a large volume of trade. Similarities in language, culture and friendly relations facilitate the exchange of goods. Due to the importance of WB as a grouping for the Republic of Serbia (hereinafter: RS), the work will be devoted to the analysis of the business operations of companies on WB, specifically business operations before, during and after the pandemic. The subject of this work is to determine and examine how the outbreak of the COVID-19 pandemic affected the business operations of companies in the WB. The goal of the work is to present the latest data on the trade of RS with the WB as a grouping, but also for individual WB countries, which will help companies and state authorities in creating a policy for the development of relations and incentives.

Keywords: Western Balkan, trade, Covid-19 pandemic, business

JEL classification: F1, F5

АНАЛИЗА УТИЦАЈА ПАНДЕМИЈЕ КОВИД-19 НА РОБНУ РАЗМЕНУ РЕПУБЛИКЕ СРБИЈЕ СА ЗЕМЉАМА ЗАПАДНОГ БАЛКАНА

Апстракт

Пословање на Западном Балкану карактерише уска повезаност између земаља чланица као и велики обим робне размене. Сличности у језику, култури и пријатељски односи олакшавају робну размену. Због значаја Западног Балкана као групације земаља за Републику Србију (РС), рад је посвећен анализи пословања предузећа у земљама Западног Балкана, конкретно пословању пре, у току и након пандемије. Предмет овога рада је да утврди и испита како је избијање пандемије COVID-19 утицало на пословање предузећа на Западном

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Балкану. Циљ рада је да се представе најновији подаци о робној размени РС са Западним Балканом као групацијом, али и појединачним земљама Западног Балкана, који ће помоћи предузећима и државним органима у креирању политике развоја односа и подстицаја.

Кључне речи: *Западни Балкан, робна размена, пандемија Ковид-19, пословање*

Introduction

The outbreak of the Covid-19 pandemic has led to changes in the way of life of people and the behaviour of business entities. People spend more time in their homes. Experts in the field of information technology conduct business as before the pandemic, working from home. There is an expansion of online sales and home delivery. The realization of extra profit is especially present in the pharmaceutical industry. Some companies are reorienting their business or diversifying their product range. On the other side, there are companies that have neither experienced expansion, nor have adapted. This group includes companies from the field of tourism, hotel and catering. The Covid-19 pandemic also affected the operations of companies in the WB, which is our second most important foreign trade partner after the European Union, with a share of almost 10% in the total exchange of goods with the world (17.2% in exports and 4% in imports) in 2021, with a surplus of 2.5 billion EUR, and 299.1% coverage of imports by exports.

After the drop in trade with the WB as an economic grouping, there are currently (during 2022) tendencies of economic recovery (the GDP of the region increased by 4.7% in the first quarter of 2022 compared to the same period of the previous year). There is also an increase in production as a result of the lifting of measures to prevent the spread of the virus, while the creation of new jobs continues. Under the influence of the pandemic as well as the crisis in Ukraine, in all countries of the WB, there is still an increase in inflation (the price of energetics, food and transport increases).

After the general analysis of the economic relations between the RS and the WB as an economic grouping, an analysis of the exchange of goods with each individual country will follow. The analysis will also include the exchange of products of different degree of product processing and activities that contribute the most to the creation of GDP. The analysis covers the period before, during and after the pandemic.

All data within the scope of the work were taken from the Republic Institute of Statistics, Foreign trade goods traffic, Database search application-restrictive access of the Republic of Serbia.

1. Literature review

1.1. The impact of the Covid-19 pandemic on global trade

Numerous authors have investigated the impact of the Covid-19 pandemic on various aspects and segments of economies around the world. The changes were manifested both at the national and global levels. Significant consequences have been reflected in global trade.

In their work, Vidya & Prabheesh (2020) measure interconnectedness between countries before and after the outbreak of COVID-19. Within the sample, they analyzed countries that are among the leading trading economies in the world: Canada, US, UK, Germany, France, Italy, Japan, South Korea, China, Hong Kong, India, Indonesia, Russia, Netherlands, and Singapore. For research purposes, they used the analysis of trade networks and artificial neural networks. The results of their research indicate that there is a drastic reduction in trade interconnectedness, connectivity and density between countries following the outbreak of COVID-19. Also, there are changes in the structure of the trade network. In this sense, the consequences of the COVID-19 pandemic were especially suffered by countries such as Germany, Italy, France, the USA, UK. However, the “central” position of China in the trade network is still present, despite the crisis conditions. Finally, they predict a decline in the value of imports and exports for all countries by the end of 2020.

Mena et al. (2022) indicate that the Covid-19 pandemic has significantly affected and disrupted international trade and reshaped globalization patterns. In their work, they start from the concept of supply chain resilience. That concept includes both the system’s ability to withstand an impact (robustness) as well as recover from it (responsiveness). Mena et al. (2022) explore trade resilience at the country level during the first wave of the pandemic having the concept of supply chain resilience as a starting point. They pointed out certain factors with a positive impact, as well as factors with a negative impact in pandemic conditions on trade resilience. Factors that have a positive impact on resilience are globalization (economic and social), readiness for logistics and health care, as well as high-income levels. On the other hand, the strong response of the government and the high number of deaths are factors with a mostly negative effect. This means that balancing and reconciling health and economic outcomes is a challenging task.

