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Actual Problem

The Impact of Health on Economic Development: Ghana's COVID-19 Management So Far

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Abstract

The COVID-19 pandemic as a public health crisis also has a major effect on development. Though there has been a prediction of economic decline worldwide, developing African countries are anticipated to have the worst form of impact. In this paper, we reviewed the impact of COVID-19 on the economic development of Ghana. We observed that Ghana's gross domestic product (GDP) growth rate had been reviewed downwards by the International Monetary Funds from 5.8 % to 1.5 %. This would be seen as the least recorded GDP growth since the year 1983. The Minister of Finance in a statement to the Parliament of Ghana indicated that COVID-19 would directly affect production, trade, and investment within Ghana and between Ghana and the world. He added that the pandemic will affect the prices of global commodities (crude oil, gold, and cocoa), tourism, fiscal stance, and human life, mainly the health and life of the most vulnerable. Also, COVID-19 would indirectly affect Ghana's economic growth through the decline of global economic growth and supply chain interferences. In light of the socio-economic challenges created by the pandemic, Ghana has so far thrived immensely in the management of this crisis. Despite the future inevitable economic impacts of the COVID-19 pandemic, Ghana will be able to endure with a good system of governance, adequate public health measures, and a strong macroeconomic foundation.

Keywords: COVID-19, economic development, Ghana, health.

1. Introduction

The novel coronavirus is one of the recent deadliest global pandemics which has affected both the developed and developing countries (Kapata et al., 2020). The World Health Organization (WHO) on 12 January 2020 officially announced that the novel coronavirus first affected the inhabitants of Wuhan City, Hubei Province, China in December 2019. Caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), novel coronavirus cases have shown significantly lesser mortality rates than the 2003 Severe acute respiratory syndrome (WHO, 2020).

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This outbreak was declared a Public Health Emergency of International Concern on 30th January 2020. On 11th February 2020, WHO gave an announcement on the name of the new Coronavirus as COVID-19 (Aljazeera, 2020). As the infection progressed, most countries closed their borders and restricted travels which have hindered the movement of travellers. Additionally, several countries have imposed lockdowns to reduce the spread of the virus. These have tremendously resulted in the reduction of the demand for air travel in 2020. Thus, there is an expectation that this reduction will persist in the next six months (International Air Travel Association, 2020).

In addition to air travel restrictions, the COVID-19 pandemic also affected the demand and supply of commodities. Due to the direct impact of lockdowns and restrictions on movements, there have been supply-chain disruptions, a fall in oil prices, and a decline in global economic growth (Anderson et al., 2020; Mhalla, 2020). Despite the tolerable level of supplies to most of the food markets, global trade restrictions announcements, and excess buying by most countries have raised concerns for food insecurity (Loopstra, 2020). Globally, there has been observed to have substantial international spread and increasing death toll (Aljazeera, 2020; Kapata et al., 2020). As of 30th May 2020, the global case rate stood at 5,991,102 confirmed cases, 2,530,050 recovered cases, and 366,875 deaths (Google News, 2020). Currently, a total of 213 countries and territories and two international conveyances have been affected by the COVID-19 pandemic (Worldometer, 2020). Since 13th May 2020, all African countries with Lesotho being the last country had recorded a case of the COVID-19 (Shaban, 2020). Unfortunately, developing countries, especially in Africa have been predicted to be more likely to be worst affected due to the lapses in their healthcare and economic systems (Kapata et al., 2020; Nkengasong, Mankoula, 2020).

2. Results and discussion

Ghana's COVID-19 National Management

Ghana, a country in Sub Saharan Africa, recorded its first two imported cases of COVID-19 infection on 13th March 2020 from Norway and Turkey (MyJoyOnline, 2020). As of 11th March 2020, the President of the Republic of Ghana, His Excellency Nana Akufo-Addo directed the Hon. Ken Ofori-Atta (Minister of Finance) to make available the Ghana Cedi equivalent of 100 million US Dollars to augment the preparedness and response plan of Ghana (Ministry of Health, 2020). Later on, the Minister of Finance confirmed in Parliament that the said amount was not ready. Consequently, the sincerity of the government was severely criticised by some Ghanaians on various social media platforms (Ghanaweb, 2020). After the number of infected persons reached six, on the 14th March 2020, Ghana's president announced a ban on all public gatherings on the 15th March 2020 to lessen the spread of COVID-19. Additionally, all educational institutions were closed except final-year junior high, and senior high students were allowed to remain in school under social distancing protocols to prepare for Basic Education Certificate Examination and West African Senior Secondary Certificate Examination respectively (Nyabor, 2020). Furthermore, the Ministry of Foreign Affairs and Regional Integration announced on the 19th March 2020, of suspension of passport services (Graphic Online, 2020).

As Ghana's cases increased to 19 persons, the then Deputy Health Minister, Hon. Alex K. Abban, on the 21st March 2020 announced Ghana's first COVID-19 death (see Figure 1) in an interview on TV3 (Azumah, 2020). Subsequently, Ghana's borders were closed for two weeks from the midnight of 22nd March 2020 by the government in a State Address. Additionally, individuals arriving in the country after the closure were mandatorily quarantined and tested (Dapatem, Nunoo, 2020). Furthermore, the Local Government Minister on the 23rd March 2020 announced that 137 markets in the Greater Accra Region were to undergo disinfection exercises. Similar disinfection exercises of public places ensued in other regions with time (Aklorbortu, 2020; Modernghana.com, 2020).

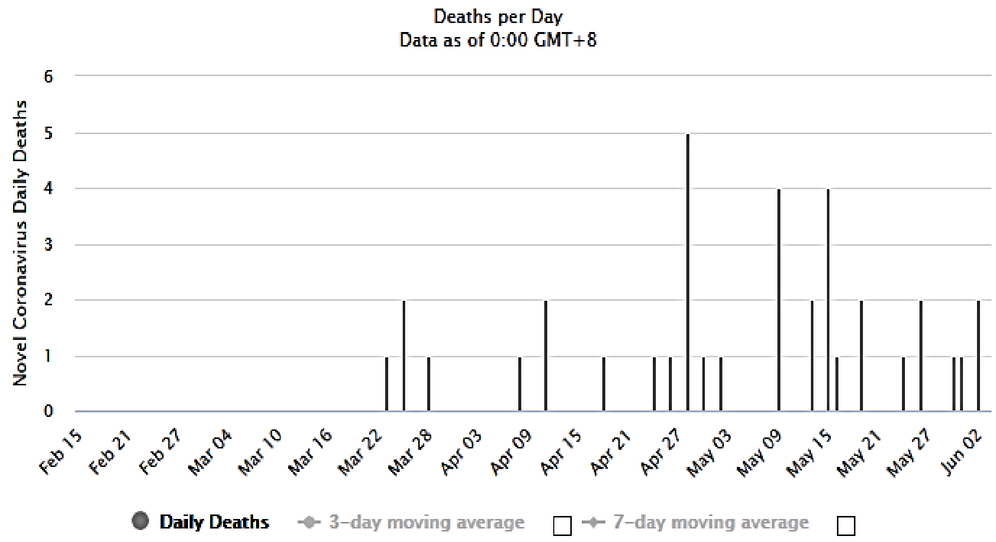

Fig. 1. Daily COVID-19 deaths per day record of Ghana
Link: https://www.worldometers.info/coronavirus/country/ghana/

With a total of 132 confirmed COVID-19 cases, the Director-General of the Ghana Health Service, Dr. Patrick Kuma-Aboagye, on the 26th March 2020 wrote a letter to request all healthcare personnel on study leave in Ghana return to work, after the closure of all training institutions in Ghana, to augment the increasing workload at their respective healthcare facilities (Frimpong, 2020). A day after, the President of Ghana gave a State Address on COVID-19 and placed Accra, Tema, Kasoa, and Greater Kumasi (the four biggest cities) under 21-day partial-lockdown from 30th March 2020. This restriction on movements only excluded providers of essential services like health personnel, those operating within the food chain, members of the Executive, Legislature, and the Judiciary (Essien, 2020). Due to the partial lockdown, Ghanaians complained of a shortage of food, lack of revenue, an increase in the prices of goods and other essentials, and heavy vehicular traffic cross some major roads (CGTN Africa, 2020).

On 19 April 2020, the President of Ghana lifted the three-week partial lockdown but urged Ghanaians to maintain all other preventive protocols. At this point, Ghana had improved its case testing rates and had a total of 1,042 confirmed cases. Though the lifting of the partial lockdown was criticised by some people as premature, others praised the government for such effort as many Ghanaians survived on daily wages (Knott, 2020; Nunoo, 2020). In a State Address by the President on 10th May 2020, he reported that COVID-19 cases had increased to 4,700 with 494 recoveries (see Figure 2).

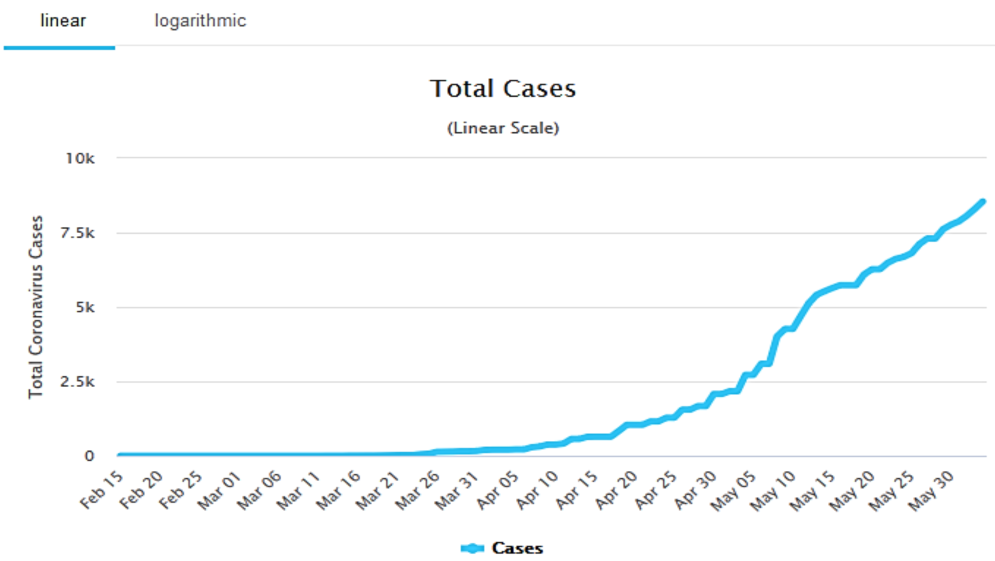

Fig. 2. Daily confirmed COVID-19 cases per day record of Ghana
Link: https://www.worldometers.info/coronavirus/country/ghana/

In the address, the President extended the ban on public gatherings until the end of May 2020 (AllAfrica Global Media, 2020). However, just a day after President's State Address, the Ghana Tourism Authority (GTA) announced that hotels, bars, and restaurants were allowed to begin operating under the preventive protocols. This directive by the GTA was cancelled on the 13th March 2020 by the Minister of Tourism, Arts and Culture, Hon. Barbara Oteng-Gyasi [MP], but allowed food chains and restaurants including hotel restaurants to reopen while drinking bars and night clubs remain closed (Graphic.com, 2020).

On 31st May 2020, President Nana Akufo-Addo in his 10th address to the nation stated that COVID-19 case count numbered 8,070 after 218,425 tests have been completed. He also added that Ghana has 5,087 active cases with 36 deaths (Figures 1, 2). Also, he lessened the restrictions imposed on public gatherings and activities in the country by allowing a maximum of 100 persons to attend religious gatherings from 5th June 2020, following the mandatory one-meter rule of social distancing. Also, the final year junior high, senior high, and university students from 15th June 2020 were to resume classes to prepare for their specified exit examinations. However, he extended a ban on large public gatherings like funerals, political gatherings, and big religious gatherings. Also, he announced an extension of closure of all of Ghana's borders (by air, land, and sea) for human traffic until further notice. Nonetheless, Ghanaians who are stuck abroad were to undergo mandatory quarantine and safety procedures when evacuated back to Ghana (Daily Guide Network, 2020).

Impact of COVID-19 on Ghana's Economy

According to Hon. Ken Ofori-Atta, the economy of Ghana had been badly affected directly and indirectly by the COVID-19 pandemic. In a statement to the Parliament of Ghana, the Minister of Finance noted that COVID-19 would directly affect production, trade, and investment within Ghana and between Ghana and the world. Specifically, he mentioned global commodity (crude oil, gold, and cocoa) prices, tourism, fiscal stance, and human life, mainly the health and life of the most vulnerable. Furthermore, this pandemic indirectly would affect Ghana's economic growth through the decline of global economic growth and supply chain interferences (Ofori-Atta, 2020).

In a similar vein, the International Monetary Funds (IMF) revised projection for the real gross domestic product (GDP) growth rate for Ghana was reviewed downwards from 5.8 % to 1.5 %. This would be seen as the least recorded GDP growth since 1983. This would certainly affect GDP per capita, referring to what happened in 2015 as the 2.5% GDP growth recorded pushed the GDP per capita for that year to a figure lower than zero (IMF, 2020). Also, Deloitte had projected that the global GDP growth of 3.3 % for 2020 would slow to less than 2.9 % due to the COVID-19 pandemic. Consequently, Ghana's estimated GDP growth downward from 6.8 % to 2.8 % due to the economic disruptions the country is experiencing as a result of the pandemic (Deloitte, 2020).

The economy of Ghana is increasingly becoming export-oriented. Noted from 2018, export accounted for over 35 % of the GDP. This is higher than the proportion expected from a country at the lower to middle-income level. Meanwhile, a higher percentage of Ghana's exports are primary commodities with cocoa, oil, and gold collectively summing up to over 80 % of exports. Therefore, the collapse in international demand for oil and the fall in the prices of oil would certainly cause a severe disruption in the Ghanaian economy. In 2018, 30 % of export revenue by the country was accrued from its oil revenue. Out of this revenue, over 50 % of the exports went to China. Certainly, a substantial reduction in Chinese demand for oil as a result of the global pandemic will decrease Ghana's export revenue for the first quarter of 2020, as stated by the Minister of Finance, to an estimated value of GH¢5.7 billion shortfalls in oil revenue (Ofori-Atta, 2020).

The COVID-19 pandemic had led to a fall in prices of cocoa, 27.2 % globally (Myers, 2020). Meanwhile, it accounts for about one-fifth of Ghana's export revenue since 2018. The reduction in cocoa export revenue resulting from less international demand for cocoa might lead to poverty in the rural areas since most of the households who engage in the cocoa industry are vulnerable (Kolavalli, Vigneri, 2017). Likewise, Ghana is likely to experience a substantial decline in the revenue from tax (Deloitte, 2020). Revenue from import duties is expected to fall by GH¢808 million. Similarly, revenues from other non-oil taxes and non-oil taxes are expected to fall by GH¢1,446 million and GH¢2,254 million respectively. These shortfalls will harm the Ghanaian economy (Ofori-Atta, 2020).

Furthermore, the disruptions of international supply chains particularly because Ghana depends more on imports during the COVID-19 pandemic will affect the national economy indirectly (Ofori-Atta, 2020). Deloitte (2020) points out that the greatest impact of the pandemic is likely to manifest in the form of shortfalls in revenue. Currently, Ghana is experiencing GH¢9.5 billion deficits, partly due to shortfalls in revenue. Part of the GH¢9.5 billion (approximately GH¢600 million) according to Deloitte was allocated to the fight towards COVID-19. Also, the government incurred GH¢572 million as the start-up cost of the response plan and preparing for the fight against COVID-19.

Similarly, due to the impact of the pandemic on the revenue from petroleum, it is expected that the Stabilisation Fund, Heritage Fund, Annual Budget Funding, and transfers to Ghana National Petroleum Commission(GNPC) will also be affected. The Stabilization Fund is expected to fall by GH¢1,058 million, while the Heritage Fund also falls by GH¢453 Million. Also, the annual budget funding is expected to experience a shortfall of about GH¢3,526 million whiles the transfers to GNPC also fall by GH¢642 million (Deloitte, 2020). Presently, treasury bill rates and stock prices both globally and locally have been affected with five out of the eight listed banks in Ghana experiencing falls in their share price (Adoteye, 2020). Nonetheless, Adoteye noted that gold as a global commodity might have the potential of saving countries and banks with exposure to the mining sector. Though the precious metal accounts for about one-third of Ghana's total export, strategists of the Bank of America have indicated that the price of gold is projected to increase by 78 % [US $3000 an ounce] in 18 months (Levisohn, 2020). Notwithstanding the negative impacts of COVID-19 pandemic on Ghana's economy, Ghana's gold is likely to cushion the economy to some extent (Adoteye, 2020).

