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# OGRANIČENJA KOMPOZITNIH INDEKSA U MERENJU KONKURENTNOSTI

## Rezime

U ekonomskoj teoriji i praksi analiziraju se različiti aspekti konkurentnosti (produktivnost, odnos izvoza i uvoza, devizni kurs, razvijenost institucija itd.). Zbog toga, merenje nacionalne konkurentnosti podrazumeva sagledavanje i vrednovanje brojnih mikroekonomskih, makroekonomskih i institucionalnih faktora koji opredeljuju konkurentnost nacionalne privrede. Danas se merenje konkurentnosti najčešće vezuje za okvir postavljen od strane Svetskog ekonomskog foruma, Doing Business-a i Heritage fondacije. Zato će u radu biti detaljnije objašnjena metodologija koja se koristi za izračunavanje indeksa konkurentnosti navedenih organizacija.

U radu se razmatra način ocenjivanja i rangiranja konkurentnosti nacionalnih privreda prema različitim kompozitnim indeksima (Svetskog ekonomskog foruma, Doing Business liste i Heritage fondacije), kao i o ograničenjima pojedinih indikatora. U radu se testira hipoteza da kompozitni indeksi u merenju konkurentnosti ne odslikavaju u potpunosti razvijenost jedne privrede, što će se pokazati Pirsonovim koeficijentom korelacije između indeksa globalne konkurentnosti i GDP/per capita za izabrane zemlje u periodu od 2012-2017. godine..

**Ključne reči:** konkurentnost, kompozitni indeksi, merenje konkurentnosti, ograničenja

JEL: E02, F43, O11

# LIMITATIONS OF COMPOSITE INDICES IN COMPETITIVENESS MEASUREMENT

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## Summary

In economic theory and practice, different aspects of competitiveness are analyzed (productivity, export-import ratio, exchange rate, institutional development, etc.). Therefore, the measurement of national competitiveness involves understanding and evaluating numerous microeconomic, macroeconomic and institutional factors determining the competitiveness of the national economy. Today, measuring competitiveness is most often associated with a framework set up by the World Economic Forum, Doing Business and Heritage Foundation. Therefore, this paper will explain in more detail the methodology used to calculate the competitiveness index of these organizations.

The paper discusses the method of assessing and ranking the competitiveness of national economies according to different composite indices (World Economic Forum, Doing Business list and Heritage Foundation), as well as limitations of individual indicators. The paper examines the hypothesis that composite indices in measuring competitiveness do not fully reflect the evolution of an economy, which will be shown by Pearson's correlation coefficient between the global competitiveness index and GDP per capita for the selected countries in the period 2012-2017.

**Keywords:** competitiveness, composite indices, measuring competitiveness, constraints

**JEL:** E02, F43, O11

## Uvod

U težnji za ostvarenjem prosperiteta i što veće stope privrednog rasta, koja se nameće kao nužan uslov razvoja jedne ekonomije u savremenim uslovima poslovanja, velika pažnja usmerena je na nacionalnu konkurentnost. U uslovima ograničenih resursa, neminovnosti postojećeg stanja nacionalnih privreda, datih komparativnih prednosti i nedostataka, kao i nemogućnosti potpune izmene ranijih politika i usmerenja, glavna preokupacija vlasti ostaje unapređenje konkurentskih prednosti nacionalne privrede, kao i pronalaženje novih potencijala za rast. Ovakav stav objašnjava tvrdnja Majkla Portera o tome da se „nacionalni prosperitet ne nasleđuje nego stvara“ (Porter M. E., 2008, str. 159), čime se ističe da konkurentnost jedne nacije zavisi od sposobnosti njene privrede da se unapređuje i konkuriše drugim zemljama, analogno konkurenciji na mikro nivou između preduzeća. Jačanjem nacionalne konkurentnosti istovremeno se unapređuje i konkurentnost kompanija u okviru te privrede, čime one, kroz poslovanje u datim privrednim strukturama, institucijama i tržišnom ambijentu, ostvaruju prednosti u odnosu na svetske konkurente. Kada se privreda specijalizuje za proizvodnju dobra za koju ima komparativnu prednost, povećava se ukupna proizvodnja u privredi, a to povećanje dovodi do opšteg boljitka (Mankiw & Taylor, 2008, str. 53). Pojedine zemlje uspevaju da ostvare prednosti u određenim segmentima na svetskom tržištu upravo iz razloga što je njihovo domaće okruženje naprednije, dinamičnije i izazovnije od drugih. Pol Krugman, sa druge strane, ističe da domaći faktori dominantno utiču na nivo BDP-a po stanovniku i blagostanje ekonomije, a ne nacionalna konkurentnost potvrđena na svetskom tržištu (Krugman, 1994). Prema mišljenju Krugmana i Obstfelda, nacionalne privrede posluju tako što se specijalizuju za one proizvode koje proizvode jeftino, odnosno čiji su oportunitetni troškovi niži (Krugman & Obstfeld, 2003).