The key questions are the following: How are far-reaching the consequences of the Covid-19 pandemic on global trade? Whether the consequences of the Covid-19 pandemic will disappear with the end of the pandemic? Gruszczynski (2020) indicates that although the short-term consequences of the Covid-19 pandemic are present and strong, they are not insurmountable. However, Gruszczynski (2020) also points to the potential impact of the pandemic that may be stronger than expected, which may lead to structural changes in globalization processes.

1.2. Economic implications of the Covid-19 pandemic on the countries of the Western Balkans

The Covid-19 pandemic has had consequences for national economies around the world. The countries of the Western Balkans, consisting of the Republic of Serbia, Bosnia and Herzegovina, North Macedonia, Albania, Montenegro and so-called Kosovo, have also suffered the consequences of the pandemic on their economies. The political and economic circumstances that characterize these countries have further aggravated the situation caused by the pandemic. The countries of the Western Balkans are still not members of the European Union, but they have significantly relied on the financial assistance of the European Union and international organizations such as the IMF and the World Bank in this new situation. Their help is needed considering the insufficiently developed health infrastructure in the countries of the Western Balkans.

Svrtinov et al. (2020) in their work point to the consequences of the Covid-19 pandemic that manifested on the economies of the Western Balkan countries, such as a decrease in aggregate supply and aggregate demand, a decline in summer tourism, and an increase in public expenditures. There is also a decrease in GDP. Remittances, which make up 10% of the GDP of the Western Balkan countries, are one of the factors that influence the reduction of GDP. Due to travel restrictions and increased unemployment in the countries of Western Europe, remittances, on which the countries of the Western Balkans rely significantly in financing domestic demand and investments, have decreased. The decrease in GDP in the countries of the Western Balkans is also a consequence of the interruption of the operations of numerous companies, difficulties in supply, and a decrease in demand and household income.

Bodroža & Lazić (2021) indicate the consequences of the Covid-19 pandemic that all the countries of the Western Balkans suffered. In this sense, their research indicates the pandemic's impact on key macroeconomic variables such as GDP, public debt, fiscal balance and unemployment. The results of the analysis showed that the pandemic slowed down the economies of the countries of the Western Balkans, but with certain differences between the observed countries. The biggest consequences were felt in Montenegro, where the drop in GDP amounted to 15.2% in 2020. The other countries of the Western Balkans coped relatively well with the situation, especially the Republic of Serbia, which recorded a GDP decline of 1% in 2020 compared to 2019. The drop in GDP is due to a simultaneous drop in aggregate supply and demand, as well as an increase in unemployment in all observed countries of the Western Balkans. The speed of recovery of the countries of the Western Balkans depends on the development of the situation related to the pandemic, but also on the speed of recovery of the European Union as the most important foreign trade partner of the countries of the Western Balkans.

In her research, Stanceva-Givov (2020) points to the consequences of the Covid-19 pandemic on the external sector using the example of Macedonia. Macedonia's manufacturing sectors are heavily involved in global supply chains. Due to reduced demand and disruptions in value chains due to the Covid-19 pandemic, Macedonian imports and exports suffer certain consequences. In her work, Stanceva-Givov (2020) analyzes the trend and changes in exports and imports by selected products and countries in the period from 2015 to 2020, as well as a more detailed analysis on a quarterly basis for the period from January 2019 to June 2020. Based on the results of the analysis, there is a decrease in demand at the global level. This also applies to the European Union and especially Germany, which is Macedonia's largest export partner, as a result of which Macedonia's exports are decreasing. On the other hand, there are numerous problems on the import side due to the great dependence of the Macedonian economy on the materials needed for its industry, which are supplied from imports.

Kissin et al. (2022) in their research analyze the key indicators of foreign trade exchange of the Republic of Serbia in order to evaluate its position and the results of foreign trade exchange, bearing in mind the impact of the Covid-19 pandemic. At the end of the 20th century, the Republic of Serbia suffered a difficult period for its economy, which particularly affected external trade. After the lifting of sanctions and the NATO bombing in 1999, there were numerous difficulties for Serbia to return to the markets where it was previously present, especially the market of Western Europe. Nevertheless, Serbia managed to overcome the difficulties and record a positive trend in the foreign trade exchange until 2009. As a result of the World Economic Crisis and the drop in the value of foreign trade turnover, there is a stabilization followed by stagnation until 2012. Then comes the five-year period from 2012

to 2016, when there was a significant increase in exports and a decrease in the foreign trade deficit. After that, from 2017, a tendency of strong growth of all indicators was established, which was stopped with the beginning of the pandemic crisis of Covid-19. In 2020, Serbia had the same value of trade exchange as in 2019. Also, in 2021, there was a complete recovery and a significant increase in the value of foreign trade exchange. Kissin et al. (2022) state that there were no significant changes in the structure, as well as in foreign trade exchange partners. The most important partner of the Republic of Serbia is the European Union, and when it comes to individual countries, Germany stands out first, followed by China and Italy. They conclude that the Republic of Serbia has a lot of opportunities for improving foreign trade exchange, especially for increasing exports, as well as increasing the quality and value of the products it exports.

Staletović et al. (2022) indicate the impact of the Covid-19 pandemic on the operations and results of trading companies in the Republic of Serbia. In their research, they state that this impact is mostly negative, but varies depending on different trade segments. For example, trading companies that sell food products recorded positive results in 2020 compared to 2019. There is also an increase in online shopping by customers due to social distancing recommendations. Because of this, many companies started their own online stores, which they didn't have until then. On the other hand, businesses, such as gas stations in the first place, felt the negative impact of the Covid-19 pandemic. Also, clothing stores felt the negative impact of the Covid-19 pandemic on their business due to their closure during the lockdown, as well as the determination of customers to buy only existential products.