3. Conclusion

The paper demonstrates that the effect of the COVID-19 pandemic on the Ghanaian economy requires an equally integrated response. A comprehensive plan from the State with a focus on health, business development, and the social economy will ensure Ghana's resilience to adjust to future shocks. Though Ghana seems to be making progress in handling COVID-19, it is obvious that the pandemic will affect the national economy in these times of uncertainty. Undoubtedly, there are mutual reciprocal relations between the health and economy of the world. To date, the government of Ghana, its stakeholders, and partners have taken various health and socio-economic measures to handle the COVID-19 pandemic. Yet, McKee and Stuckler (2020) advise that the world will face serious future health consequences after the COVID-19 pandemic if they fail to protect the global economy from the negative effects of the pandemic. In this case, the vulnerable population in developing countries like Ghana in the worst case will suffer the health, economic, and general quality of life and well-being costs post-COVID-19.

4. Author's contribution

IB, JOS, EWA, and SKA designed the study concept and drafted the manuscript. All authors read and approved the manuscript.

5. Competing Interest

The authors (IB, JOS, EWA, and SKA) declare they have no competing interests.

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Articles

Environmental Sustainability in the Development of Resort Areas in Krasnodar Krai

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Abstract

Fostering the sustainable development of a tourism region involves planning and managing the development of areas within it, with a focus on protecting their natural and cultural environments, managing their resort-and-recreation resources, enhancing their environmental condition, improving the quality of life of their population, and ensuring world-class conditions for the comfortable stay of their visitors. The development of resort areas comes with a whole host of implications, both positive and negative. In today's volatile market environment, the need to develop and maintain a competitive tourism product suggests the importance of assessing on a regular basis an area's current environmental condition and the condition of its natural resources. Environmental assessment is crucial to an area's sustainable development. A serious damage to a region's natural-recreational potential is capable of canceling out any of its economic and sectoral achievements, including those associated with the development of the tourism industry in the area.

Research on the dynamics of pollution in Krasnodar Krai (Russia) indicates that its resort areas tend to differ in terms of both particular components of pollution and indicators of the current environmental condition. With that said, for particular resort areas in the region, and for the entire region as a whole, this condition is determined, above all, by the degree to which the following two resources, which are most significant to the successful development of tourism in an area, are polluted – water and air. An analysis indicates that at this point an exacerbation of certain environmental problems in resort areas in Krasnodar Krai appears to be inevitable.

The findings from the research reported in this paper suggest that, while Krasnodar Krai's resort areas are on course for environmental sustainability, there remain issues that need to be addressed. The most serious factors hindering the region from achieving sustainable environmental development include air and seawater pollution, growing volumes of solid and liquid waste, and increased recreational strain on its resort areas, especially in the summertime. Accordingly, there is a need to take an ecosystems approach to integrally assessing the environmental situation in the region's resort areas.

Keywords: sustainable development, resort areas, environmental, indicators, environmental sustainability.

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1. Introduction

What makes the sustainable development of a nation's regions, especially those oriented toward tourism, particularly significant is the importance of preserving their originality. Economic activity in a resort region is primarily aimed at achieving a state of sustainable development in it, normally has territorial limits, and is directly dependent on the region's environmental condition and the condition of its key recreational resources. The significance of the environmental condition of regions focused on tourism-and-recreation activity has grown increasingly due to the implementation of the concept of sustainable development. This kind of activity ought not to lead to the depletion of natural resources in a region but ought to ensure their renewal (Masserov, 2013; Vidishcheva et al., 2019; Vidishcheva i dr., 2020; Ajsanov, 2008; Bobylev, 2007).

Krasnodar Krai's resources-rich and diverse natural environment offers a unique potential for the sustainable development of its resort areas. A major barrier to this development is the relatively high susceptibility of many of the region's ecosystems to anthropogenic impacts on the regional environment, which is affecting the environmental condition of its resort areas.

Factors like the volatile market environment and the need to develop and maintain a competitive tourism product in the resort areas may require assessing on a regular basis the current environmental condition of a region and the condition of its natural resources. Processes related to the development of resort areas have been explored by numerous researchers around the world. Issues of the sustainable development of tourism regions, including the practical assessment thereof, have been researched in a number of works by Russian scholars (Vidishcheva et al., 2019; Vidishcheva et al., 2020; Ajsanov, 2008). Sustainable development implies the balanced long-term development of an area and involves a moderate use of its natural resources. The issue of sustainability appears to be most relevant when it comes to resort areas. Economic activity can cause increased strain on such areas. This may lead to an irrational use of an area's tourism-and-recreation potential and affect the environmental situation in it.

The set of an area's key characteristics is associated with its ability to achieve sustainable dynamics in terms of social, economic, environmental, sectoral, and anthropogenic indicators of growth, with its environmental and anthropogenic characteristics playing a particularly significant role in its development. Indicators of the environmental sustainability of the development of resort areas are crucial indicators reflecting the current condition of the regional economy.

The development of resort areas comes with a whole host of implications, both positive and negative. One of the more comprehensive reviews of the negative impact of the tourism industry on the ecology of resort areas is provided in a work by H. Ceballos-Lascuráin (Ceballos-Lascuráin, 1996). In his book, the scholar identifies the following types of impact on the ecology of tourism areas:

– impact on a tourism region's geological formations;

– impact on its soils (the building of infrastructure in a resort area may cause the movement and disposition of its soils);

– impact on its water resources;

– impact on its flora;

– impact on its fauna;

– change in its sanitary conditions (garbage and other waste from the regional economy, including the tourism industry, may impact on a tourism area's sanitary condition; this impact may extend beyond the resort area and affect all of the local population too);

– change in the aesthetic characteristics of the area's landscape (a significant worsening of the local landscapes' aesthetic qualities may be the result of irresponsible and uncontrolled activity in the resort area).

The extent and nature of the impact of the regional economy on a resort area's ecosystem may depend on factors such as number of tourists, length of their stay in the area, their activity in the area, and the area's distinctive environmental characteristics. As an area's tourism fame grows, visitor flows may increase, which should result in the creation of relevant supporting infrastructure and increased development of transportation services, as transport flows will increase. Problems may arise when the increase in tourism flows is very large and the permissible strain on the area is exceeded, i.e. there is an excessive use of its recreational resources.

The purpose of this study was to assess the environmental sustainability of recreational resources in Krasnodar Krai's resort areas using a special system of indicators (Vidishcheva et al., 2019; Vidishcheva i dr., 2020; Ajsanov, 2008) and based on a pool of relevant information on the subject. The analysis was conducted based on a set of environmental indicators and a set of indicators of anthropogenic strain.

The study's methodological basis was grounded in the systems approach, with analysis and synthesis employed as well. Use was also made of expert methods of obtaining and systematizing information.

2. Methodology

The methodological basis of the study consists of materials from foreign and Russian periodicals, as well as publicly available Internet resources. To achieve the goals of the study, empirical and theoretical methods were applied, such as data collection, study and analysis, generalization, comparison and classification.

3. Results and discussion

The findings from the research reported in this paper have helped gain a useful insight into some of the key strengths and weaknesses of the development of resort areas in Krasnodar Krai and identify some of the key barriers standing in the region's way to environmental sustainability.

Environmental assessment

Environmental assessment is crucial to an area's sustainable development. A serious damage to a region's natural-recreational potential is capable of canceling out any of its economic and sectoral achievements, including those associated with the development of the tourism industry in the area.

The environmental sustainability of Krasnodar Krai and its key resort areas has been explored using the following environmental metrics (Masserov, 2013; Vidishcheva et al., 2019; Vidishcheva i dr., 2020; Ajsanov, 2008; Bobylev, 2007):

– emissions of various pollutants to the atmosphere from transportation in the region, tons;
– relative share of Black Sea water samples that do not meet hygienic standards;
– dynamics of emissions from stationary sources of pollution in the region, thousand tons;
– combined area of the region's protected nature conservation zones, thousand ha;
– combined discharge of foul wastewater, million m^3;
– combined emissions to the atmosphere, thousand tons.
– current (operational) spending on environmental protection, including expenditure covering conservation services, thousand rubles;
– number of facilities with stationary sources of pollution;
– combined emissions to the atmosphere from stationary sources of pollution, thousand tons;
– amount of pollutants emitted by all stationary sources in the region, thousand tons;
– relative share of seawater samples that do not meet hygienic standards (sanitary-chemical indicators, microbiological indicators, and coliphage numbers);
– number of operating control points in the rivers of the Black Sea coast; average suspended solids concentration; extent of pollution in water bodies.

The following two social indicators are closely associated with environmental metrics for the region's resort areas (Bobylev, 2007):

– total solid residential waste taken off the region in a year, thousand m^3;
– total liquid residential waste taken off the region in a year, thousand m^3.

Below is an analysis of the dynamics of a set of indicators characterizing the environmental sustainability of Krasnodar Krai and its key resort areas (O sostoyanii prirodopol'zovaniya, 2018; O sostoyanii prirodopol'zovaniya, 2019; Ohrana okruzhayushchej sredy; Sbros zagryaznennyh stochnyh; Krasnodarskij kraj v cifrah, 2018).

1. Emissions of pollutants to the atmosphere from transportation. In today's world, it is becoming extremely difficult to curb growth in emissions from transportation, as the number of motor vehicles is growing at an unabated pace. Resort areas may face an additional strain due to tourists using motor vehicles of their own. The average volume of emissions from transportation in Krasnodar Krai is around 560 tons, with the share of the resort cities of Sochi and Anapa in the region's total volume of transportation emissions currently being 4 % and 2 %, respectively.

The region posted an increase in emissions in the period from 2016 to 2018 (Figure 1).

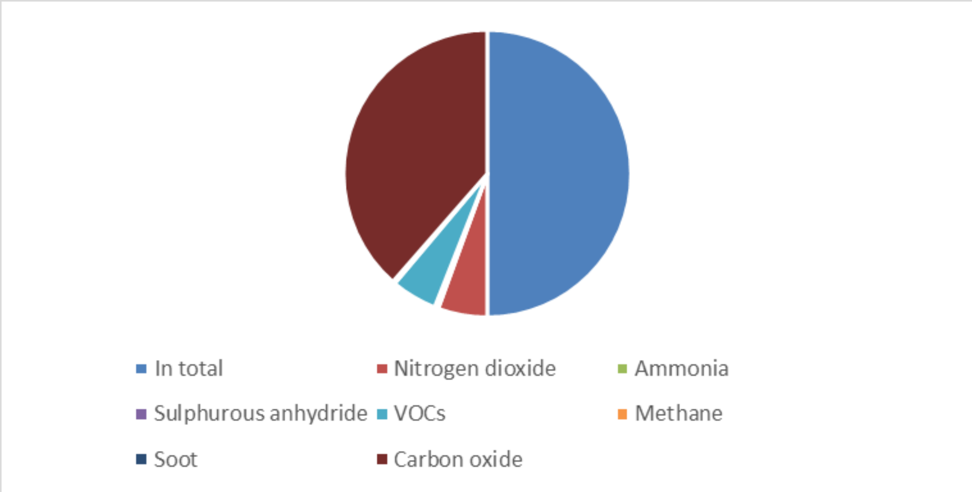

Fig. 1. Dynamics of emissions from transportation in Krasnodar Krai, tons

While the study has identified no pronounced dynamics on this across the region's resorts, in terms of emissions' composition the bulk of the region's transportation emissions is accounted for by carbon oxide – 77 % (Table 1).

Table 1. Dynamics of Emissions from Transportation in Krasnodar Krai, tons

Emissions	2016	2017	2018	Increase, %	Increase in volume terms	Share of each type of emissions, %
Total	562.2	570.8	563.92	100 %	1.72	100 %
Nitrogen dioxide	61.4	63.5	62.8	102 %	1.4	11.1 %
Ammonia	1.5	1.6	1.6	107 %	0.1	0.3 %
Sulphurous anhydride	3.1	3.2	3.2	103 %	0.1	0.6 %
Volatile organic compounds	56.6	59	58.2	103 %	1.6	10.3 %
Methane	2.3	2.3	2.3	100 %	0	0.4 %
Soot	1.01	1.01	1.02	101 %	0.01	0.2 %
Carbon oxide	424.3	440.1	434.8	102 %	10.5	77.1 %

2. Relative share of seawater samples that do not meet hygienic standards. There are no trends governing the way microorganisms emerge and are discovered in the Black Sea's water environment – it is something that occurs in an unpredictable fashion. For this reason, it is quite difficult to assess the degree to which the dynamics are positive or negative, as the situation may change dramatically in a future reporting period. The region posted a tangible decline in the share of unsatisfactory samples in 2018 compared with 2014. However, the interim periods witnessed not only declines but also major increases in the number of unsatisfactory water samples in the region. This is best illustrated by a 2.8-times increase in coliphage numbers in 2016. The most serious deviation of water samples from the standard in the entire period under review across the region's resort areas was detected with microbiological indicators. The largest number of cases of the water not meeting the standard parameters in the period under review was detected in the city of Sochi, with Anapa leading the way in water bodies' cleanliness. However, data on the latest samples indicate that the lowest number of unsatisfactory samples has been registered in the city of Sochi, whilst Anapa and Gelendzhik have posted serious deviations on this.

Based on the dynamics of seawater pollution in the region (Table 2), in the period under review the maximum allowable concentration (MAC) of pollutants in its seawater exhibited a decline in lead content and pollution by oil products. There was an increase in concentration of iron.

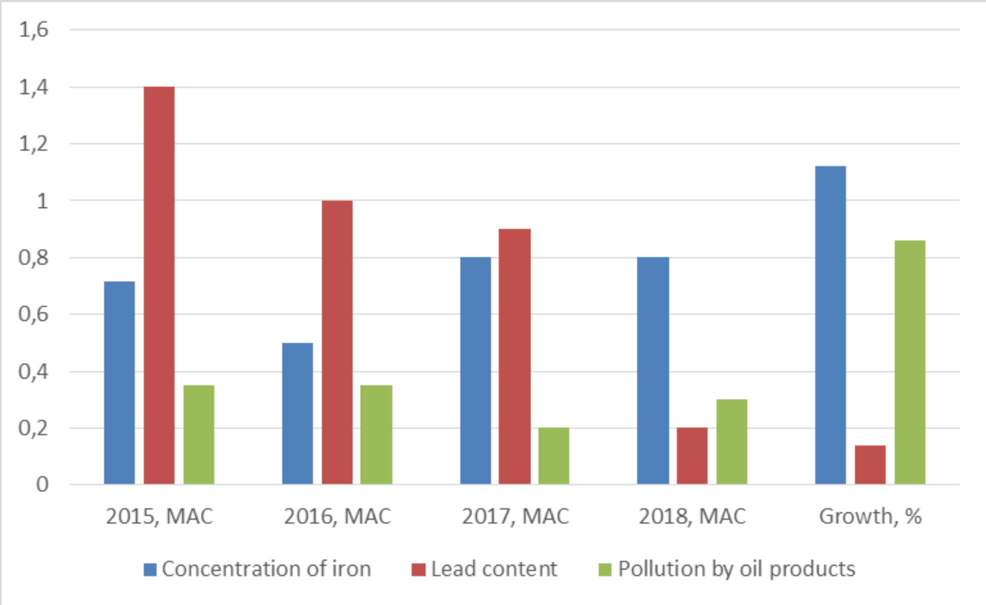

Fig. 2. Dynamics of seawater pollution in Krasnodar Krai. (Krasnodarskij kraj v cifrah, 2018)

Table 2. Dynamics of Seawater Pollution in Krasnodar Krai (Krasnodarskij kraj v cifrah, 2018)

Indicator (average annual value)	2015, MAC	2016, MAC	2017, MAC	2018, MAC	Increase, %	Increase, in volume terms
Concentration of iron	0.715	0.5	0.8	0.8	112%	0.085
Lead content	1.4	1	0.9	0.2	14%	-1.2
Pollution by oil products	0.35	0.35	0.2	0.3	86%	-0.05

3. Dynamics of emissions from stationary sources. As evidenced by the authors' analysis, the region's total emissions in the period 2008–2018 increased 5.6 times (678,000 tons). The most impetuous increase was registered between 2016 and 2018. The largest annual increase (+93 %) was posted in 2018. The share of the region's resort areas in its total volume of emissions has been quite small, as there are no major stationary sources of pollution (e.g., factories and industrial plants) in them.