Nacionalna konkurentnost predstavlja ekonomske strukture i institucije države koje podstiču ekonomski rast unutar strukture globalne ekonomije (Marković & Radukić, 2014, str. 275). Povećanje nacionalne konkurentnosti

je važan zadatak svake privrede, jer samo konkurentna privreda može istovremeno izdržati pritiske drugih učesnika na domaćem i međunarodnom tržištu, obezbediti održivi ekonomski rast i razvoj i podizanje životnog standarda stanovništva. Iz tog razloga, potrebno je ustanoviti efikasan sistem merenja konkurentnosti i sagledavanja njenih sastavnih elemenata, kako bi se na adekvatan način odredila pozicija jedne privrede u međunarodnim okvirima i uspostavio sistem koji na efikasan i objektivan način uvažava sve dimenzije konkurentnosti u okviru jedne ekonomije. Međutim, u oceni stanja privrede, kompozitni indeksi mogu ispoljiti određene nedostatke, pa se može pretpostaviti da oni ne odražavaju u potpunosti nivo razvijenosti jedne ekonomije, te se, u skladu sa tim, može postaviti *hipoteza* da kompozitni indeksi u merenju konkurentnosti ne odlikavaju u potpunosti razvijenost jedne privrede.

## Teorijski okvir i definisanje konkurentnosti

Kao ključne determinante konkurentnosti jedne privrede ističu se troškovi radne snage, devizni kurs i kamatne stope, dok vlade zemalja pokušavaju da različitim politikama i izmenama ovih, kao i drugih činilaca, podstaknu i unaprede konkurentnost svoje privrede. Pored ovih determinanti, možda i najvažniji uslov i koncept konkurentnosti na nacionalnom nivou jeste koncept produktivnosti (Porter M. E., 2008, str. 164). Naime, rast jedne privrede zavisi od rasta životnog standarda njenih građana koji je direktno srazmeran rastu produktivnosti jedne nacionalne ekonomije, tako da, ukoliko zemlja efikasno identifikuje pravi izvor svoje konkurentnosti, onda će se suočiti sa manje problema tokom svog ekonomskog razvoja (Porter, Sachs, & McArthur, 2001). Produktivnost će zavisiti od sposobnosti adekvatnog korišćenja prvenstveno radne snage i kapitala, dok održivi rast produktivnosti, kao uslov održivog privrednog rasta i unapređenja konkurentnosti, zahteva stalno unapređenje privrede, prilagođavanje tržišnim tokovima i istovremeno visok stepen inovativnosti i napretka. Konkurentnost jedne privrede se može odrediti i na osnovu sposobnosti: (1) Zarađivanja

## Introduction

In the pursuit of prosperity and the highest possible rate of economic growth, which is imposed as a necessary condition for the development of an economy in modern business conditions, great attention is focused on national competitiveness. In the context of limited resources, the inevitability of the existing state of national economies, given comparative advantages and disadvantages, and the inability to completely change earlier policies and orientations, the main preoccupation of the authorities remains to enhance the competitive advantages of the national economy as well as to find new growth potentials. This view explains Michael Porter's claim that "national prosperity is not inherited but created" (Porter M. E., 2008), which emphasizes that a nation's competitiveness depends on its economy's ability to advance and compete with other countries, analogous to micro-level competition between companies. Strengthening national competitiveness also enhances the competitiveness of companies within that economy, thereby gaining advantages over global competitors through operations in given economic structures, institutions and market environments. When an economy specializes in the production of goods for which it has a comparative advantage, the total production in the economy increases, and this increase leads to an overall improvement (Mankiw & Taylor, 2008). Some countries manage to gain advantages in certain segments of the world market precisely because their home environment is more advanced, dynamic and more challenging than others'. Paul Krugman, on the other hand, points out that domestic factors dominate the GDP per capita and the well-being of the economy, and not the national competitiveness confirmed in the world market (Krugman, 1994). According to Krugman and Obstfeld, national economies operate by specializing in low-cost, lower-cost products (Krugman & Obstfeld, 2003).