Marković et al. (2021), in their research, aimed to determine the intensity and impact of the Covid-19 pandemic from 2020 on the export competitiveness of the agricultural and food sector of the Republic of Serbia. For the purposes of the analysis, they used specific indicators of internal and external export competitiveness. They found that the agricultural and food sector has exceptional resilience in times of crisis. In fact, the export of agricultural and food products recorded an increase in significance in total foreign trade in goods in the crisis year of 2020 in relation to all analyzed indicators: net exports index, index of contribution to trade balance, relative coverage of imports by exports, unit values of exports. Positive performances in this sector reduced the negative impact of the crisis on the economy of the Republic of Serbia. The Covid-19 pandemic represents, in the author's opinion, a chance for Serbian agriculture, given that many countries have banned food exports to ensure national food security.

In their research, Cvijić & Stanković (2022) examine the impact of the Covid-19 pandemic on global and local supply chains. They also look at the changes that occur due to the uncertainty in the transport of goods from producers to customers, as well as the way in which this is reflected in the business operations of companies in the Republic of Serbia. Numerous companies have had to lay off their employees and even stop their operations, which are part of both local and global supply chains. Difficult business circumstances such as closed borders, the difficult flow of goods, pressure on courier services, and so on, have followed the operations of supply chains since the beginning of the pandemic. There is also additional pressure on companies when it comes to meeting distribution and delivery deadlines, due to the intensification of e-commerce in certain sectors. Cvijić & Stanković (2022) suggest that it is best for companies to rely on domestic production, and to rely as little as possible on sources with any level of risk, or to eliminate them altogether.

Bearing in mind the numerous and significant implications of the Covid-19 pandemic on the economies around the world, as well as the countries of the Western Balkans, this paper will analyze the impact of the Covid-19 pandemic on the trade of the Republic of Serbia and the countries of the Western Balkans, as the second most important, after the European Union, partner of the Republic of Serbia in foreign trade exchange.

2. Analysis of economic relations between RS and WB as an economic group

The WB group is the second most important foreign trade partner after the EU, with a share of almost 10% in the total exchange of Serbia with the world (17.2% in exports and 4.4% in imports) in 2021, with a surplus of 2.5 billion EUR, and 299.1% coverage of imports by exports. We export to WB 3 times more than we import from it (a few years ago, the ratio was 4 to 1). According to the recently published report of DG Trade, the RS today has a share of 50% in the export of the entire Western Balkans to the EU, and during the last ten years, it achieved the highest average annual growth rate of exports to the EU of all WB members, at 10.7%.

RS constantly records a surplus in trade in goods with WB (Table 1). Already in 2019, there is a trend of decreasing exports (which continues in 2020), and recovery and growth are recorded in 2021. Imports fell in 2020 (-8.6%). The coverage of imports by exports is high in all years of observation.

Table 1: Merchandise exchange with WB countries (2019-2021), in millions of EUR

| Year | Export | Import | % change in export | % change in import | Total | Balance | Coverage of imports by exports |
|------|---------|---------|--------------------|--------------------|---------|----------|--------------------------------|
| 2019 | 3,040.2 | 968.1 | -6.0 | +2.8 | 4,008.4 | +2,072.1 | 314.0 |
| 2020 | 2,950.6 | 884.8 | -2.9 | -8.6 | 3,835.4 | +2,065.8 | 331.1 |
| 2021 | 3,791.4 | 1,267.6 | +28.5 | +43.3 | 5,059.0 | +2,523.9 | 299.1 |

Source: Republic Institute of Statistics(a) (2022). Foreign Trade Merchandise, Database Search Application - Restrictive Access (Accessed 2022)

RS exports to the WB amounted to 3.8 billion EUR in 2021, which is a growth of 28.5% compared to the previous year. Imports from WB in the same period amounted to 1.3 billion EUR and recorded a growth of 43.3%. Shipping to so-called Kosovo after 412.2 million EUR in 2018, and a drastic drop due to the unilateral introduction of taxes by PIS in Pristina and the amount of only 84.7 million EUR in 2019. In 2020, it started to recover and reached the amount of 251.9 million EUR. The growth continued in 2021 when the value of the total shipment was 404 million EUR.

In all three observed years, cereals and cereal-based products represent the most important export product. Although in 2020 there was a slight decrease in their exports due to the pandemic, in 2021 there was a recovery and significant growth in exports, which reached a value of 270.9 million EUR. When it comes to the structure of imports, the first place in all three observed years is occupied by iron and steel (in 2020, there was a drop in imports).

3. Activity structure according to the value of exports and import

Table 2 presents the structure of import and export activities in relation to their values in the period from 2019 to 2021 for each year separately.