At 2017, compared with 2014, Sochi posted a tangible decline in the number of stationary sources of pollution in the city. However, there was an increase in the volume of pollution per facility. In Gelendzhik, the number of polluting facilities rose 11 %, the volume of emissions rose 1.6 times, and the volume of emissions per facility rose 43 % for the same period. The largest volume of emissions and the largest number of polluting facilities among the cities examined in the study were posted by the city of Sochi (2017 data). The average volume of emissions per polluting facility in Sochi was, respectively, 1.6 and 3.6 times greater at year-end 2017 than the figures posted by Anapa and Gelendzhik. In 2014, the figures were six times vis-à-vis Gelendzhik and two times vis-à-vis Anapa. Figure 3 illustrates the dynamics of change in the number of stationary sources of pollution across a set of years and with a breakdown into the resort areas.

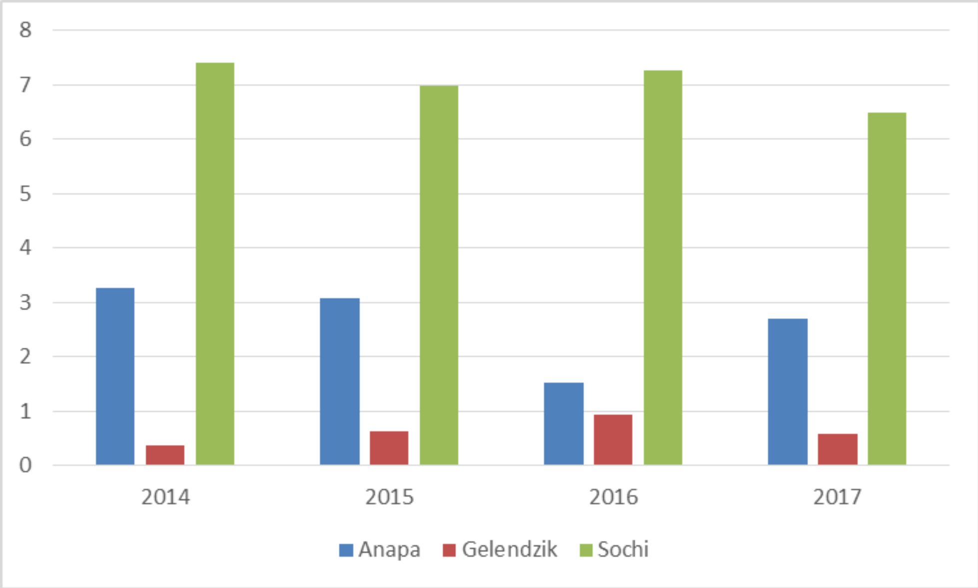

Fig. 3. Number of facilities with stationary sources of pollution to the atmosphere in Krasnodar Krai

The combined relative share of emissions between the three resorts in the region's total volume of emissions dropped from 5.8 % to 2.3 % in the period 2014–2017. It is also worth taking into account that in that period there was a decline in emissions in Anapa (-17 %) and in Sochi (-12 %). However, this drop in emissions was offset by a major increase in emissions in Gelendzhik (+58 %).

That said, the evidence from practice indicates that emissions from stationary sources are not the only (and not the largest) source of pollution in the region. The share of emissions from stationary sources in Krasnodar Krai's total emissions to the atmosphere varied from 18 % to 59 %.

In all of Krasnodar Krai's resort cities, the bulk (98-99 %) of pollutants emitted by stationary sources is accounted for by volatile organic compounds (VOCs). In volume terms, both in 2014 and in 2017 the largest amount of pollutants was registered in the city of Sochi. However, Sochi is the only city among those examined that posted negative dynamics on all the groups of pollutants. The worst situation with increase in emissions was observed in Gelendzhik and Anapa – 4.3 times and two times, respectively.

4. Combined area of protected nature conservation zones. This has been quite a stable quantity with Krasnodar Krai. Over the last few years, the region has not witnessed a significant increase in the combined area of its protected nature conservation zones. The maximum figure is 379.3 thousand ha (Vidishcheva i dr., 2020). Starting in 2015, the combined area of the region's protected nature conservation zones has been gradually shrinking and going back to the figures of 2008.

5. Discharge of foul wastewater. It is worth noting the absence of a pronounced dynamics when it comes to the dynamics of the level of wastewater discharge in the region within the system of environmental indicators of sustainability. This may be testimony to the implementation of restraining conservation policy. Over the last 10 years, the increase has been just 7 %, whilst in the period 2009–2012 alone the region's total volume of wastewater discharge rose 23 %. The figure has been smoothed by declines in foul wastewater discharge. If viewed in terms of fluctuation, the figure can rightfully be regarded as sustainable, as all changes in it in the last 10 years have been in the range of 200 million m^3 (from 820 to 1,021 million m^3).

6. Emissions to the atmosphere. The volume of Krasnodar Krai's emissions to the atmosphere has been growing rapidly, with an average annual increase of nearly 30 % posted. Over the last 10 years, the volume of pollution released to the atmosphere in the region has grown 69 %. The region's figures in terms of the structure of emissions indicate that the increase in emissions observed in recent years has been mainly associated with a rise in emissions from the activity of stationary sources of pollution (Figure 4). By contrast, the share of emissions from transportation in the region is less than 1 %.

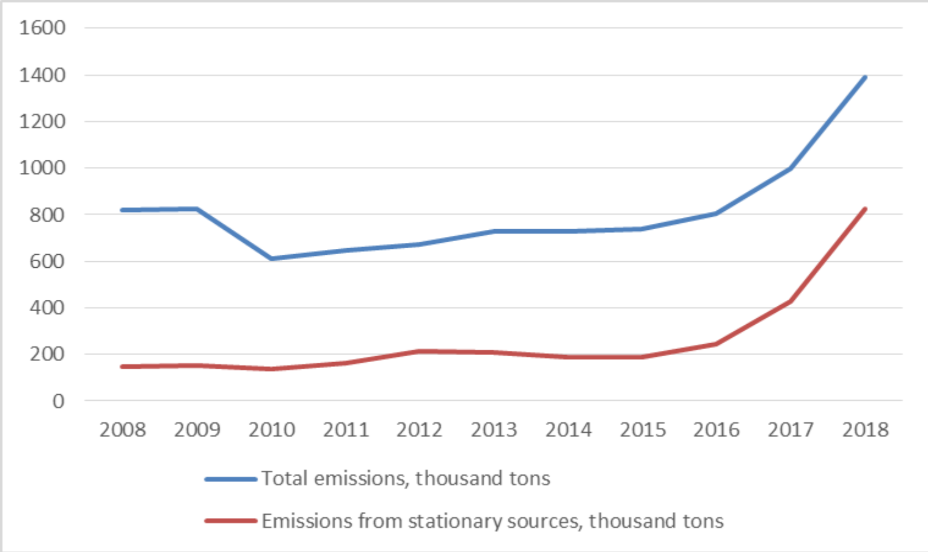

Fig. 4. Comparison of the dynamics of emissions from stationary sources with that of total emissions in Krasnodar Krai, thousand tons (O sostoyanii prirodopol'zovaniya, 2019)

7. Spending on environmental protection. The funding and organization of conservation activities is increasingly becoming a topical objective for the region's resort areas. The issue owes its relevance to the significant worsening of environmental situation throughout the region, caused by increased pressure on its hard-to-renew natural-recreational resources. Over the last six years, total operational spending has grown three times. In 2018, the figure was over 14.5 billion rubles. Sochi has been the undisputed leader in spending on environmental protection among the region's resort areas. The largest increase in spending was posted by the city in the period 2012–2014 (when facilities and infrastructure were being built in the area for the 2014 Winter Olympics). In the entire period under review, the city posted an increase of two billion rubles in related spending. However, relative to 2012 the best results were achieved by Anapa and Gelendzhik, which in the period under review posted an increase of 29.9 and 13.3 times in related spending, respectively.

Figure 5 illustrates the dynamics of spending on environmental protection in Krasnodar Krai as a whole and its key resort areas in particular.

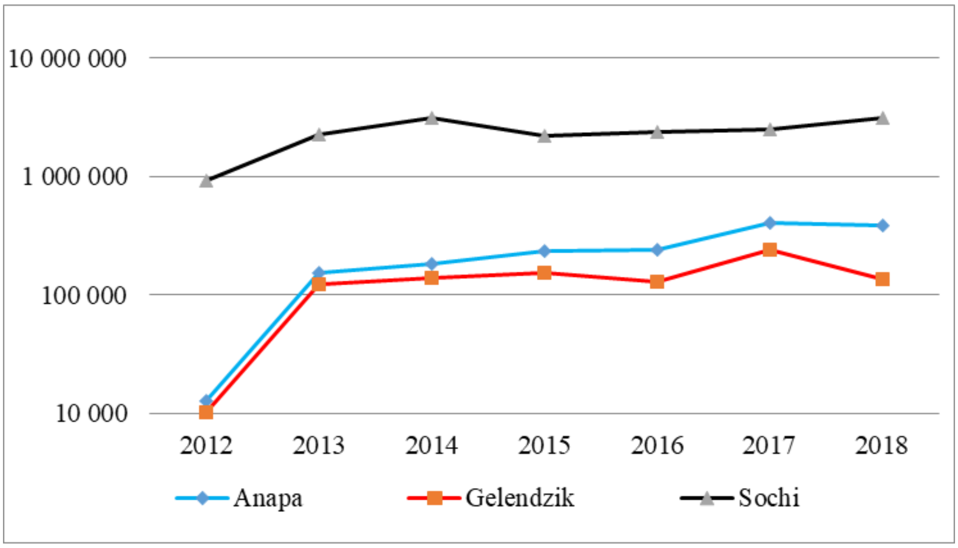

Fig. 5. Dynamics of spending on environmental protection in Krasnodar Krai (Ohrana okruzhayushchej sredy)

The need for conservation activities is largely associated with increased anthropogenic strain on the area. In this context, let us examine how much is currently spent on environmental protection per capita in the region. Based on data for the entire region and its key resort areas, the way in spending on environmental protection in the region is currently led, by a considerable margin, by Sochi, which spends on environmental protection four times the regionwide average. The rest of the regions in the sample have been actively posting an increase in related spending, with some periodically spending close to the regionwide average. Overall, on average, Krasnodar Krai's resort areas spend on environmental protection more than its areas with a different specialization.

Since the resort areas' production structure is not expected to change much in the near future (considering their sufficient natural-resource potential), the environmental condition they now are in as a result of economic activity in them (as shown above) cannot be regarded as wholly satisfactory, and the areas have yet to achieve optimum environmental condition. Spending on conservation activity in the region ought to be such as to prevent any damage to the environment whatsoever (Stepanko, 2013; Stepanko, 2016). Without minimizing environmental damage resulting from the large-scale impact of economic activity and transportation on the environment, it will be difficult to ensure effective nature management in and achieve the sustainable development of the region's resort areas.

Eliminating the environmental damage accumulated in Krasnodar Krai's resort areas, reducing the amount of waste, and reusing waste can be possible only via the purposeful attraction of investment toward waste processing, boosting spending on environmental protection, promoting the rational use of natural recreational resources, and ensuring a balanced structure of investment.

Ensuring the successful implementation of these activities will require assessing the environmental condition of the resort areas through the prism of existing industrial and natural processes and the way nature management is currently being handled in them (Stepanko, 2013; Stepanko, 2016).

4. Conclusion

The findings from the research reported in this paper have helped gain a useful insight into some of the key strengths and weaknesses of the development of resort areas in Krasnodar Krai and identify some of the key barriers standing in the region's way to environmental sustainability.

Below is an aggregate assessment of the degree to which the current development of resort areas in Krasnodar Krai is sustainable. The assessment is based on an analysis of data for Krasnodar Krai as a whole and its key resort areas in particular.

Strengths:

– Relatively stable volumes of foul wastewater discharged to the environment;

– Steady increase in spending on environmental protection.

Potential:

Expansion of conservation zones.

Weaknesses:

– Mechanism underpinning the allocation of funding being unstable;

– Significant increase in emissions to the atmosphere from various sources of pollution, including stationary ones and transportation;

– Significant increase in foul wastewater discharged to the environment in Krasnodar Krai.

Threats (barriers):

– Unsatisfactory quality of seawater;

– Increased recreational strain.

To be able to make effective use of data available on the subject, researchers will need to come up with efficient ways to process that information in an integrated fashion and develop efficient methods for modeling the environmental condition of and representing data on the resort region.

Research on the dynamics of pollution in Krasnodar Krai indicates that its resort areas tend to differ in terms of both particular components of pollution and indicators of the current environmental condition. With that said, for particular resort areas in the region, and for the entire region as a whole, this condition is determined, above all, by the degree to which the following two resources, which are most significant to the successful development of tourism in an area, are polluted – water and air. An analysis indicates that at this point an exacerbation of certain environmental problems in resort areas in Krasnodar Krai appears to be inevitable.

The areas have yet to achieve optimum environmental condition. Spending on conservation activity in the region ought to be such as to prevent any damage to the environment whatsoever. A key focus in optimizing the areas' economic-social and natural relations ought to be on obtaining the required funding for conservation activities, structuring investment in environmental protection, and putting in place a cutting-edge system of technological processes related to economic activity in the areas, including waste treatment and recovery.

Integrated rational nature management ought to be regulated based on the concept of sustainable development, principles and methods of implementing sustainable development from a standpoint of new knowledge on ecology, and a whole new model for nature management itself that will reflect changes in the way one looks at an area's nature and resort-and-recreation resources and in one's notion of the place and role of nature management in the social-economic development of tourism regions and people's life activity.

The research reported in this work helps draw the conclusion that, while Krasnodar Krai's resort areas are on course for environmental sustainability, there remain issues that need to be addressed. The most serious factors hindering the region from achieving sustainable environmental development include air and seawater pollution, growing volumes of solid and liquid waste, and increased recreational strain on its resort areas, especially in the summertime.

Accordingly, there is a need to take an ecosystems approach to integrally assessing the environmental situation in the region's resort areas, which should help achieve the following:

– obtain a more comprehensive and accurate picture of the environmental situation in the resort areas and their tourism-recreational potential;

– monitor and forecast changes in the condition of the region's local ecosystem;

– determine maximum values for environmental strain and factors influencing the condition of the areas' recreational resources;

– ensure efficient decision-making on minimizing the impact of specific negative factors based on the Pressure–State–Response (PSR) framework, with a focus on carrying out effective conservation and restoration activities in the tourism region.

The primary focus in terms of the future development of the region's resort areas ought to be on achieving a state of harmony and balance between its economic, sectoral, and environmental objectives en route to sustainable development.

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Impacts from Sport Events for the Local Communities on Tourism, Local Economic Development and Destination Branding: the Case of Larissa Regional Unit Race Events

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Abstract

In recent years, efforts have been made in order to create a new model of development. This can be considered as a general effort of the various local communities to achieve economic development. It is also crucial for this new model to implement the social aspect as well as the economic aspect. This can be achieved by considering as critical tools for development, culture and sport, combined with the historical memory of the various societies.

Lately, there is a world trend on investing and expecting a significant turn over in terms of economic and social capital for the local communities, from local sport events and activities. Sport events are such as running races organized every weekend in the urban and rural areas.

The present research paper tries to study the effects on the local economy and local community in general, of the various running events organized in the Larissa Regional Unit, based in central Greece. Those sport events, can have a positive effect on the local community in many ways for the economy, tourism and society.

In order to identify those implications, the running events of Ippokrateios in Larissa city, and Gentiki Trail race will be studied in the present research paper. Those two sport events that are studied in the present research paper, are two characteristic events of Larissa Regional Unit, with effect on both rural and urban local communities.

Keywords: local economic development, sport tourism, sustainability, culture, destination branding.