National competitiveness is the economic structures and institutions of the state that stimulate economic growth within the structure of the global economy (Marković & Radukić, 2014). Increasing national competitiveness is

an important task for every economy, because only a competitive economy can withstand the pressures of other players in the domestic and international markets, ensuring sustainable economic growth and development, and raising the standard of living of the population. For this reason, it is necessary to establish an effective system for measuring competitiveness and considering its constituent elements, in order to adequately determine the position of an economy in international frameworks and to establish a system that effectively and objectively respects all aspects of competitiveness within a single economy. However, in assessing the state of the economy, composite indices may exhibit some disadvantages, so it can be assumed that they do not fully reflect the level of development of an economy, and, accordingly, the *hypothesis* can be that composite indices in measuring competitiveness may not fully reflect the development of an economy.

## Theoretical Framework and the Definition of Competitiveness

The key determinants of the competitiveness of an economy are labor costs, exchange rates and interest rates, while governments try to encourage and improve the competitiveness of their economy through various policies and changes to these and other factors. In addition to these determinants, perhaps the most important condition and concept of competitiveness at the national level is the concept of productivity (Porter M. E., 2008). Namely, the growth of an economy depends on the growth of its citizens' standard of living, which is directly proportional to the productivity growth of a national economy, so that if a country effectively identifies the true source of its competitiveness, then it will face fewer problems during its economic development (Porter, Sachs, & McArthur, 2001). Productivity will depend on the ability to make adequate use of primarily labor and capital, while sustainable productivity growth, as a condition of sustainable economic growth and improving competitiveness, requires a continuous improvement of the economy, adaptation to market flows, and at the same time a high degree of innovation and progress.

profita u odnosu na identične industrije u drugim državama, (2) Privlačenja faktora proizvodnje u odnosu na ostale industrije u okviru jedne države (regiona) ili iz drugih država i (3) Prilagođavanja promenama u društveno-ekonomskom okruženju (Toming, 2011).

Unapređenje konkurentnosti jedne nacionalne ekonomije, koje postaje najvažniji zadatak vlade svake zemlje, ne može se sagledati putem neke sveobuhvatne teorije, ali se u svim definicijama konkurentnosti naglašava sposobnost države da dostigne održive visoke stope ekonomskog rasta, merene BDP po glavi stanovnika, uz sposobnost da proizvede robe i usluge koje zadovoljavaju test svetskog tržišta (Maksimović, 2012, str. 100). Tokom vremena razvijen je veliki broj načina za merenje nacionalne konkurentnosti, upravo zbog velikog značaja koji ona ima. Suština rangiranja konkurentnosti nacionalne privrede i njenih performansi u odnosu na druge zemlje jeste identifikovanje potencijalnih institucionalnih i tržišnih nedostataka i slabosti ekonomske politike, koji bi mogli da ugroze buduću ekonomski rast (Milovanović & Veselinović, 2009, str. 282). Korekcija ekonomske politike, jačanje tržišnih institucija, kao i institucija vladavine prava, nužni su i umnogome opredeljuju dalji tok unapređenja konkurentnosti i razvoja jedne privrede.

Brojne analize su pokazale da se zemlje koje su visoko rangirane prema konkurentnosti, visoko rangiraju i prema dohotku po glavi stanovnika, odnosno prema životnom standardu (Maksimović, 2012, str. 101). Uloga države ogleda se u ostvarenju makroekonomske i političke stabilnosti kroz uspostavljanje stabilnih državnih institucija, unapređenju mikroekonomske sposobnosti i efikasnosti, kao i u uspostavljanju pravila za sve tržišne učesnike.

Koncept institucionalnih reformi je od velike važnosti u procesu unapređenja konkurentnosti jedne privrede. Kada se jednom konstituišu, institucije ne funkcionišu zauvek u nepromenjenom obliku. One nikada nisu statične, već tokom vremena postaju izložene odgovarajućim promenama, u skladu sa realnim društveno-ekonomskim uslovima, a u tom procesu mnoge od njih bivaju zamenjene potpuno novim institucijama. Naime, društveno-ekonomski razvoj i promene uslova

u kojima se odvijaju ekonomske aktivnosti, utiču da neke institucije postanu zastarele, usled čega nastaje potreba za stvaranjem novih (Leković, 2010, str. 221). Na osnovu uočavanja, merenja i upoređivanja institucionalnih pokazatelja sa relevantnim pokazateljima ostalih zemalja, moguće je odrediti mesto posmatrane zemlje u međunarodnom okruženju i doneti odgovarajuće zaključke o posmatranoj privredi i njenoj konkurentnosti na međunarodnim tržištima.

Pored ovoga, uloga države uključuje i kreiranje ambijenta koji omogućava ubrzanje razvoja i usavršavanje postojećih struktura, čime se upravo doprinosi ostvarenju i unapređenju konkurentskih prednosti. Dobrim okvirom delovanja i adekvatnom reakcijom tržišnih aktera na unapređenje ključnih determinanti konkurentnosti, nacionalna privreda u procesu međunarodne trgovine pronalazi svoje mesto na međunarodnom tržištu na kojem aktivno konkuriše.