Table 2: Presentation of the most important export activities according to the value of exports (2019-2021), in millions of EUR

| The year 2019 | Export | Import | Total |
|---|--------|--------|-------|
| Production of food products | 559.9 | 109.9 | 669.8 |
| Production of chemicals and chemical products | 246.7 | 30.5 | 277.2 |
| Production of coke and petroleum | 205.7 | 142.7 | 348.4 |
| Agricultural production, hunting and service activities | 195.4 | 39.6 | 235.0 |
| Production of electrical equipment | 172.9 | 13.1 | 186.1 |
| Production of basic metals | 168.0 | 178.2 | 346.2 |
| Production of rubber and plastic products | 152.7 | 28.0 | 180.6 |
| Production of unmentioned machines and equipment | 137.8 | 13.8 | 151.6 |
| Production of beverages | 128.3 | 24.2 | 152.5 |
| Manufacture of metal products, except machinery | 110.7 | 43.0 | 153.7 |
| The year 2020 | | | |
| Production of food products | 524.3 | 116.5 | 640.8 |
| Production of chemicals and chemical products | 237.8 | 34.5 | 272.3 |
| Agricultural production, hunting and service activities | 208.0 | 46.4 | 254.4 |
| Production of electrical equipment | 156.8 | 16.2 | 173.1 |
| Production of coke and petroleum derivatives | 152.4 | 72.6 | 224.9 |
| Production of rubber and plastic products | 136.8 | 29.8 | 166.6 |
| Production of unmentioned machines and equipment | 125.5 | 11.0 | 136.5 |
| Production of basic metals | 121.0 | 160.6 | 281.6 |
| Production of beverages | 110.9 | 22.0 | 133.0 |
| Manufacture of metal products, except machinery | 99.5 | 41.9 | 141.4 |
| The year 2021 | | | |
| Production of food products | 608.3 | 134.4 | 742.7 |
| Production of chemicals and chemical products | 277.9 | 39.0 | 316.9 |
| Production of coke and petroleum derivatives | 269.7 | 148.2 | 417.9 |
| Agricultural production, hunting and service activities | 237.7 | 61.1 | 298.8 |
| Production of electrical equipment | 179.6 | 24.9 | 204.5 |
| Production of rubber and plastic products | 168.4 | 37.9 | 206.4 |
| Production of unmentioned machines and equipment | 153.9 | 10.7 | 164.5 |
| Production of beverages | 147.8 | 25.8 | 173.6 |
| Manufacture of metal products, except machinery | 113.2 | 53.4 | 166.6 |

Source: Republic Statistical Office (a) (2022). Foreign Trade Merchandise, Database Search Application - Restrictive Access (Accessed 2022)

In trade with WB as an economic group, in all three years, the most representative activity in exports is the food industry (the largest export of products is from this activity). It retains first place despite the pandemic conditions. In 2019, the export of the food industry

of the RS and the countries of the WB amounted to 559.9 million. In 2020, there will be a decrease in exports to 524.3 million EUR. In 2021, the maximum is reached compared to the observed years, where exports reach a value of 608.3 million EUR. Changes are observed in the production of coke and oil derivatives, which in 2019 took third place with exports worth 205.7 million EUR. In 2020, exports dropped by 53.3 million EUR, which reduced the total exchange by 123.5 million EUR. The recovery of the exchange occurs in 2020, when the exchange almost doubled, from 224.9 million EUR to 417.9 million EUR, which put the production of coke and oil derivatives from 5th place in terms of the importance of export activities to third place in 2021. Agricultural production, hunting and service activities record export growth even in the year of the pandemic, so the growth tendencies are carried over into 2021. The production of electrical equipment in 2020 recorded a drop in exports from 172.9 million EUR in 2019 to 156.8 million EUR. In 2021, there was a recovery and growth of 22.8 million EUR. The production of rubber and plastic products also, like most activities, recorded a drop in exports in the amount of 15.9 million EUR in 2020, but also growth in 2021 for 31.6 million EUR compared to the previous year. Production of metal products, except machines, of 110.7 million EUR in 2019, fell to 99.5 million EUR in 2020, while in 2021, there was a growth of 13.7 million EUR. Beverage production also had the lowest export value of 110.9 million EUR in 2020, after which the export of beverages grew above the level at which it was in 2019. The production of unmentioned machines and equipment recorded a drop in exports of 12.3 million EUR in 2020 and a growth of 28.4 million EUR in 2021 compared to 2020.

In the defined period, there was no change in the structure of the most significant export activities (except for a minor change in positions) according to the value of exports. All activities, except agricultural production, hunting and service activities, recorded a drop in exports in 2020. After the drop in exports in 2020, all activities in the following year reached values that were higher than those in the year before the pandemic. It can be concluded that the pandemic had a negative impact on exports, reducing their values, but already in the following year there was a visible recovery.

Table 3: Presentation of the most important import activities according to the value of imports (2019-2021), in millions of EUR

| The year 2019 | Export | Import | Total |
|--|--------|--------|-------|
| Production of basic metals | 167.9 | 178.2 | 346.1 |
| Production of coke and petroleum derivatives | 205.7 | 142.7 | 348.4 |
| Production of food products | 560.0 | 109.9 | 669.8 |
| Wood processing and wood products, except furniture | 58.3 | 55.1 | 113.4 |
| Production of products from non-metallic minerals | 75.1 | 45.3 | 120.3 |
| Manufacture of metal products, except machinery | 110.7 | 43.0 | 153.7 |
| Agricultural production, hunting and service activities | 195.4 | 39.6 | 235.0 |
| Production of basic pharmaceutical products and preparations | 56.6 | 34.1 | 90.7 |
| Production of chemicals and chemical products | 246.7 | 30.4 | 277.2 |
| Production of rubber and plastic products | 152.7 | 28.0 | 180.6 |