1. Introduction

The recent economic crisis has created a need to identify new models of local development and sustainability. Moreover, it is crucial for those new models to implement the social aspect as well as the economical aspect. Lately, there is a world trend on investing and expecting a significant turn over in terms of economic and social capital for the local communities, from local sport events and activities. Sport events such as running races, are organized every weekend in the urban and rural areas. According to A. Goulas, M. Pappa, and G. Theodosiou (2017), the new model of local development, combine culture with local sporting events and activities, combined with the historical memory of the various areas. According to L. Misenert (2016), 'sporting events have become highly sought after tools for economic, tourism, and social development in cities around the world'. Also, it is well spread, the idea, that sport tourism is being utilized for the restructuring of rural and urban local communities, communities that are in necessity of development and regeneration in the emerging economies (Chalip, Costa, 2005; Grix, 2012; Tichaawa, Bob, 2015).

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In the last years, several efforts have been made to create a new model of development in the effort of local communities for economic development. It is also crucial for this new model to touch both the social and the economic dimension. This can be achieved by considering them as critical tools for development, culture and sports, combined with the historical memory of different societies. This practice, with tools for developing the local economy, culture and sports, is common in major European cities. The main theme of this research project is to identify and publish a new model of local development based on two key factors, culture and branded sporting events. For this reason, the case of the Ippokrateios road race as well as the Gentiki Trail mountain race will be studied by the Prefecture of Larissa. The Ippokrateios road race is an international sporting event with participants from Greece and abroad. That event has a significant impact on the local economy for the city of Larissa mainly and is organized every year in the city center of Larissa. The Gentiki Trail race is a mountain race and is organized in a very close to Larissa city mountainous area, at the mountain of Gentiki. The participants on that trail race are mainly from Greece, and several from abroad. However, for these two events, it is underlined, that there are three main dimensions, the economic dimension, the cultural dimension and the health dimension. In order to measure the impact of these two well-known sports events on the local development of the city of Larissa, a questionnaire was conducted which was distributed to the participants in each event and then analyzed statistically. The results of the research from the specific sport events confirmed the multiple benefits for the society of the Regional Unit of Larissa, both economically and culturally. In addition, for the needs of the present research work, the literature review and the study of similar cases were used. Moreover, it is quite important to mention the fact that those events can boost the tourism of the specific area and the surroundings, especially during the event period. Actually, research findings show that during the weekend of the organization, there was noticed a significant increase on hotel booking. That is the reason for A. Goulas et al (2017) to consider and study the race event of Ippokratios race as a tool for development for the city of Larisa mainly

Race events – Development factors for local societies

In recent years, with the ongoing economic crisis, more and more local government are trying to find a way to boost their region. One of the sectors that is constantly gaining ground is that of sports tourism. Indeed, according to T.D. Hinch, & J.E. Higham (2001), sports is an important activity in tourism, while tourism is a fundamental feature of sports. In addition, many researchers have pointed out over the years the importance and affect of sports events on the societies that organize and host these events. Thus, according to M. Weed & C. Bull (2004), athletic tourism is an economic, social and cultural phenomenon created by the unique interaction of activity, people and location. In addition, according to St. Ross (2001), 'the sport tourism industry has a few boundaries although it primarily penetrates economic, environmental and cultural areas. Much of the research on event sport tourists has focused on their economic impact upon a host community, although measuring spending patterns is a difficult proposition. Tourism's economic impact is one of the most researched but least understood areas of tourism'. Moreover, according to J. Conway, C. Isselhard and E. Urbanski (2007) 'the economic impact of sport can be defined as the ne change in an area's economy resulting from a sport event. The net change will encourage or discourage a sport franchise to build a complex in a designated area'. In addition, Conway et al. (2007) underline that 'this specific change is caused by activity involving the acquisition, operation, development, and use of sport facilities and services. This in turn generates visitor spending, public spending, employment opportunities and tax revenue'. Furthermore, A. Goulas et al. (2017) claims that 'running race events, like Ippokratios race can have an economic impact on local economies'. In addition, G. Gkoutzioupas and D. Gargalianos, (2008), in their research work, claim that 'sport events can increase sports tourism and also suggest that government and local authorities should invest on such events'. It is a fact that sporting events, such as the road races we are examining in this article, generate income from sports tourists' travelers, from the stay and nutrition of sports tourists, from spending in the markets while staying at the area of the sporting event, while national or international visibility of the area is achieved, depending on the size of the sporting event. S. Gammon and T. Robinson, (1997) mention that the rapid development of sports tourism in recent years is due to the increasing popularity of national and international sporting events, the understanding of the value of engaging in sporting activity as a means of promoting health internationally and the awareness of the importance of sport as a means of developing people's relations. "It is worth mention the opinion of S. Lee (2006) that 'the indirect effects include the recirculation of public and visitor spending for the sporting event. Induced effects are the increase in employment and household income resulting from introduction of a sport franchise'. Examples from the international literature are many. G. Papanikos (2015) claims that 'marathons are usually organized by cities and the decision making process involves many stakeholders. Eventually though a critical mass of local citizens must run behind the idea and this has to come through the local government with the support of local business interests and sport associations'. Furthermore according to M. Taks, L. Chalip and Ch.B. Green, (2015), 'sport events have a particularity; they are temporal and can trigger a variety of short term or long term positive or negative impacts'. All these organizations are invited to work together to organize the event, and we will see in the examples to be presented in this research paper, that all those mentioned above are cooperating for the organization.

Ippokratios race

The novel paradigm for local development that the present research paper presents is the case of Ippokrateios Race. For the needs of the research a questionnaire was distributed on the participants of Ippokrateios Race, which was held on the 8th of May 2016 in Larissa, Thessaly. Ippokrateios Race is a local sport event on annual basis organized by the Larissa Marathon Runners Club, an amateur running club. It is actually organized every year on May in the city of Larissa which is located in central Greece in the Region of Thessaly. Another important fact that must be highlighted is that the city of Larisa is located in the center of Greece, which makes the city easily accessible from most of the other Greek cities. Also, the city of Larissa is not cited at an altitude, on the contrary it is plane thus becoming an easy flat route for the runners, a fact that makes it attractive for the participants. Additionally, one of the characteristics of the route that will be presented further on the present research paper is that the start and finish of the 10 km race is in front of the first Ancient Theater of the city and a big part of the route passes from other monuments like the Hippocrates monument and through the Park of Pinios River. Furthermore, the children's race of 1000m starts in front of the Hippocrates monument and finishes at the Ancient Theater. This is something of a greater importance and an added value to the event.

Last year was the 10th year that the specific event was organized and had three major events, the Ippokrateios Race of 10 kilometers, the 3kms Fun Run and the kid's race of 1000 meters. The event had a record of participants with an amount of 1250 runners registered for the race of 10 kilometers, 530 runners registered the 400 kids raced at 1000m. These numbers of participants ranked Ippokrateios Race as one of the most popular races of 10 kilometers in Greece. That number of participants was the sample of the present research.

The main objective of the questionnaire that was held on the participants was to measure the economic influence of the event on the city of Larisa for the specific weekend. The number of nights stayed in Larissa and the amount of money they spent for that weekend was two of the questions. In addition, the number of persons accompanying the runners was another important question.

Gentiki trail race

The Gentiki trail race is an annual event, which is held on the third weekend of February and is organized by the Larissa Marathon Runners Club. It has two main events, a bigger trail race of 17 km in the mountain of Gentiki and a smaller trail race of 5 km for less experienced athletes. The mountain Gentiki is a mountain close to the city of Larissa, at a distance of just 10 km, unknown even to the locals, but with a lot of history and with important historical monuments. It is known mostly from the antiquity for the extraction of the famous green stone, the green marble with which many well-known world monuments were built, such as the church of St. Sophia in Constantinople, the temple of St. Paul in the Vatican in Rome and others. The Gentiki trail event, with both events, is mainly a pole of attraction for trail runners. Indeed, the period during which the race is organized, in the heart of winter, is a period of reduced tourist traffic for the region of Larissa. As a result, this stimulates the traffic both in hotel reservations and local stores and mainly in restaurants and cafes.

On February 2020, the 4th edition of Gentiki Trail was organized, with a massive success and participation. In the main trail race, 3kms were added, in order to be a total of 20 kms for the Gentiki Trail race, and the second smaller trail race remained on 5 kms. The 4th edition was finished with 240 finishers on the 20 kms trail race and with 150 finishers on the 5 kms trail race, which are actually the race participants limit for both races. In other words the races went sold out from participations.

On that case the same questionnaire that the researchers used firstly on Ippokratios race, was used also in order to measure the economic influence of the Gentiki trail even on the area for that weekend.

2. Results and discussion

The research findings of the three race events that were studied for the present research paper were very interesting. It is very important to highlight the fact that from the analyses of the 7th Ippokrateios data is that the percentage of the athletes that were from the city Larissa is 34 % thus, the participants that visited the city of Larissa the specific weekend for the race is 66 %. We can see the data analysis at Figure 1. It is particularly interesting to see and realize the importance and impact this athletic event has on the city of Larissa from the economical aspect and observe carefully the specific categories. From the city of Larissa, the percentage of athletes was 34 %, from the Prefecture of Larissa 41 % and 29 % of the participants visited Larisa for the specific race from the rest of the region of Thessaly, outside of Larissa's Prefecture, i.e. the Prefectures of Trikala, Karditsa and Volos. The total percentage of participants from the region of Thessaly was 70,5 % thus the athletes that traveled the most to Larisa, coming from regions outside Thessaly was 29,5 %. To summarize, 41 % of the participants were from Larissa's Prefecture and an impressive 59 % traveled to Larissa from other cities. The research also shows that most of the participants that traveled to Larissa had at least one companion and in many cases their whole family. A large number of them with their companions stayed in Larisa overnight. On average, every participant had one companion. According to the president of Hoteliers of Larisa's Prefecture Mrs Papaioannou Eirini, at the weekend of May 7 and 8th, the occupancy in hotels in the city of Larissa reached 90 % and this is largely due to Ippokrateios Race. Additionally, participants and their companions that visited Larissa only for the day, had lunch in restaurants. Actually all participants had coffee and lunch after the race. A positive coincidence was that at the race day, which was Sunday, the shops were open. All of the above mean that the local market was significantly enhanced.

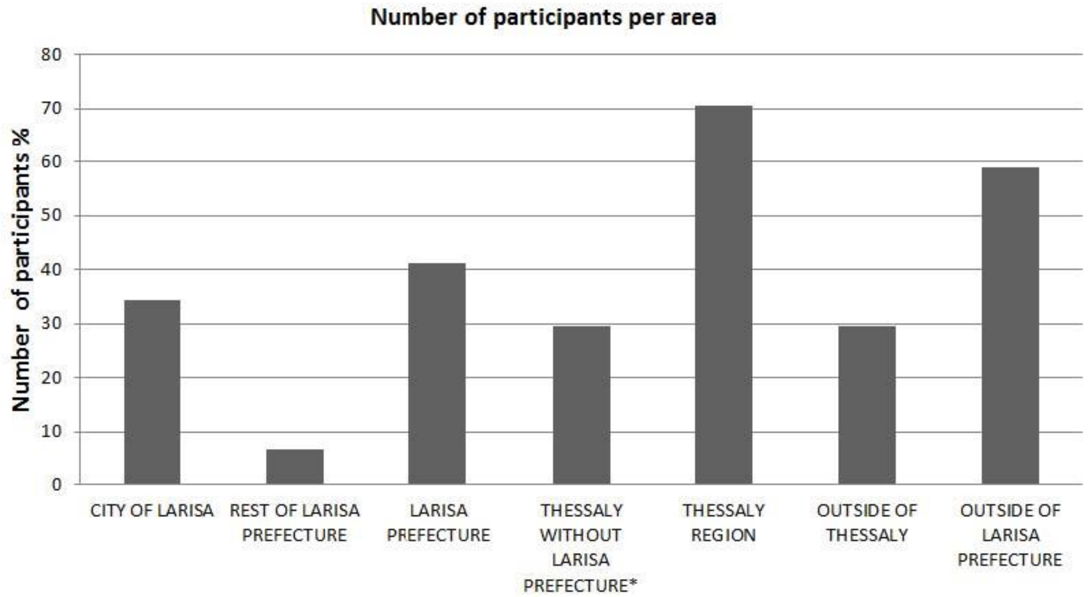

Fig. 1. Number of participants per area at the 7th Ippokrateios of 2016
*The rest of the Thessaly region Prefectures are those of Trikala, Karditsa and Volos

For the second sport event presented on this research paper is the Gentiki trail.

The research findings showed that from the City of Larissa was the 43 % and from the rest of Larisa prefecture (e.g. Tyrnavos) was the 17 % of the total participants as we can see in the data analysis on Figure 2.

It is quite important to underline that from Thessaly but outside of Larissa prefecture was 17 % of the athletes, i.e. Karditsa, Volos and Trikala prefectures.

To summarize the research findings, Larisa prefecture represented by 60 % of the total participants thus 40 % of the participants came outside of Larisa prefecture.

On this race event, 23 % of the participants came outside from Thessaly region, i.e. Ioannina, Pieria, Thessaloniki, Athens, Kozani, Grevena, Lamia and etc.

It is quite important to mention that for the day of the race event most of the athletes and their companions, had a coffee or lunch at the restaurants and cafeterias of the village of Kalochorion, which is close to the race event finish line. Also, is quite important to mention that 59 % answered that they spent at least one night at the region for the race event. All of them answered that they preferred the hotels of Larissa city for their staying. Even on that occasion, the research findings result that for the specific weekend that the race event took place, the local economy was boosted.

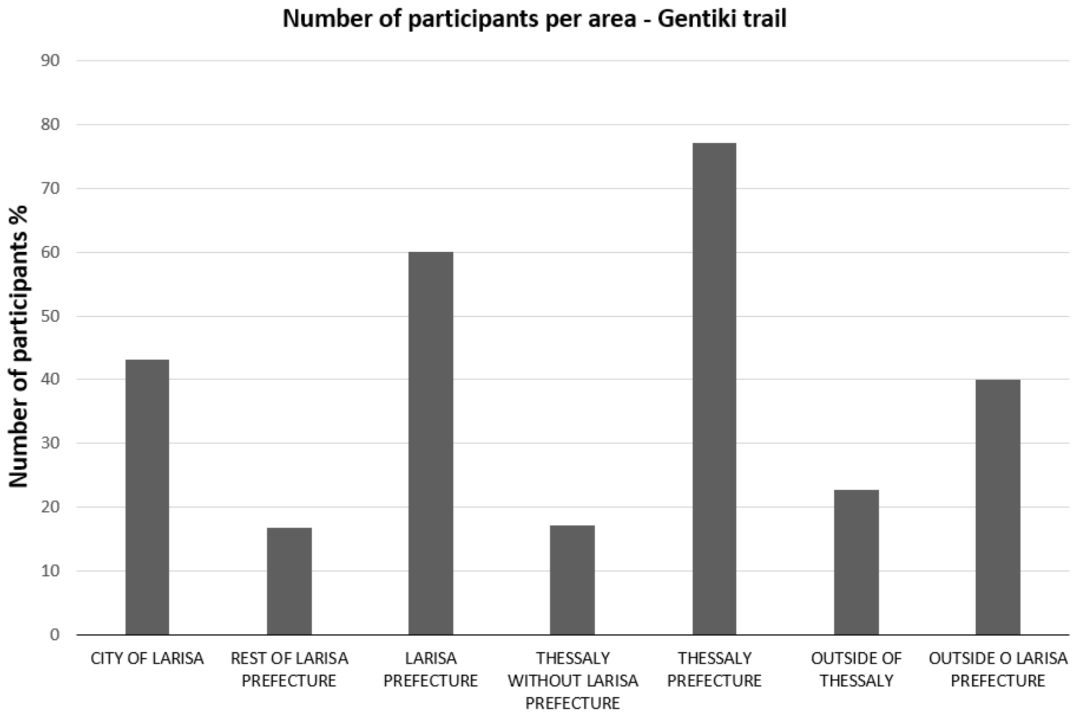

Fig. 2. Number of participants per area at the 2th Gentiki trail of 2018
The rest of the Thessaly region Prefectures are those of Trikala, Karditsa and Volos

3. Conclusion

In the present research paper, a new model paradigm of local development for the prefecture of Larisa based on two different running events was presented. The researchers choose to study and analyze two local running events, organized in different periods that attract a vast number of runners and visitors in the city of Larissa and the surroundings. Mainly the biggest running event of region of Larissa, Ippokratios race, attracts more than 2000 runners, attendants and visitors with a big impact on the local economy and with important social and cultural aspects as well. Then Gentiki Trail race is organized during the winter period and create the factors to help the tourist aspect of the events. Thus, in fact, the combination of these two race events creates in the same year the appropriate conditions for Larissa, so that it is a touristic destination for athletes from all over Greece. Larissa Regional Unit, with the organization of running events can claim that is becoming a sport tourism destination during the year. This has economic, social, cultural, sporting and tourism impact on the city and its citizens. In fact, with the sport events presented in this research paper, two weekends of the year, athletes and escorts from all over Greece come and stay in the city of Larissa. Athletes and their escorts have lunch, they shop, they consume and have fun during their stay in Larissa. However, the most important aspect of all, which is not directly measurable, is the fact that the visitors get to know the beautiful side of the city of Larissa and leave with excellent impressions, since their participation in one of those three races and tourism on the occasion of this event, is the purpose of their visit. This creates a brand image for the city. In a future research the impact of these events on the creation of the city branding will be analyzed and presented.

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Effect of Consumer Price Index Change on Annual Net Salary in Balkan Countries: Case of Serbia, Croatia and Bosnia

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Abstract

This research is examining the effect of Consumer Price Index (CPI) to calculate the change in Annual Net Salary (ANS), across the three Balkan countries: Bosnia, Serbia and Croatia. The study will be using the data with the graphical representations and publications regarding CPI and ANS in the period from 2014 to 2018 from the „Agency of Statistics in BiH", „Trading Econometrics" and „CEIC Data". In order to test the hypothesis regression approach will be used where we define the regression models, find statistical relationship and present calculations reached in Excel and SPSS. Authors confirm the main hypothesis for all three countries using statistical tools such as mean and the median of descriptive statistics, correlation analysis, model summary with R, R-Square(s) and standard error of the estimate, ANOVA significance and coefficients – confidence intervals. Authors show that the relationship of CPI and ANS is rather strong hence the hypothesis stands. Authors conclude that this research could be helpful for the analysis of similar indicators for other transition economies.

Keywords: consumer price index, salary impact, Balkan countries, GDP, wealth creation.

1. Introduction

This research is examining the outcome of the change in two indicators, the Consumer Price Index and the Annual Net Salary. The goal is to calculate the change in one indicator by the approximate change in the other, across the three countries. Consumer Price Index is taken as the independent variable which change is causing the dependent variable change in Annual Net Salary. Consumer Price Index (CPI) is representing the change in inflation rate in the prices of products and services through the consumption and demand in the territories of Bosnia and Herzegovina, Croatia and Serbia. Consumer Price Index compares the inflation and price movements in one country like BiH with inflation in other countries like Serbia or Croatia. Products, goods or services that are bought by the population for consumption are included and written in the index. Net Salary or Annual Net Salary (ANS) is the money you ultimately receive into your account and it does not represent the actual amount of your work for one year. The amount of your work is Gross Salary, but you simply must share the difference of the amount with the state. People have developed the understanding of this procedures over time and they are more aware of their duties living less worried with the fact of cutting their earnings. The Net is therefore the money that taps

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under the people arms after the state takes a part that belongs to it. By comparing these two indicators, we will inspect the difference between the three neighbor countries and find out if this study can consider to fulfill the aim that it is set from the topic. This research will study five years of these countries from 2014 to 2018.

2. Discussion

The useful articles that helped me doing this research are those that were closest to the topic. For example; the definitions, information and regulations are obtained through the article „Consumer Prices, the Consumer Price Index, and the Cost of Living“. These authors explained how to accurately measure prices and their rate of change, inflation, and how that affect almost every economic issue. That includes growth and productivity, industry prices, government taxes and spending programs, budget deficits and debts, monetary policy, real financial returns, real wages, real median incomes and poverty rates, and the comparative performance of economies. The author explained that relative prices of different goods and services change frequently, in response to technological and other factors affecting costs and quality, which leads consumers to change their buying patterns. Despite important updates and improvements over time, the change in the CPI has substantially overstated the actual rate of inflation, and it is also likely to continue to overstate the change in the cost of living for the foreseeable future. (Boskin, 1998). Generally looking, the salary is considered as the income of most of the employed population in countries with a solid economy and which holds the main share between the market-specific fundamental incomes. According to the author of „Analysis Of The Evolution And Correlation Between Gross Net Salary And Consumer Price Index“, this author states that regarding their forms of existence and their practical significance, two forms of salary are distinguished: Nominal Salary (Gross and Net) and Real Salary. The Nominal Salary is the amount of money that the employee receives from his employer, expressed in current market prices. On the other hand, Gross Salary includes all income from work (basic salary and other benefits). In this article it is said that the Net Salary is based on the reduction of the Gross-Nominal Salary with the salary tax, social insurance contributions and other obligations stipulated by the law. In countries with market economy, the minimum wage is set by law. It consists of a certain amount of money needed for living insurance, being a measure of social protection of the employees. Its size varies from one country to another and from one period to the next. The Real Salary is expressed in the form of money, the quantity of goods, materials and services that can be acquired by an employee or a family of employees at a given time with the Net Nominal Salary earned. The size of the real wage was influenced by two factors: the Net Nominal Salary size and the price level of the goods for the consumption of the population. (Popescu, 2018). Now, regarding that the topic is related to the neighbor countries, we found out this study about Serbian economy. In a chapter of „Modeling And Presentation Of Macroeconomic Time Series Of Serbian Economy“ the author (Lojanica, 2018) says that economic growth parameters are key macroeconomic variables that are always in the public focus. With the inflation rate and the unemployment rate, a general picture of the development and review of the economy is being created. Inflation, economic growth and unemployment are central issues for social and economic livelihoods. It is undoubtedly that some of the macroeconomic goals are that a country wants to achieve economic growth, price stability and full employment. (Lojanica, 2018). In his study „The Analysis of Profit per Employee in the Trade of Serbia“ the author Lukić (2015) stated that there is a special system of indicators for measuring efficiency, productivity and performance of trade. The significance of profit per employee is expressed as a contemporary measure of trade performance. His work analyze the factors of the profit per employee that influence the trade in Serbia and some developed market economies. In that relation, profit per employee in trade of Serbia is significantly lower in observed companies and on the level of the whole trade. Increasing the profit per employee in Serbia for the future time is necessary to successfully control the critical factors of business success. The effects of all this are increased revenues, decrease of total costs and increase of total profit and profit per employee in trade of Serbia. (Lukić, 2015). Regarding our other neighbor – Croatia, there is a study of „Hedonic Regressions and Price Indices – Application to the Personal Computer Price Index in Croatia“. It explains different methods used in the CPI compilation process. This study overviews it's use for statistical method and discusses the possibility of its implementation in the price index compilation in Croatia. This overview helped to understand the statistically important information that could be used in this research. Although the application of methodological regression is not directly required, numerous expert papers, analyzes in different countries and conferences dedicated to this topic in recent years point to the probability of initiating its application at least at the experimental level. On the other hand, it is necessary to emphasize that the calculation of the harmonized consumer price index is still largely based on recommendations, and only methods that are considered inappropriately are banned. (Botrić, 2004) In the study named "Impact of Authentic Leadership Style on Job Satisfaction: Case of Insurance Sector in Bosnia and Herzegovina" from the authors Ajana Šakić, Nereida Hadžiahmetović and Nataša Tandir (2019) the subject of discussion are the aspects of authentic leadership. That aspects are affecting worker's job satisfaction in particular sectors in BiH. This study helps to understand the effects of the leadership on the job satisfaction and to find out how job satisfaction can be affected by the Net Salary (Šakić, 2019). The study written by Ensar Mekić and Emina Mekić (2013) pursue a discussion of a study called "Thinking 'I' and 'The Company' were the same". These authors explain that the manager with leadership is better for a company, but that the leadership has it's traps. This should be the parallel with our study because it shows us how person can be selected to a position even when it is not aware of the abilities that it possess. That triggers some kind of consequences if that person is for example the manager that gives salaries to the employees. The more of "I" person that is, the more will affect the salaries and job satisfaction of the workers, and probably the whole chain which pulls the consumption next (Mekić, 2013).

3. Methodology

For the explanation of this study we will take the statistical approach, precisely the regression analysis where the Consumer Price Index is the independent variable and Annual Net Salary is dependent variable. This starts the main hypothesis of this research that is named „Change in Consumer Price Index has a strong effect on the change in Annual Net Salary" – by implementing this hypothesis, we have to define it as the formula no.1. Assume that CPI is X and the independent, and ANS is Y which is dependent variable on the change in X. If we assume that, then we can make the formula like this:

$$Y = b0 +/- b1 * X \qquad (1)$$

The b0 is the percentage change. This formula can be plotted on the graph, whereas +/- b1 represents the slope that is either positive or negative. Putting any number at the place of Y will automatically calculate the difference between these two variables and the causal effect of X will make the variable Y to change. Data collected is secondary data for most part of this research. It includes the sources from the Internet, articles, chapters, statements, conference papers, books and other types. This collected data and sources are mentioned in the section of Literature Review. The other group of data collected is from agencies for statistics in BiH, Serbia and Croatia, and from global data sources. Information that is plugged in this research is trying to fulfill the goal of the topic. This data will provide the backbone to the main hypothesis of this research. The main hypothesis is even assuming that the other factors like Inflation, Interest Rates, Exchange Rates, Import, Export and etc., also influence the change in Annual Net Salary with strong effect. This is important for the research because when we measure one indicator, we almost immediately assume that it will cause changes to another indicator(s). Countries that are taken for this research have similar history, present and fate in the economic activities. Entering the European Union did not make progress for Croatia in the sense of young people leaving the country trying to find well paid job. Some of them actually foresee that the CPI or other indicators do nothing significant to the increase in Net Salary. Serbia at the other hand, has probably one of the lowest minimal wages in our region. The problem is that the standards of all three countries is very huge regarding the prices of commodities. That emerges the statistics that the average family has monthly spending four or five times more than the minimal wage. However, this study shows that even with similar destiny, all three countries are aiming for the European Union recognition. Croatia is already inducted and Serbia and BiH are desperately trying to get there. By stating that change in CPI is causing change in ANS, the obvious question is how that looks in every year analyzed. This examining process concerns itself with the years from 2014 to 2018, collected from the data.

4. Results

In the annual report of financial sustainability of BiH we can see that deflationary pressures began to weaken in 2014. General consumer prices, measured by the consumer price index (CPI) in 2014 were lower than in the previous year. In December 2014, a deflation of 0.4 % was recorded on an annual basis level, while average consumer prices in 2014 were lower by 0.9 %. Deflationary movements at the end of the year are to a fall in prices in many categories like house and apartment, water, electric energy, gas and other energy products. Deflation movements continued in the first five months of 2015 in BiH. The prices measured in the CPI compared to the same period last year were lower by 0.5 %, while in May 2015 they recorded annual deflation rate of 0.4 %. Although indicators from the real sector show a slight recovery, economic activity in the country was still weak, and it was expected that weak domestic demand will continue in the upcoming period with limiting factor in terms of a significant economic growth activities in the country. With the two year period of stagnation, the average net salary in 2016 has slightly increased. Comparing it to the previous year, the average net salary has been increased by 0.96 % and in 2016 it amounted to 838 BAM. That increase in the average net salary do not significantly increase the purchasing power of its employees, bearing in mind the inflationary pressures at the end of 2016 and beginning of 2017. In 2017, a slight recovery of the economy continued in BiH, and according to the preliminary data of the Agency for Statistics in BiH, growth was recorded in almost all areas of the economic activities. Although there are noticeable positive developments in the labor market, average nominal net salary in 2017 it amounted to 851 BAM and in comparison with the previous year it increased by 1.5 %. (Central Bank of BiH – Financial Stability Reports 2014, 2015, 2016, 2017, 2018). Throughout the 2018, the average net salary was 889 BAM which shows a big progress regarding that many years ago average was almost 50 % lower. The CPI in 2014 to 2018 is increasing highly because many four-member families are spending four times more than receiving the minimum or average net salary. The graphical representation of that is shown in following Figure 1.

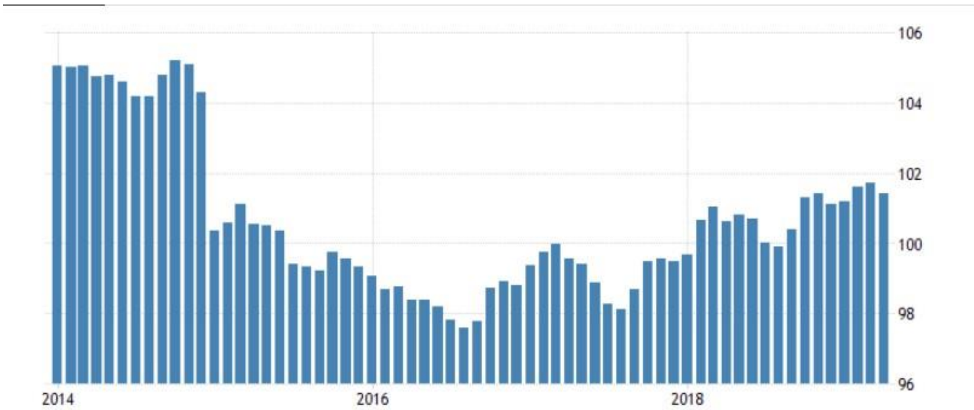

Fig. 1. Changes in BiH CPI 2014 – 2018
Source: Trading Econometrics – BiH CPI 5 year difference

In Serbia this was the state of the Consumer Price Index. In 2014 the CPI varies from 101,4 to 99,6 to monthly changes in previous month. Also from 103,1 to 101,7 at the end of the year comparing to the same month last year, and from 101,4 to 101,7 comparing to the December of previous year.

In 2015 the CPI varies from 99,8 to the same amount at the end of the year to monthly changes comparing to previous month. Also from 100,1 to 101,5 at the end of the year comparing to the same month last year and from 99,8 to 101,5 comparing to the December of previous year. In 2016 the CPI varies from 100,6 to the 99,9 at the end of the year to monthly changes comparing to previous month. Also from 102,4 to 101,6 at the end of the year comparing to the same month last year and from 100,6 to 101,6 comparing to the December of previous year. This was the state in 2017 and 2018. Throughout the both years the CPI varies from 101,4 to the 100 and 100,3 to 100,1 at the end of the year to monthly changes comparing to previous month. Also from 102,4 to 103 and from 101,9 to 102 at the end of the year comparing to the same month last year and from 101,4 to 103 and 100,3 to 102 comparing to the December of previous year.

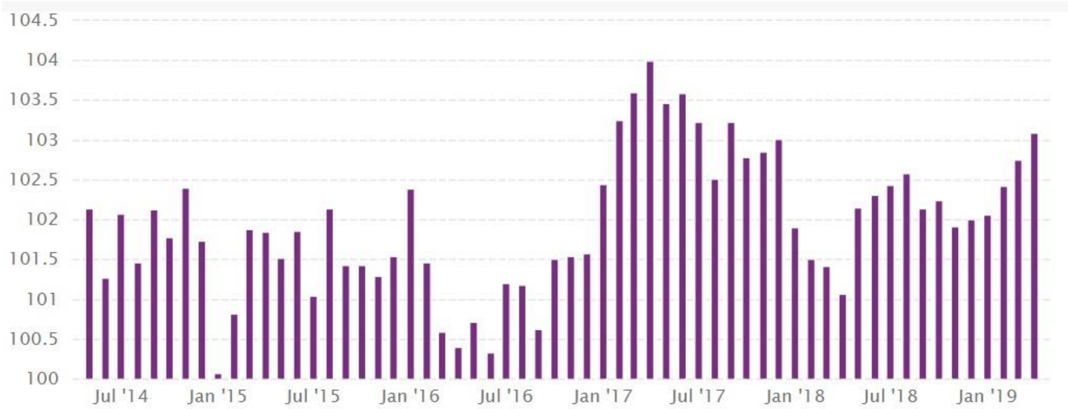

Fig. 2. Changes in Serbia CPI 2014–2018
Source: CEIC data – Serbia CPI 5 year difference

In Croatia, Consumer Price Index averaged 86,99 from 1998 until 2019, having the record high of 102,5 in October of 2018, and in April of this year the country was close to the record with 102,4. The following figure will present the actual state throughout the years, bearing in mind that in all these years Croatia was already a member of European Union.