| The year 2020 | | | |
|--|-------|-------|-------|
| Production of basic metals | 121.0 | 160.6 | 281.6 |
| Production of food products | 524.3 | 116.5 | 640.8 |
| Production of coke and petroleum derivatives | 152.4 | 72.6 | 224.9 |
| Wood processing and wood products, except furniture | 54.9 | 55.2 | 110.2 |
| Production of products from non-metallic minerals | 62.7 | 47.0 | 109.7 |
| Agricultural production, hunting and service activities | 208.0 | 46.4 | 254.4 |
| Manufacture of metal products, except machinery | 99.5 | 41.9 | 141.4 |
| Production of basic pharmaceutical products and preparations | 61.0 | 41.0 | 102.0 |
| Production of chemicals and chemical products | 237.8 | 34.5 | 272.3 |
| Production of rubber and plastic products | 136.8 | 29.8 | 166.6 |
| The year 2021 | | | |
| Production of basic metals | 220.1 | 271.6 | 491.8 |
| Production of coke and petroleum derivatives | 269.7 | 148.2 | 417.9 |
| Production of food products | 608.3 | 134.4 | 742.7 |
| Wood processing and wood products, except furniture | 61.7 | 75.5 | 137.7 |
| Production of products from non-metallic minerals | 67.2 | 61.2 | 128.7 |
| Agricultural production, hunting and service activities | 237.7 | 61.1 | 298.8 |
| Electricity, gas and steam supply | 84.7 | 55.7 | 140.4 |
| Manufacture of metal products, except machinery | 113.2 | 53.4 | 166.6 |
| Production of paper and paper products | 84.8 | 43.6 | 128.4 |
| Production of basic pharmaceutical products and preparations | 76.8 | 42.6 | 119.4 |

Source: Republic Institute of Statistics (b) (2022). Foreign Trade Merchandise, Database Search Application - Restrictive Access (Accessed 2022)

By reviewing Table 3, it can be noticed that the production of base metals represents the most significant import activity in 2019, 2020 and 2021. In 2019, imports totalled 178.2 million EUR, which was then reduced in 2020, as a result of the pandemic, to 160.6 million EUR. However, in 2021, there was import from the area of production of basic metals in the amount of 271.6 million EUR, which represents the maximum compared to the previous two years of observation. In 2019 and 2021, the production of coke and petroleum derivatives was the second most important import activity. However, in 2020, it fell to third place, with the value of import in the amount of 72.6 million EUR. In 2020, the production of coke and oil derivatives replaced the production of food products, which came in second place in terms of import, with import in the amount of 116.5 million EUR. In the fourth place, in all three years of observation, there is wood processing and wood products, except for furniture. In contrast to most of the activities that have been analyzed so far, a slight growth of 55.1 million EUR can be observed in the activity of wood processing in 2019 to 55.2 million EUR in 2020. The growth trend continues in 2021 when import reached a value of 75.5 million EUR. Like the previous activity, the production of products from

non-metallic minerals recorded a growth trend from year to year of observation. In 2020, there was an increase of 1.7 million EUR, while the growth in 2021 was 14.2 million EUR compared to 2020 and 15.9 million EUR compared to 2019. The production of metal products, except for machines, recorded import in the amount of 43 million EUR in 2019, which in 2020 fell to 41.9 million EUR, and in 2021 grew to 53.4 million EUR. Agricultural production, hunting and service activities recorded an increase in import from year to year, with 39.6 million EUR (2019), to 46.4 million EUR (2020) and 61.1 million EUR (2021). Due to the characteristics of the pandemic, the production of basic pharmaceutical products and preparations recorded an increase in import. In 2020, there is an increase of 6.9 million EUR. Milder growth is realized in 2021 when the growth of import amounted to only 1.6 million EUR compared to 2020. The production of chemicals and chemical products in 2020 recorded an increase in import of 4.1 million EUR, while in 2021, this activity is not among the top ten most important import activities. The production of rubber and plastic products in 2020 recorded a slight increase of 1.8 million EUR in import, while, like the previous activity, in 2021, it is not on the list of the most important import activities. The supply of electricity, gas and steam (55.7 million EUR of import) and the production of paper and paper products (43.6 million EUR of import) are ranked among the first ten most important import activities in 2021, which represents a change in the structure compared to the previous two years.

4. Export and import of products according to the degree of their processing

Generally speaking, in 2020, there was an increase in the export of unprocessed and unclassified products, while there was a decrease in the export of highly processed products and products of ordinary processing, which have the largest share in the total export to WB, which is presented in Table 4.

Table 4: Presentation of export of products in the Republic of Serbia according to the degree of processing, in the period 2019-2021, in millions EUR

| Products according to the degree of processing | 2019 | | 2020 | | 2021 | |
|--|---------|---------------|---------|---------------|---------|---------------|
| | Export | % the changes | Export | % the changes | Export | % the changes |
| High processing products | 1,767.6 | +5.1 | 1,616.8 | -8.5 | 1,940.0 | +20.0 |
| Products of ordinary processing | 917.2 | +7.4 | 800.0 | -12.8 | 1,226.6 | +40.8 |
| Raw products | 287.9 | -3.7 | 304.5 | +5.7 | 344.7 | +13.2 |
| Unclassified products | 158.0 | +11.7 | 189.0 | +19.4 | 174.0 | -7.7 |

Source: Republic Statistical Office (b) (2022), Foreign Trade Merchandise, Database Search Application - Restrictive Access (Accessed 2022)

Products of high processing in all three years of observation accounted for more than 50% of the total value of exports. In 2019, there was an increase in exports by 5.1%

compared to the base of 2018, then in 2020, a decrease was recorded from 1.7 billion EUR of exports to 1.6 billion EUR (a drop of 8.5%), while in 2021, the export of highly processed products reached the maximum value in the observation period of 1.9 billion EUR (growth of 20% compared to 2020).

Products of ordinary processing, after products of high processing, have the largest share in the export of products from the RS to the WB. Products of ordinary processing in 2019 recorded export of 917.2 million EUR (a growth of 7.4% compared to 2018), after which there was a decrease in exports due to the pandemic by 12.8% (the export of these products in 2020 amounted to EUR 800 million). In 2021, there was a recovery, so the value of exports reached a value of 1.2 billion EUR, which was an increase of as much as 40.8% compared to 2020.

Unprocessed products are in the penultimate place in terms of export participation. They record export growth in 2020 (an increase of 5.7% compared to 2019). The trend of export growth continued in 2021, when a growth of 13.2% is recorded.

The share of unclassified products in total exports was almost the same in all years of observation and was at the lowest level of the previously mentioned. Unclassified products also recorded an increase in exports in the pandemic year by 19.4%, however, unlike unprocessed products, which continued the trend of export growth in 2021, the export of unclassified products according to the degree of product processing was reduced in 2021 (decrease of 7.7%).

In 2020, there was an increase in the import of highly processed products and unprocessed products, while the import of products of ordinary processing and unclassified products achieved a decrease, which is presented in Table 5. In 2021, the maximum import values of all product groups were reached in relation to the remaining two years of observation.

Table 5: Presentation of import of products in the Republic of Serbia according to the degree of processing, in the period 2019-2021, in millions EUR

| Products according to the degree of processing | 2019 | | 2020 | | 2021 | |
|--|--------|---------------|--------|---------------|--------|---------------|
| | Import | % the changes | Import | % the changes | Import | % the changes |
| High processing products | 312.2 | +8.2 | 325.9 | +4.4 | 399.1 | +22.4 |
| Products of ordinary processing | 508.9 | -0.3 | 410.2 | -19.4 | 687.5 | +67.6 |
| Raw products | 99.0 | -3.1 | 109.1 | +10.2 | 136.4 | +25.1 |
| Unclassified products | 35.3 | +17.4 | 30.2 | -14.5 | 39.3 | +30.1 |

Source: Republic Institute of Statistics (c) (2022). Foreign Trade Merchandise, Database Search Application - Restrictive Access (Accessed 2022)

Unlike export, where highly processed products take the most part, in import, they are in second place, behind products of ordinary processing. In 2019, there was an increase in imports by 8.2% compared to the base of 2018. Then, in 2020, further growth of 4.4% was recorded. Finally, the highest growth of 22.4% was recorded in 2021 (from EUR 325.9 million in import in 2020 to EUR 399.1 million in import in 2021).

In 2019, products of ordinary processing took part with over 50% in the total import in the WB. The decline was recorded in 2020, while the largest increase in participation was realized in 2021. The import of products of ordinary processing achieved the lowest value in the year of the pandemic when the biggest drop of 19.4% in the import of these products in the observation years was recorded. After the decline, there was a recovery in 2021, when import from 410.2 million EUR in 2020 reached a value of 687.5 million EUR (growth of 67.6%).

Unprocessed products in 2019 participated in the total import in all years of observation with about 10%. When talking about the value of imports, there was a trend of constant growth in imports of unprocessed products, even despite the pandemic. In 2019, there was a 3.1% decrease in imports compared to 2018, after which there was an increase in imports in 2020 and 2021. Specifically, in 2020 imports increased by 10.2%, while in 2021 a growth of 25.1% was recorded.

The share of unclassified products according to the degree of product processing in the observed years was at a low level. In 2020, the lowest value of imports and a drop of 14.5% were recorded, after which imports increased in 2021 (growth of 30.1%).

5. Analysis of the economic cooperation of Serbia with individual WB countries

The Republic of Serbia (RS), along with all WB countries, recorded a decrease in the value of import and export in 2020 except with the so-called Kosovo and Albania (Table 6). In 2020, there was a decrease in export to B&H by 10.5% compared to 2019. In 2021, after the pandemic, export began to grow and reached a value of 1.6 billion EUR (in 2019, exports amounted to EUR 1.3 billion, while in 2020 they amounted to EUR 1.2 billion). RS achieved the largest exchange of goods with B&H out of all countries of the WB, and a surplus is traditionally recorded to the side of RS.

The lowest value of import from so-called Kosovo was achieved in 2019, where a decrease of 13.4% was recorded compared to 2018. In 2020 and 2021, there was an increase in the value of import. The situation was the same with exports, which experienced a decline in 2019 and growth in 2020 and 2021.