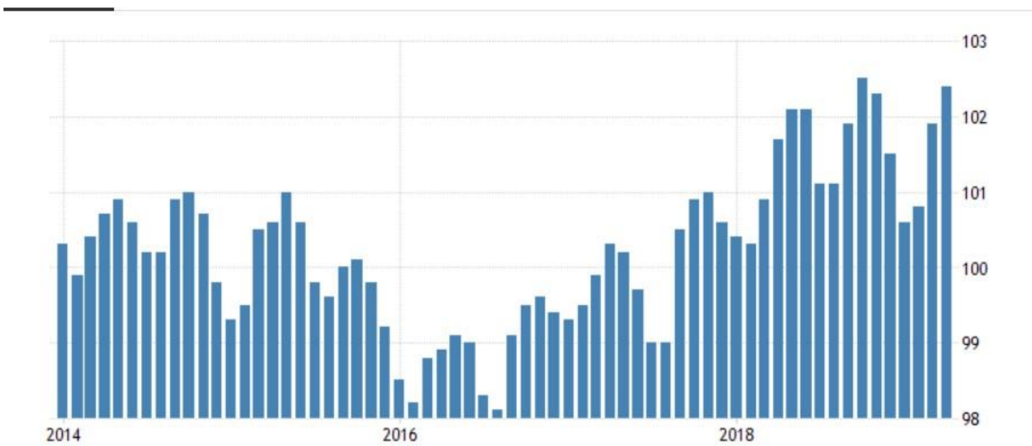

Fig. 3. Change in Croatia CPI 2014–2018
Source: Trading Econometrics – Croatia CPI 5 year difference

In this section, we present the statistical relation between CPI and ANS where we use regression analysis with the elements of descriptive statistics, correlation, ANOVA table, model summary and standard error of estimate and the coefficients. This the next figure shows the results of comparing and calculating the change of both indicators throughout five years in BiH.

Descriptive Statistics

	Mean	Std. Deviation	N
Annual Net Salary	845.85	21.447	60
Consumer Price Index	100.503	2.2557	60

Correlations

		Annual Net Salary	Consumer Price Index
Pearson Correlation	Annual Net Salary	1.000	-.137
	Consumer Price Index	-.137	1.000
Sig. (1-tailed)	Annual Net Salary	.	.148
	Consumer Price Index	.148	.
N	Annual Net Salary	60	60
	Consumer Price Index	60	60

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.137[a]	.019	.002	21.427

a. Predictors: (Constant), Consumer Price Index

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	511.273	1	511.273	1.114	.296[b]
	Residual	26628.377	58	459.110		
	Total	27139.650	59			

a. Dependent Variable: Annual Net Salary

b. Predictors: (Constant), Consumer Price Index

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	977.010	124.320		7.859	.000	728.156	1225.864
	Consumer Price Index	-1.305	1.237	-.137	-1.055	.296	-3.780	1.170

a. Dependent Variable: Annual Net Salary

Fig. 4. Regression Analysis of Consumer Price Index on Annual Net Salary in BiH

Regarding Serbia, the average annual net salary is 46.515 RSD, and in 2014 the amount was 49.970 RSD and that is around 832 BAM which is very similar to average in BiH. Next year it has risen to 51.485 RSD, which equals around 858 BAM in 2015. In 2016 the average ANS was 53.456 RSD or 890 BAM. In 2017 and 2018 the average ANS was 54.344 and 52.372 respectively which equals 905 and 872 BAM. This shows that the ANS in Serbia in most years exceeds Bosnia's Annual Net Salary (Trading Econometrics).

Descriptive Statistics

	Mean	Std. Deviation	N
Annual Net Salary	46515.77	3230.361	60
Consumer Price Index	101.902	.8645	60

Correlations

		Annual Net Salary	Consumer Price Index
Pearson Correlation	Annual Net Salary	1.000	.177
	Consumer Price Index	.177	1.000
Sig. (1-tailed)	Annual Net Salary	.	.088
	Consumer Price Index	.088	.
N	Annual Net Salary	60	60
	Consumer Price Index	60	60

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.177[a]	.031	.015	3206.553

a. Predictors: (Constant), Consumer Price Index

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19324029.62	1	19324029.62	1.879	.176[b]
	Residual	596354821.1	58	10281979.67		
	Total	615678850.7	59			

a. Dependent Variable: Annual Net Salary

b. Predictors: (Constant), Consumer Price Index

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	95,0% Confidence Interval for B Lower Bound	95,0% Confidence Interval for B Upper Bound
1	(Constant)	-20946.496	49211.408		-.426	.672	-119453.833	77560.840
	Consumer Price Index	662.033	482.913	.177	1.371	.176	-304.623	1628.689

a. Dependent Variable: Annual Net Salary

Fig. 5. Regression Analysis of CPI on Annual Net Salary in Serbia
Source: Author's calculations

The average salary of employees in the Republic of Croatia is 5830 HRK, and in January 2014 amounted to 5,553 HRK or 1388 BAM. The average paid off net salary per employee in the Republic of Croatia for 2015 amounted to 5,656 HRK and that is around 1414 BAM. The average monthly paid off net earning per person in employment in the Republic of Croatia for 2016 amounted to 5,685 HRK or 1421 BAM. The average net salary monthly paid per person in employment in the Republic of Croatia for 2017 was 6022 HRK, which is around 1500 BAM. The monthly paid net earnings per person in 2018 in Croatia amounted to 6,190 HRK, which is a nominal increase of almost three percent on a monthly basis and it equals around 1550 BAM. It is shown that almost double the annual net salary is in Croatia comparing to the BiH and Serbia. (Croatia National Bank)

Descriptive Statistics

	Mean	Std. Deviation	N
Annual Net Salary	5830.88	263.539	60
Consumer Price Index	100.360	.9557	60

Correlations

		Annual Net Salary	Consumer Price Index
Pearson Correlation	Annual Net Salary	1.000	.342
	Consumer Price Index	.342	1.000
Sig. (1-tailed)	Annual Net Salary	.	.004
	Consumer Price Index	.004	.
N	Annual Net Salary	60	60
	Consumer Price Index	60	60

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.342[a]	.117	.102	249.804

a. Predictors: (Constant), Consumer Price Index

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	478382.219	1	478382.219	7.666	.008[b]
	Residual	3619327.964	58	62402.206		
	Total	4097710.183	59			

a. Dependent Variable: Annual Net Salary

b. Predictors: (Constant), Consumer Price Index

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	95,0% Confidence Interval for B Lower Bound	95,0% Confidence Interval for B Upper Bound
1	(Constant)	-3625.352	3415.467		-1.061	.293	-10462.151	3211.448
	Consumer Price Index	94.223	34.031	.342	2.769	.008	26.103	162.343

a. Dependent Variable: Annual Net Salary

Fig. 6. Regression Analysis of CPI on Annual Net Salary in Croatia
Source: Author's calculations

5. Conclusion

This research was aiming to determine and examine the causal effect of Consumer Price Index on Annual Net Salary. Consumer Price Index or CPI is assumed as independent indicator and Annual Net Salary as dependent. We compared them in three countries of BiH, Serbia and Croatia. From the beginning of the research, we mentioned that this research used secondary data.

In methodology we reached the main hypothesis that is „A change in Consumer Price Index has a strong effect on the change in Annual Net Salary“. In the analysis and discussion we put few graphs and information from 2014 to 2018 across each of three countries for the mentioned periods.

We can see that in almost every segment, as the member of European Union, Croatia is highly in advance comparing to BiH and Serbia, whose goal is to enter the EU one day. Even regarding that, Croatia has a problem of young people leaving because of high consumption standards in the country.

In Serbia the situation is that the country has the problem of low wages, and food, fuel and living standards exceed the average salaries by far. Same situation is in BiH but this country is feeling the effect of even higher impact because of two entities Federation of BiH (FBiH), Republic of Srpska (RS) and district Brčko.

However it looks, the future does not look bright for these countries, or at least two of these three. Assuming that, in much more successful situation is Croatia which has the support of the

European Union. The only thing left for the other two countries is the hope that soon enough, they will enter the EU and stabilize their economic situation.

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Effectiveness Assessment of Economic Systems Management on the Example of Retail Trade in Russian Federation in the Context of the Q3 2019 Business Climate

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Abstract

Each enterprise, as well as the state, requires a certain accumulated layer of information that reflects all market trends in order to successfully manage internal economic systems. The company is more interested in the industry in which it operates, which makes it monitor its market with various marketing tools. A common vision of the market and understanding of its development trends is the key to the long-term development of any enterprise. The state also needs information on all sectors of the economy, it is a generalized indicator of its development and is formed in the concept of the business climate of the country. At the moment, against the background of positive, but at the same time, low growth rates of the Russian economy, projected inflation rates, and foreign sanctions, the country's business climate is not sufficiently favorable. This is reflected in the assessments of both foreign experts and the results of domestic research. The end-user market reacts most acutely to changes in market conditions. The consumer confidence index is more likely to undergo sharp fluctuations than all other indicators of the country's business climate. The retail market is an indicator of the mood of the final consumer. The paper assesses the General state of the retail trade market in Russia as of the 3rd quarter of 2019, defines criteria and indicators of economic efficiency and inefficiency of this sector of the economy, identifies signs of inefficient development of the economic system, factors that affect the dynamics of its development and other factors that allow correct management of this economic system. Also, the paper gives the concepts of the business climate and the end user. The business climate of Russia as a whole is estimated, the main indicators of economic development and their forecast values are given.

Keywords: economic system, development efficiency assessment, retail market, industry, enterprise, entrepreneurs, survey, development indicators, development factors, business climate.

1. Introduction

From the point of view of an individual enterprise, planning and management of economic systems is carried out primarily by means of communications with an informative marketing information system of the enterprise, which allows making correct management decisions. The management apparatus uses various tools, including marketing and communication in building relationships with market participants, which allows it to efficiently spend labor, material and, first of all, financial resources.

The consistent accumulation of information will allow future management decisions to be made both within the enterprise and in relation to the direct impact environment consisting of

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suppliers, competitors, partners, intermediaries, consumers and other market infrastructure actors (Khandamova, 2014).

From the point of view of the state, successful management of economic systems is reflected in the concept of the country's business climate. The business climate is a set of external (firm-independent) business conditions that determine the production and investment decisions of firms and entrepreneurs (Seibel et al., 2017).

Among other things, the Higher school of Economics monitors the business climate in Russia, separately studying such components of the business climate as industry, construction, wholesale and retail trade, services, including information technology, the real sector, and the economic sentiment index as a General indicator that reflects the trends in the country's investment and business climate (Monitoring delovogo klimata, 2019).

According to the data of the Center for market research at the Higher school of Economics, shown in figure 1, the index of economic sentiment in the 3rd quarter of 2019 reflects the insufficiently favorable business climate in the domestic economy (Ministerstvo ekonomicheskogo razvitiya, 2020).

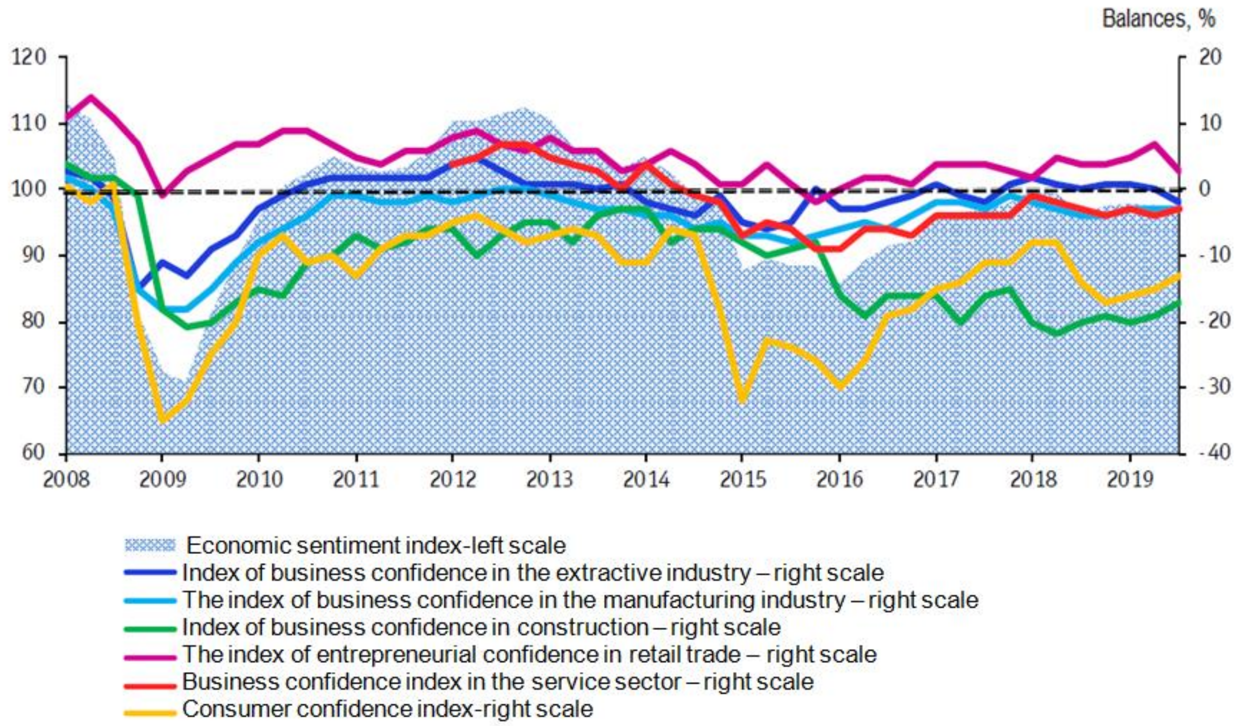

Fig. 1. Economic sentiment Index, business and consumer confidence index in Russia in the third quarter of 2019 (balances*, %)
* Balance – the difference in the percentage of respondents who noted an increase and decrease in the indicator value compared to the previous period (quarter), or the difference in the percentage of respondents who marked the indicator level as "above normal" and "below normal" in the reporting period (quarter); as a percentage.

Almost all indexes reflect the unfavorable investment and business climate in the country, while the consumer confidence index is most often subject to sharp fluctuations, showing negative end-user sentiment (Indeks ekonomicheskogo nastroeniya, 2019).

A common vision of the market and understanding of its development trends is the key to the long-term development of any enterprise. The retail market is an indicator of the final consumer's mood. Recall that the final consumer is a participant in the economic system who purchases a product or service for personal use, consumption and subsequent disposal without the intention of reselling and extracting any profit from it (Pokupatel'skoe povedenie potrebitelei, 2016).

Field of study

The research proposed in the article is based on the author's independent empirical work, scientific publications of Russian scientists and open Internet data on the assessment of the General state of the retail market in Russia at the time of the 3rd quarter of 2019. This article uses the following research methods: system approach, comparison, analysis and synthesis.

The collected statistics are based on data from the annual survey of the higher school of Economics on monitoring the state of the retail business climate as of the 3rd quarter of the 2019 year.

The method of assessing the business climate is a survey of managers of domestic retail enterprises.

Sample-82 subjects of the Russian Federation, 4 million 250 thousand heads of trade organizations.

2. Discussion and results

1. Assessment of the effectiveness of the mechanism for planning and managing economic systems is possible using the business confidence index.

For the retail industry, this index (hereafter ISP) is an arithmetic mean of balances of assessments of the stock level (with opposite sign), changes in the economic situation in the current period compared to the previous and expected changes in the economic situation in the next period; in percent. IP value at the time of Q3 2019 at 3 %, it fell from the previous value into the zone of weak business growth due to the current and expected economic situation (Figure 2).