Table 6: Trade between the RS and so-called Kosovo (2019-2021), in millions of EUR

| Year | Export | Import | Total | Balance | % change in export | % change in import | Coverage of import by export in % |
|------|--------|--------|-------|---------|--------------------|--------------------|-----------------------------------|
| 2019 | 84.7 | 23.3 | 108.0 | 61.4 | -79.4 | -13.4 | 363.5 |
| 2020 | 251.9 | 25.4 | 277.3 | 226.5 | +197.3 | +8.9 | 991.7 |
| 2021 | 404.2 | 40.9 | 445.1 | 363.3 | +60.4 | +61.2 | 988.3 |

Source: Republic Institute of Statistics(d) (2022). Foreign Trade Merchandise, Database Search Application - Restrictive Access (Accessed 2022)

Trade between the RS and so-called Kosovo recorded a trend of constant growth despite the pandemic conditions. In 2019, the lowest export value was achieved (EUR 84.7 million), which was a drop of 79.4% compared to 2018. There was also a decrease in import by 13.4% compared to the base year of 2018. The coverage of import by export and the balance were also the lowest compared to the other two years of observation. In 2020, there was an increase in all indicators, especially export, which recorded a growth of as much as 197.3%. Also, the coverage of import by export was growing by almost 1/3. In 2021, the positive trends from the previous year continued, so export continued to grow (in 2021, a growth of 60.4% was recorded compared to the previous year). Import grew by 61.2%, which kept the coverage of import by export at a high level.

RS achieved a surplus with so-called Kosovo, but a significant decrease in trade in goods can be observed in 2020 compared to 2018, due to the introduction of taxes on the sale of goods, introduced by Pristina in November 2018.

The consequences were reflected in a drastic drop in shipping by 79.4% in 2019, compared to 2018. There is also a decline in equipment in 2018 (-6.2%) compared to 2017, however, due to the introduction of taxes on November 21st, the short period until the end of the year had a minor impact on the annual level.

The biggest increase in shipping to so-called Kosovo in relation to 2020 was achieved when it comes to oil, oil derivatives and related products, where the growth of as much as 558.2% was recorded, followed by beverages with an increase of 220% and cork and wood products (except furniture) with a growth rate of 133.3%.

The importance of Bosnia and Herzegovina (B&H) as a foreign trade partner is reflected in its participation in the exchange of goods with the RS. B&H is the most important trade partner of the RS within the WB group. Almost half of its total exchange with the whole region of WB, RS achieved with B&H.

The value of commodity exchange had a trend of continuous growth in the period 2010-2021 with the exception of 2012 and 2020. The highest value was achieved in 2021 in the amount of 2.3 billion EUR (Table 7). There was a noticeable decline in the coverage of import by export, so in 2021 coverage reached its lowest value (200.3%) due to the increase in the value of imports from B&H in the amount of 779.7 million EUR (exports amounted to EUR 1.6 billion). Trade exchange between RS and B&H is the dominant form of bilateral economic cooperation and takes place in accordance with the provisions of the CEFTA 2006 FTA, which means no customs duties.

In the last ten years, bilateral trade has doubled. It is characterized by constant growth (with the exception of the pandemic 2020) and a surplus on the side of RS. For the past decade (with the exception of 2020), RS has been recording year-on-year growth in exports to B&H, and compared to 2007, when the implementation of the CEFTA 2006 Agreement began, exports in 2021 were doubled and exceeded 1.5 billion EUR (as of 2015 it is more than one billion EUR).

Table 7: Exchange of the RS with B&H in millions EUR (2019-2021)

| Year | Country / Countries | Total | Export | % change in export | Import | % change in import | Coverage of import by export in % | Balance |
|------|---------------------|---------|---------|--------------------|---------|--------------------|-----------------------------------|----------|
| 2019 | B&H | 1,960.5 | 1,352.3 | +4.9 | 608.2 | +4.8 | 222.3 | +744.1 |
| | WB | 4,008.4 | 3,040.2 | -6.0 | 968.1 | +2.8 | 314.0 | +2,072.1 |
| 2020 | B&H | 1,743.3 | 1,210.4 | -10.5 | 532.8 | -12.4 | 227.2 | +677.6 |
| | WB | 3,835.4 | 2,950.6 | -2.9 | 884.8 | -8.6 | 333.5 | +2,065.8 |
| 2021 | B&H | 2,341.6 | 1,562.8 | +29.1 | 779.7 | +46.3 | 200.3 | +782.3 |
| | WB | 5,062.2 | 3,791.4 | +28.6 | 1,267.6 | +43.3 | 299.1 | +2,523.9 |

Source: Republic Institute of Statistics (e) (2022), Foreign Trade Merchandise, Database Search Application - Restrictive Access (Accessed 2022)

For many years, Montenegro has been one of the most important economic partners of the RS - among the top 20 in terms of trade value, the 8th most important export market and the 40th most important import market. Trade exchange between the RS and Montenegro is the dominant form of bilateral economic cooperation and takes place in accordance with the provisions of the CEFTA 2006 FTA, which means no customs duties. In the last 10 years, trade and exports have recorded a trend of constant growth (with the exception of 2020) with a constant surplus on the side of RS. In the observed period, exports of the RS increased by 31% and the total exchange of goods increased by 25% (Table 8).

Table 8: Merchandise exchange of RS with Montenegro (2019-2021), in millions of EUR

| Year | Export | Import | Total | Balance | % change in export | % change in import | Coverage of import by export in % |
|------|--------|--------|-------|---------|--------------------|--------------------|-----------------------------------|
| 2019 | 787.4 | 69.9 | 857.3 | +717.4 | +2.7 | +15.3 | 1,126.5 |
| 2020 | 687.2 | 64.5 | 751.7 | +622.8 | -12.7 | -7.8 | 1,065.4 |
| 2021 | 820.6 | 79.4 | 900.0 | +741.2 | +19.4 | +233 | 1,033.5 |

Source: Republic Institute of Statistics(f)(2022), Foreign Trade Merchandise, Database Search Application - Restrictive Access (Accessed 2022)

In 2019, RS and Montenegro exchanged goods in the amount of 857.3 million EUR, of which exports amounted to 787.4 million EUR (growth of 2.7% compared to 2018) and import 69.9 million EUR (growth of 15.3%). The coverage of import by export amounted to 1,126.5%, while a surplus was realized on the side of RS in the amount of 717.4 million EUR. In 2020, there was a drop in commodity exchange by 12.3%. In addition to the drop in commodity exchange, there was a drop in the value of exports (-12.7%) and imports (-7.8%). The coverage of imports by exports amounted to 1,065.4%, while the RS still realizes a surplus in the amount of 622.7 million EUR (which was reduced compared to 2019 by EUR 94.6 million). In 2021, there was a recovery in the total foreign exchange,

which increased by 19.7% (900 million EUR). There was also an increase in exports by 19.4% and an increase in imports by 23.3%. The coverage of imports by exports amounted to 1,033.5%, while the balance with the amount of 741.2 million EUR.

Table 9: Exchange between RS and N. Macedonia (2019-2021), in millions of EUR

| Year | Export | Import | Total | Balance | % change in export | % change in import | Coverage of import by export in % |
|------|--------|--------|---------|---------|--------------------|--------------------|-----------------------------------|
| 2019 | 674.5 | 223.8 | 898.2 | +450.7 | +7.3 | -2.5 | 301.4 |
| 2020 | 644.3 | 216.8 | 861.1 | +427.5 | -4.5 | -3.1 | 297.2 |
| 2021 | 815.3 | 307.3 | 1,122.6 | +508.0 | +26.5 | +41.7 | 265.1 |

Source: Republic Institute of Statistics(g)(2022), Foreign trade goods traffic, Database search application-Restrictive access(Accessed 2022)

In the observed period, RS recorded a surplus in trade with N. Macedonia (Table 9). In 2019, there was an increase in export by 7.3% compared to 2018 and a decrease in import by 2.5%. In 2020, the lowest values of import, export and total commodity exchange are achieved in relation to the remaining two years of observation. In 2021, the growth of the mentioned indicators was noted, especially the growth of imports by as much as 41.7% compared to 2020.

Table 10: Exchange between the RS and Albania (2019-2021), in millions of EUR

| Year | Export | Import | Total | Balance | % change in export | % change in import | Coverage of import by export in % |
|------|--------|--------|-------|---------|--------------------|--------------------|-----------------------------------|
| 2019 | 141,3 | 42,9 | 184,3 | +98,4 | +4,4 | -3,8 | 329,4 |
| 2020 | 156,7 | 45,3 | 202,0 | +111,4 | +10,9 | +5,5 | 345,9 |
| 2021 | 189,5 | 60,2 | 249,7 | +129,3 | +20,9 | +32,9 | 314,8 |

Source: Republic Institute of Statistics(h)(2022), Foreign Trade Merchandise, Database Search Application - Restrictive Access (Accessed 2022)

RS recorded a surplus with Albania in the period from 2019 to 2021, with the surplus increasing year after year despite the pandemic (Table 10). Also, there was an increase in export and import in 2020 and 2021, while in 2019, a drop in import of 3.8% was recorded. The pandemic did not affect the slowdown of trade between the mentioned countries.

Conclusion

WB is the second most important (behind the EU) foreign trade partner of the Republic of Serbia, if economic groupings are considered. In 2020, there was a decrease in the exchange of goods with the WB as a grouping, but also with individual WB countries (except Albania and so-called Kosovo). In all three years of observation (2019, 2020 and

2021), highly processed products participated the most in export to the WB, while products of ordinary processing participated with the highest percentage in import, according to the degree of product processing. In all three years, the food industry, whose products were exported the most, is the most represented in trade with the WB, and it retained first place despite the pandemic conditions. In the same period, cereals and cereal-based products represented the most important export product. Although there was a slight decrease in their export in 2020 due to the pandemic, in 2021 there was a recovery and significant growth in export, which reached a value of 270.9 million EUR. When it comes to the structure of import, the first place in all three observed years was occupied by iron and steel (in 2020, there was a drop in import).

B&H is the most important partner of the RS within the WB group. The RS with B&H achieves almost half of its total exchange with the entire WB region (46.2%), 41.2% of its export and 61.5% of its import from the WB region, while it also achieves almost half of its total exchange with the entire WB (46.3% in 2021). The value of commodity exchange had a trend of continuous growth in the period 2010-2021, with the exception of 2012 and 2020. The highest value was achieved in 2021 in the amount of 2.3 billion EUR. Montenegro, as the next member country of the WB, has for many years been one of the most important economic partners of RS (it is among the top 20 in terms of the value of goods exchange, the 8th most important export market and the 40th most important import market). Trade between the RS and Montenegro is the dominant form of bilateral economic cooperation and takes place in accordance with the provisions of the CEFTA 2006 FTA, which means no customs duties. RS has significantly lower values of commodity exchange with N. Macedonia, while this is even more pronounced with Albania. With so-called Kosovo, RS from year to year, regardless of the pandemic conditions, records the growth of the analyzed indicators.

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