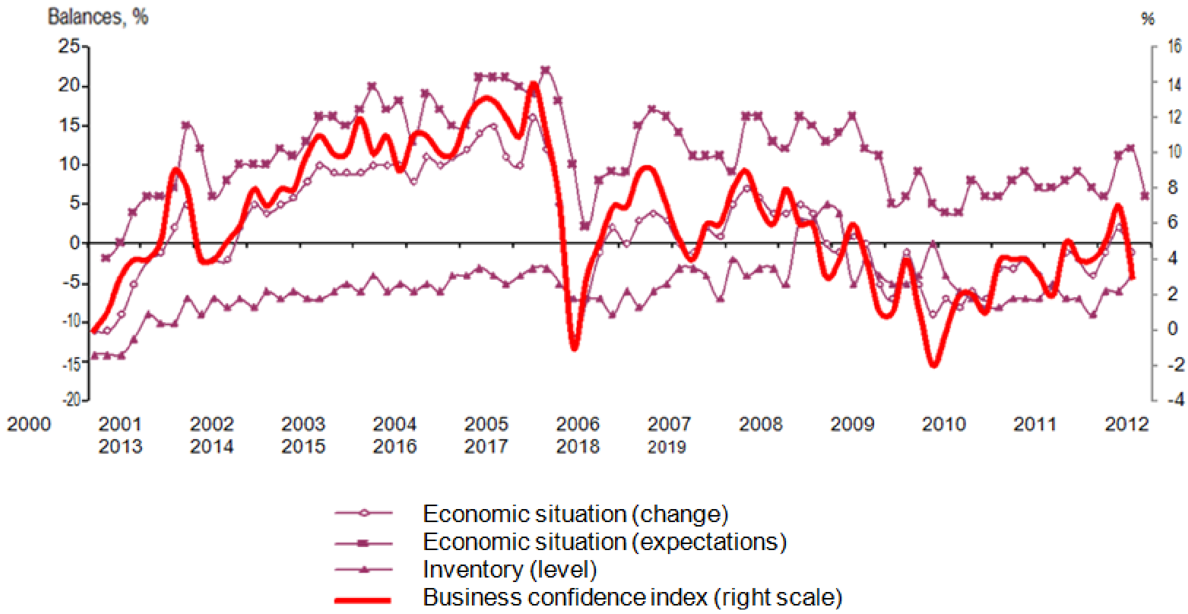

Fig. 2. Dynamics of the business confidence index and its components in retail organizations (balances, %)

The study helped to identify a number of changes that indicate a slowdown in the growth of the retail industry in the country, the formation of negative expectations about the expected development trends in the near future. Among the depressing changes, there is a decrease in demand from consumers, a reduction in orders for goods sold, a drop in sales and turnover. In addition, the index was affected by financial complications and current problems in the industry's infrastructure. Survey participants noted an increase in rents and a reduction in warehouse space.

The increase in commercial loan rates also had an adverse effect on the market under study, along with a decrease in consumer demand and demand for products already produced. Despite the increase in the number of respondents who noted the above adverse factors in the development of the retail market, the inflation background is stable. Current market changes have caused a slight decrease in prices for goods already produced and sold.

The results of the first half of the market were more positive, which gave the business community a reason to assume that the industry will continue to develop effectively. However, the forecast was not justified, and the discrepancy between the current performance parameters and the results of the first half of the year is noticeable. This indicates that the current market structure has a weak development potential that does not imply rapid and stable growth.

At this stage, the market is characterized by slow unattainable growth with short-term flashes of demand followed by reverse adjustment. This is due to the fact that this market is completely dependent on the end user or, as they say, the household. From the 4th quarter of 2014 households are experiencing a constant decline in real monetary income, which leads to a reduction in demand for a number of goods, when due to limited monetary resources, end consumers are forced to prioritize and purchase only the most necessary.

It is worth noting that the drop in income according to official statistics was more than 8 %, respectively, the market of goods and services that cover the demand of the final consumer will not increase its business activity until this indicator begins to grow.

2. Criteria and indicators of economic efficiency, as well as signs of inefficient development of economic systems are reflected in the main performance indicators of retail enterprises of the Russian Federation.

According to the survey of managers, the growth of business activity in the first half of the year was a short-term flash and was replaced by a reverse dynamics.

Domestic retail market conditions.

From the 4th quarter of 2018 the market has suspended its recovery and there is a downward trend, which is due to the strong influence of restraining factors of development. The current retail environment has indicated a decline in a number of key development trends and is comparable to 2017 in terms of performance indicators.

Table 1. Dynamics of estimates of key performance indicators of retail organizations, balance sheets

Indicators:	2018				2019		
	I quarter	II quarter	III quarter	IV quarter	I quarter	II quarter	III quarter
Retail trade turnover	-25	-8	-10	-12	-12	-2	-5
Sales volume in kind	-21	-9	-10	-12	-13	-3	-5
Product delivery orders	-15	-6	-5	-10	-9	0	-2
Product range	+4	+7	+6	+3	+7	+10	+8
Number of employees	-14	-13	-12	-14	-12	-12	-16
Security of own funds financial resources	-9	-7	-8	-10	-7	-4	-6
Sales prices	+27	+33	+33	+33	+36	+37	+35
Profit	-24	-14	-16	-20	-18	-12	-11

According to the results of the study, the most negative factor at the moment was the reduction of orders for sold goods due to the fall in consumer demand since the end of 2018.

The positive trend of the first half of the year, when the balance of this indicator reached zero, was replaced by a negative value (-2 %) and led to a market correction in the direction of decline.

The share of respondents who noted the lack of effective demand as the main constraint on their development was 56 %. This type of restriction has been a leader among the rest for a number of years and causes the most negative reaction among retail market participants.

Turnover, orders for the supply of goods, the number of employees.

A steady and continuous decline in demand has led to a reduction in turnover and sales. The share of respondents expecting the decline to accelerate by the end of this year was about 30 %. The balance values of these indicators decreased from (-3 %) and (-2 %) in the second quarter to (-5 %) in the analyzed period, respectively (Figure 3).

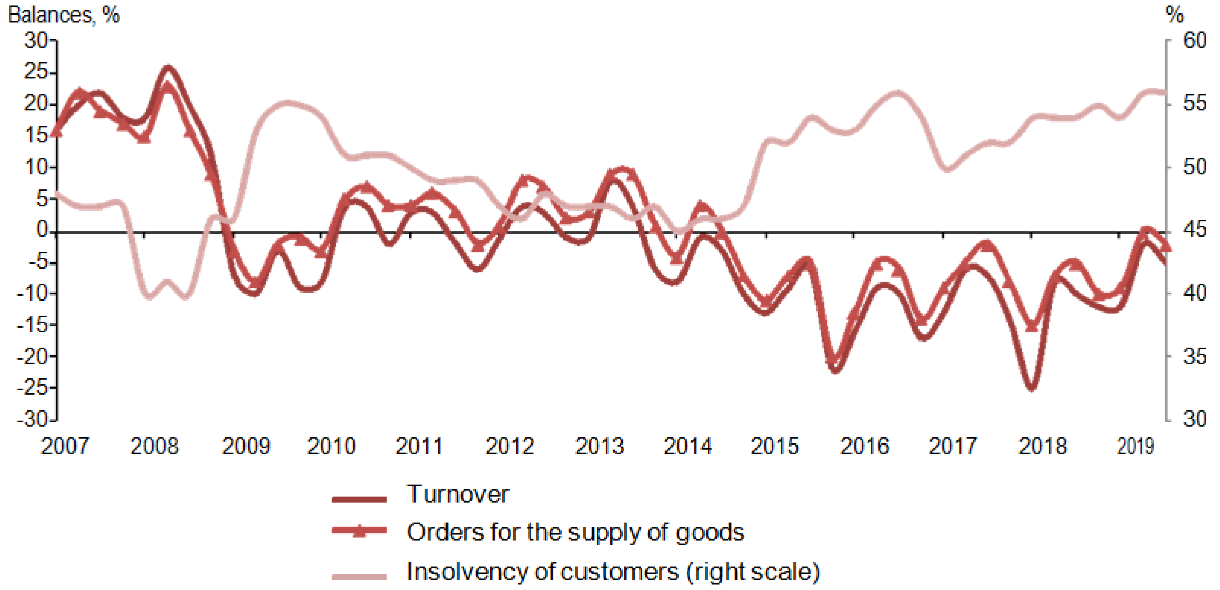

Fig. 3. Dynamics of orders for the supply of goods, turnover and the limiting factor – "customer insolvency"

The next limiting factor for the development of the market is the reduction in the number of employees. The intensity of the decline in this indicator increases due to a drop in turnover and orders. According to the results of the survey, one in three organizations reported a reduction in the number of staff. Estimates of the number of employees decreased by 16 % compared to the previous period, and the balance of estimates – by 4 points (Figure 4).

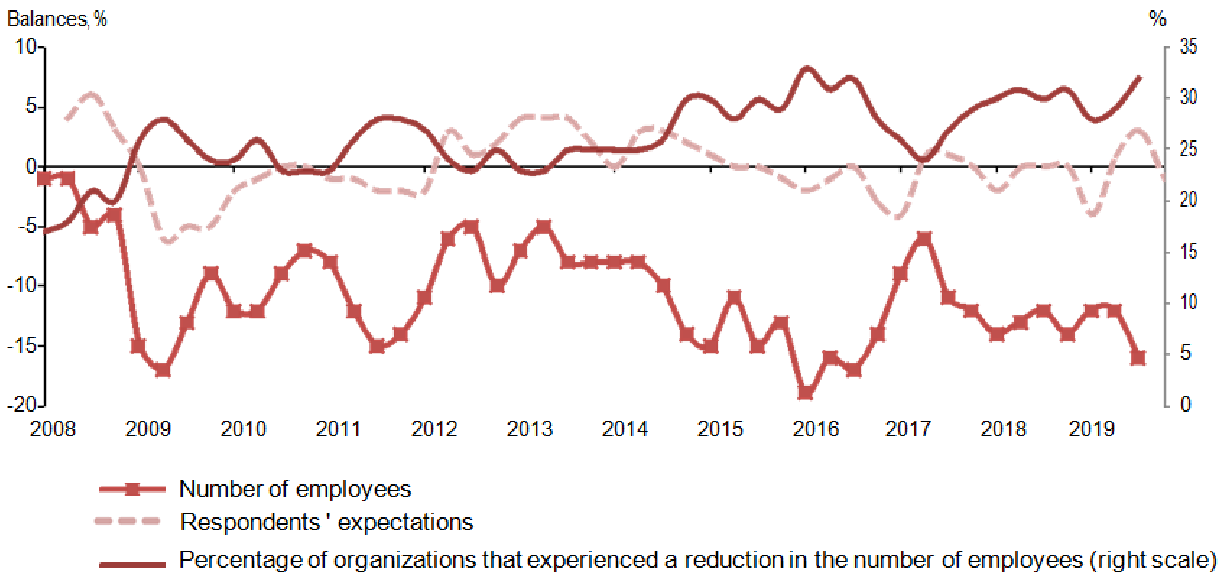

Fig. 4. Dynamics of estimates of changes in the number of employees in retail organizations

The negative dynamics of this indicator, which reflects the acceleration of the decline in the number of employed in retail trade, is influenced by the adjustment of sales volumes after the summer peak. This situation occurs to some extent every year.

But the above-described economic trends indicate that the decline in the number of employees is dictated by negative trends in the market and is a signal of the deterioration in the business climate of the economic system and allows us to predict a slowdown in economic growth. This is confirmed by the expectations of entrepreneurs who are preparing to reduce employment by the end of the year.

Product range, suppliers.

Against the background of the decline in the main indicators of the market, there was a reduction in the range of product offers in organizations.

The slowdown in the expansion of the assortment matrix was reflected in a decrease in the indicator compared to the beginning of the year (Figure 5).

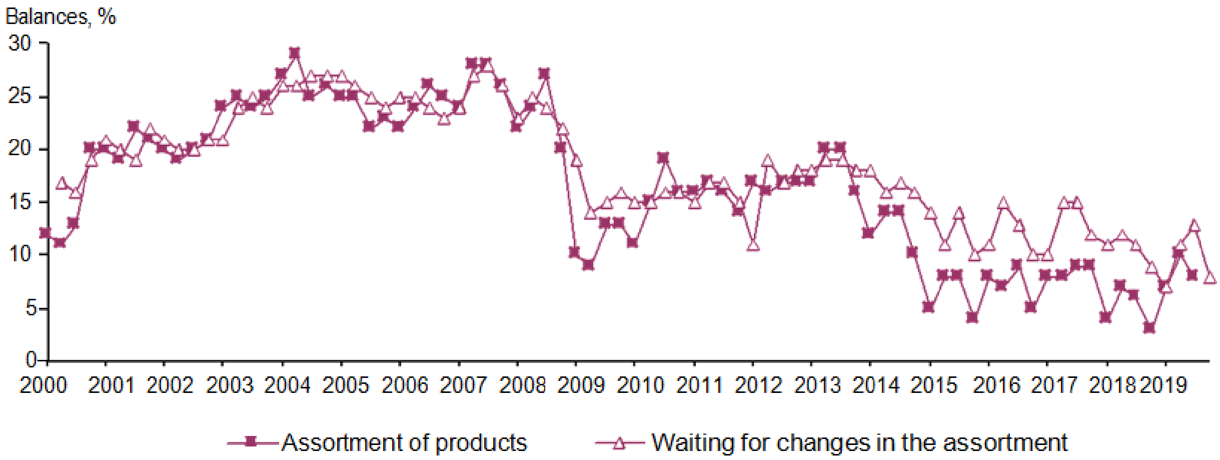

Fig. 5. Dynamics of estimates of changes in the range of products in retail organizations

According to the survey, the expectations of entrepreneurs regarding the range of products by the end of the year are quite depressing, which indicates their readiness to further reduce this indicator. The balance of expectations has almost halved – from (+13) to (+8 %).

At the moment the 3rd quarter of this year the structure of suppliers of retail enterprises is represented by the following elements:

- natural person;
- product manufacturers;
- wholesale business;
- wholesale and retail trade;
- other intermediary companies;
- other organizations.

Most commercial enterprises use the services of manufacturers located in the same region, as well as wholesale and wholesale intermediary firms.

Inflation background, prices and product margins.

Market conditions are quite volatile, but the inflation background is high but stable. Prices for goods sold decreased slightly in the 3rd quarter of this year.

40 % of business leaders reported an increase in prices (41 % in the previous quarter), while 55 % continued to say that there was no change in price dynamics. In General, the balance of sales price estimates decreased by 2 p. p. and amounted to (+35 %) (in the third quarter of 2018 – (+33%)).

Based on the forecasts of the surveyed managers, they are preparing to adjust their pricing policy and assume the continuation of a weak downward trend in prices. The balance fell by 2 percentage points to +33 % (Figure 6). In the 3rd quarter, the trade margin averaged 26 %, while managers note that they need a figure of 36 % to cover the costs of running a business and getting the planned profit. Special attention should be paid to socially important goods, for which this figure was 17 %, while entrepreneurs need more than 24 % of the trade mark-up, the survey says.

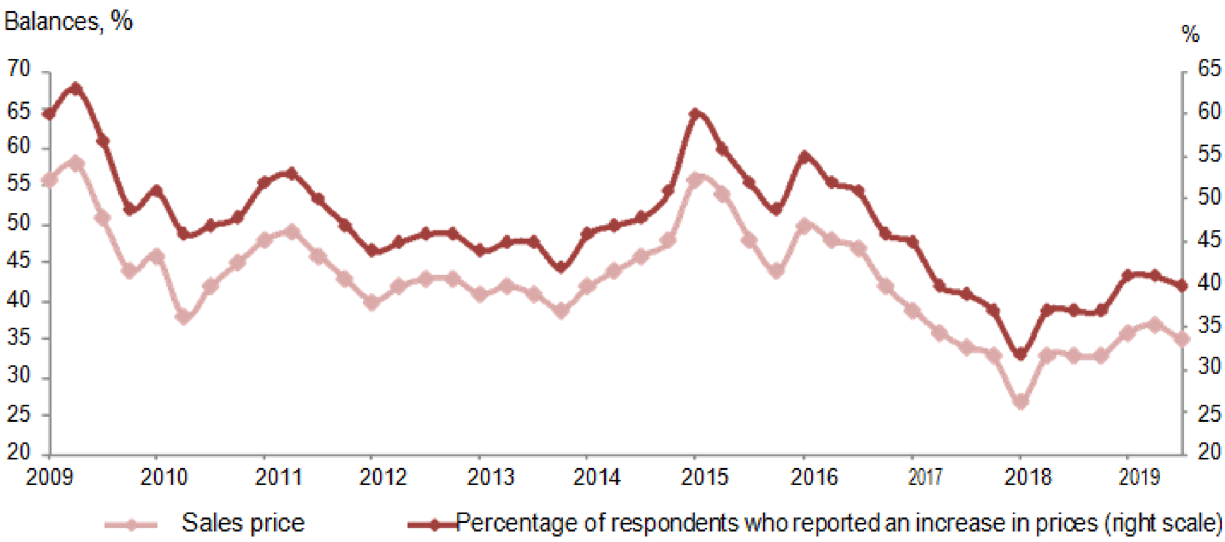

Fig. 6. Dynamics of estimates of changes in selling prices in retail organizations

As for payments with suppliers, more than half of managers prefer the system of non-cash payment of payments for the sale of goods. Cash payment is used by no more than 15 % of respondents both when receiving goods and when selling them (Figure 7).

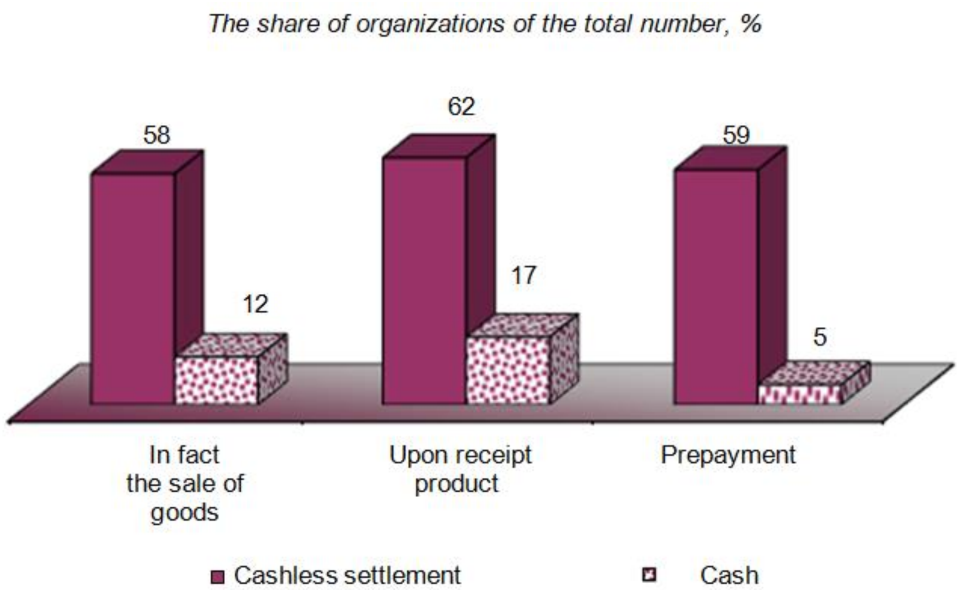

Fig. 7. Distribution of retail trade organizations by types of settlements with suppliers in Q3 2019

3. To ensure effective planning and management of economic systems necessary the relevant factors and conditions. In retail trade, the main factor affecting the dynamics of its development is the financial and economic situation of enterprises, their provision with their own financial resources. In addition, the survey identified the main factors limiting the activities of domestic retail trade.

Financial and economic situation.

The slowdown in profitability growth had a negative impact on the financial and economic situation of enterprises during the study period. About 30 % of managers noted a decrease in this indicator. As for changes in income, respondents also gave negative estimates, but they are more positive than the estimates of the 2nd quarter. There was a slight decrease in the dynamics of providing organizations with their own financial resources. The balance value of the indicator after the previous three-quarter compensation recovery decreased from (-4 %) in the second quarter of 2019 to (-6 %).

The expectations of managers of organizations regarding changes in these indicators in the fourth quarter of this year indicate a further negative trend – there is a decrease in the balance of forecast estimates (Figure 8).

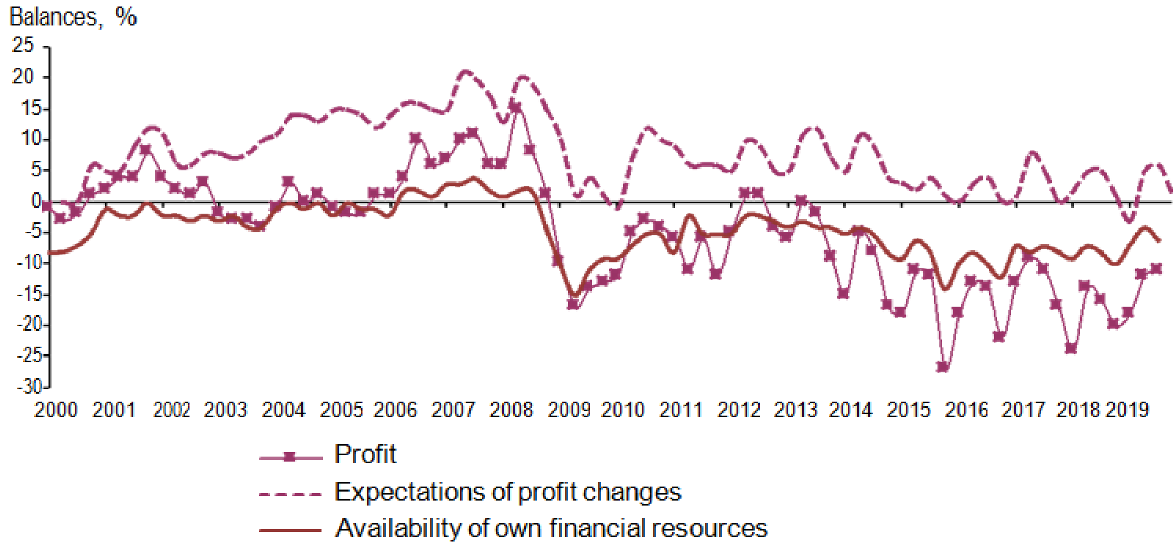

Fig. 8. Dynamics of estimates of changes in profit and provision of own financial resources in retail organizations

Negative trends were also observed in managers ' assessment of the economic situation.

The positive value of the indicator, achieved for the first time since 2014 at the end of the first half of this year – (+2 %), again fell into the negative zone, amounting to (-1 %). The final indicators of this indicator were emphatically pessimistic. The balance of expectations decreased by half-from (+12 %) to (+6 %) compared to the previous period (Figure 9).

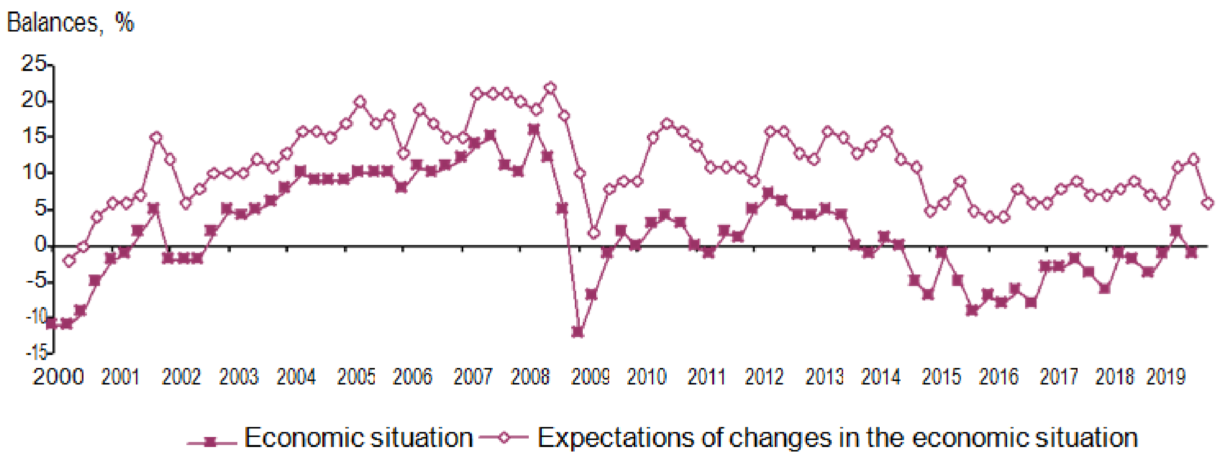

Fig. 9. Dynamics of estimates of the economic situation in retail organizations

Retail restrictions.

According to the results of the survey, among the main restraining factors for the development of retail trade are insufficient solvent demand and high taxes. Their restrictive effect has not changed compared to the previous period, and about half of the respondents pointed to them as restrictions on business development.

In addition, 27 % of managers report a lack of their own financial resources. Factors such as reduced demand for goods and solvent demand were also noted above. Respondents (18 %) note high interest rates on commercial loans as an additional factor that negatively affects the economic situation of the enterprise.

The business climate is complicated by infrastructure problems. There is a reduction in warehouse space (the balance of the indicator continued to decline and amounted to (-5 %)), and the pressure on the retail business is increased by high rental rates.

For the first time since 2008, these indicators have reached critical thresholds. For example, in the analyzed period, the share of respondents who noted an increase in rental prices increased to 31 %, which is the absolute extreme value since 2008.

The limiting factor was high transport costs, which were noted by 23 % of respondents (Figure 10).

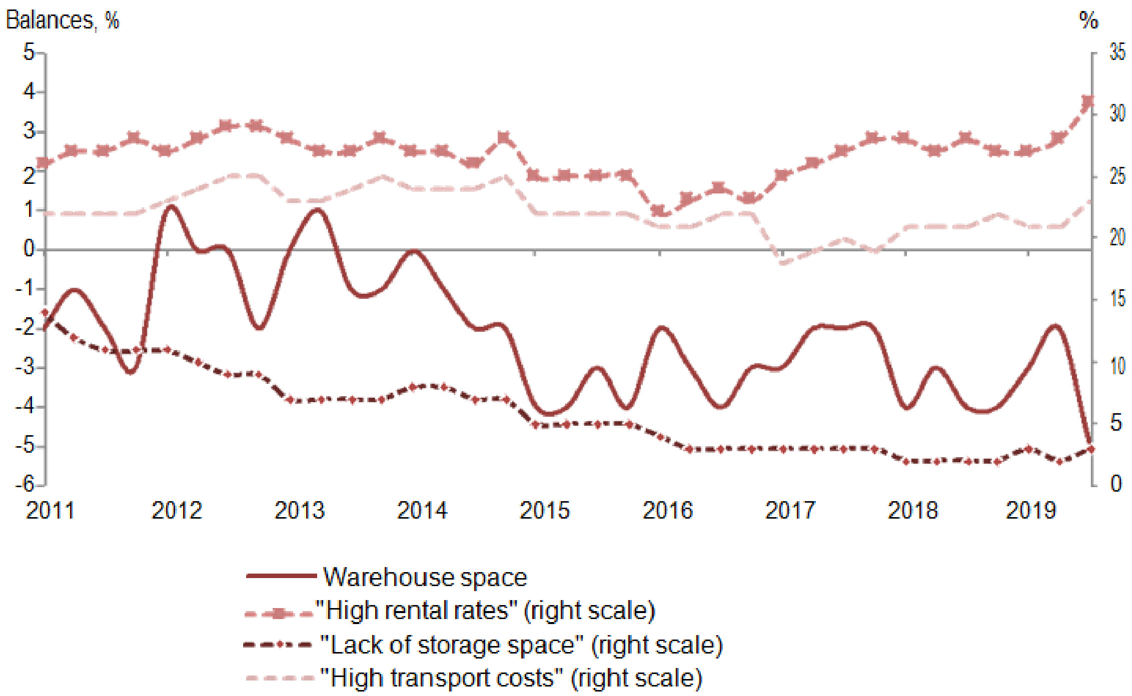

Fig. 10. Dynamics of warehouse space and limiting factors

Main conclusions.

From the collected information, we can conclude that the trends of the 3rd quarter of 2019 in the context of retail trade in the Russian Federation have shown the most unfavorable values. Entrepreneurs' low estimates of current market conditions are gaining momentum even after an annual recovery period. The current phase of development of the market under study can be classified as passive and risky from the point of view of its economic development.

In the current state of Affairs, even the growth of positive ratings of managers in the 2nd quarter was impulsive, and the effect of it was completely leveled by the 3rd quarter and did not have a proper impact on the growth of business activity.

The business confidence index points to existing problems. The indicator is usually conservative in its indicators, but in the reporting period it showed a difference of 4 points from the previous one, which indicates the negative impact of various factors on the work of the industry. Such a sharp change in the index has not been observed since 1998, that is, over the past 20 years.

The deterioration of the business climate confirms the slowdown in retail trade growth (according to Rosstat, it fell by 0.8 % and reached a value of 100.8 %). Despite this, the business confidence index maintained its positive value. In addition, there is a slight correction in business sentiment in the third quarter, but respondents ' forecasts are very pessimistic.

It should be noted that the dynamics of the business confidence index in trade in the third quarter of this year is in direct negative correlation with the PMI (purchasing managers ' index) calculated for the Russian manufacturing industry, where the corresponding index falls for the third month in a row, falling in September to almost a critical value (46.3 points).

Retail and manufacturing industries are far apart, serving different categories of demand – consumer and investment, respectively. At the same time, the dynamics of respondents ' value judgments about the state of the business climate at their enterprises, as a rule, is in the same trend — positive or negative.

Main results:

• the worst quarterly result in the dynamics of segment development over the past two years against the backdrop of a pronounced slowdown in business activity growth;

• return of the main indicator of the survey – the business confidence index (PPI) to the zone of weak growth in 2017 – a decrease in the value to (+3 %) compared to (+7 %) in the previous quarter;

• refraction of recovery trends in almost all key indicators that characterize demand, sales, turnover, profit and the overall economic situation in retail organizations;

• a new wave of reductions in the number of employees in the segment;

• growth of negative load from limiting infrastructure factors: up to 31 % increase in the share of respondents who noted high rental rates against the background of accelerating trends in the reduction of warehouse space;

• deterioration of business forecasts regarding the recovery of industrial growth rates of economic activity in the fourth quarter of this year.

Most often, as a limiting factor in the development of the industry and business, there was a decrease in effective demand from consumers, which was reflected in a decrease in orders for the sale of goods, a decrease in turnover and an acceleration in the fall in the number of people employed in retail trade. Infrastructure problems and various financial complications led to disappointing results for retail businesses.

Given the dominance of high dependence of the household budget, especially low-income households, on consumer lending, the structure of the built business model retains the same proportions. The current policy of the Central Bank to tighten new loans and restructure old is not conducive to the development of the industry, creating difficulties for the retail trade of nonfood products, using less in demand compared to food, especially amid falling solvency of the population and real income of households, limited new terms and conditions for access to loans (Delovoi klimat v roznichnoi torgovle, 2019).

4. Conclusion

Assessment of the effectiveness of the mechanism for planning and managing economic systems at the present stage on the example of domestic retail enterprises in the context of the business climate is made by analyzing the effectiveness of planning and management of the industry, expressed in certain criteria and indicators of economic efficiency of the industry, and is characterized by various factors and conditions that can have an adverse impact on the industry, and become an impetus to its development.

1. Evaluating the effectiveness of the mechanism for planning and managing economic systems on the example of domestic retail trade is possible using the business confidence index (PPI), calculated by interviewing managers based on their subjective assessments of the current situation in the industry.

2. Criteria and indicators of economic efficiency, as well as signs of inefficient development of economic systems are reflected in the main performance indicators of retail enterprises of the Russian Federation. These include:

• volume of sales in physical terms;

• number of orders for the delivery of goods;

• range of goods;

• number of employees in the industry;

• selling price;

• profit;

• retail trade turnover.

3. To ensure the effective planning and management of economic systems require the relevant factors and conditions. In retail trade, the main factor affecting the dynamics of its development is the financial and economic situation of enterprises, their provision with their own financial resources. In addition, the survey should identify specific factors that limit the current activity of the domestic retail trade.

4. As part of the assessment of the overall business climate in Russia, we note that the main obstacles to business activity of foreign companies in Russia are bureaucracy and weak market

conditions. At the same time, foreign companies are quite optimistic about 2020, counting on positive trends (Nikiforov, 2019). This is facilitated by the fact that by many indicators the Russian economy at the beginning of 2020 looks better than ever, according to estimates of the British newspaper Financial Times (FT, 2020). In addition, one of the most important indicators of the country's economic well – being-GDP, according to the Russian Ministry of economic development, grew by 1.4 % in 2019, and is expected to grow by at least 1.7 % in 2020 (Zubkov, 2020). At the same time, last year's inflation, according to Rosstat, was 3 % in Russia (Gusenko, 2020). By the end of 2020, inflation is projected at 3.5-4 % (Levarova, 2019; Rosstat podtverdil…, 2020). For 2019, the domestic economy showed positive dynamics of business activity in all major sectors of the economy (Figure 11), of which agriculture finished the year most successfully – 4.1 %, the construction sector looks weakest – 0.6 %, freight turnover – 0.6 %, services sector – 1,2 %, wholesale and retail trade – 1,8 %, industry – 2,4 %. (Kartina delovoi aktivnosti, 2020; Ministerstvo ekonomicheskogo razvitiya…, 2020).

With low rates of inflation and positive figures for the development of business activity in 2019, we can expect some improvement in the business climate in Russia, not only in retail trade, but also in other areas of the economy.

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