U daljem tekstu biće razmatrani načini ocenjivanja i rangiranja nacionalnih privreda prema različitim kompozitnim indeksima, koji su kreirani od strane međunarodno priznatih specijalizovanih organizacija za procenu tržišnog ambijenta. Takođe, biće ukazano na ograničenja pojedinih indikatora i načina vrednovanja pojedinih dimenzija konkurentnosti. U kasnijem izlaganju, analiza će biti usmerena na konkretne podatke za Republiku Srbiju, kvalitet njenih institucija prema međunarodnim kriterijumima i adekvatno poređenje sa privredama iz okruženja. Nakon toga, primenom Pirsonovog koeficijenta korelacije, biće ispitan odnos ocene globalnog indeksa konkurentnosti i razvijenosti jedne ekonomije merene BDP-om per capita.

## **Načini merenja konkurentnosti i vrednovanja institucija**

Mogu se identifikovati brojni faktori koji utiču na dugoročnu sposobnost zemlje da proizvodi i da se takmiči na svetskom tržištu, kao što su: efikasnost sa kojom finansijska tržišta transformišu štednju u investicije, sposobnost i brzina prihvatanja tehnoloških inovacija, sposobnost radnika da steknu veštine koje zahteva tržište rada, kvalitet poslovnih odluka

The competitiveness of an economy can also be determined by the ability to: (1) Earn profits over identical industries in other countries, (2) Attract factors of production relative to other industries within one country (region) or from other countries, and (3) Adapt to changes in the socio-economic environment (Toming, 2011).

Improving the competitiveness of a national economy, which is becoming the most important task of the government of every country, cannot be seen through some comprehensive theory, but all the definitions of competitiveness emphasize the state's ability to achieve sustained high rates of economic growth, measured by GDP per capita, with the ability to produce goods and services that meet the world market test (Maksimović, 2012). Over time, many ways have been developed to measure national competitiveness, precisely because of the great importance it has. The essence of ranking the competitiveness of a national economy and its performance relative to other countries is to identify potential institutional and market weaknesses and economic policy weaknesses that could threaten future economic growth. (Milovanović & Veselinović, 2009). Economic policy correction, strengthening of market institutions, as well as the rule of law institutions, are necessary and largely determine the further course of improving the competitiveness and development of an economy.

Numerous analyzes have shown that countries that are highly ranked in terms of competitiveness, are also ranked high in terms of per capita income or standard of living (Maksimović, 2012). The role of the state is reflected in the achievement of macroeconomic and political stability through the establishment of stable state institutions, the improvement of microeconomic capacity and efficiency, and the establishment of rules for all market participants.

The concept of institutional reform is of great importance in the process of improving the competitiveness of an economy. Once constituted, institutions do not function forever in an unchanged form. They are never static, but over time they become exposed to the corresponding changes, in accordance with the real socio-economic conditions, and in the process many of them are replaced by completely new institutions. Specifically, socio-

economic development and changes in the conditions under which economic activities take place make some institutions obsolete, causing the need to create new ones. (Leković, 2010). Based on the observation, measurement and comparison of institutional indicators with the relevant indicators of other countries, it is possible to determine the place of the observed country in the international environment and to draw appropriate conclusions about the observed economy and its competitiveness in international markets.

In addition, the role of the state includes creating an environment that enables accelerated development and refining existing structures, thereby contributing precisely to the realization and advancement of competitive advantages. With a good framework of action and an adequate reaction of market players to advancing the key determinants of competitiveness, the national economy, in the process of international trade, finds its place in the international market in which it actively competes.

In the following sections, we will discuss ways to evaluate and rank national economies according to different composite indices, created by internationally recognized specialized organizations for assessing the market environment. Also, the limitations of individual indicators and ways of evaluating particular dimensions of competitiveness will be pointed out. In a later presentation, the analysis will focus on concrete data for the Republic of Serbia, the quality of its institutions according to international criteria and adequate comparison with the economies in the region. Subsequently, applying the Pearson correlation coefficient, the relationship between the global competitiveness index and the development of an economy as measured by GDP per capita will be examined.

## **Ways to Measure the Competitiveness and Evaluation of Institutions**

A number of factors can be identified that affect a country's long-term ability to produce and compete in the global market, such as: the efficiency with which financial markets transform savings into investment,

menadžmenta i političkih odluka vlade i drugi faktori (Dani, 2007). U skladu sa raznovrсноšću koncepata konkurentnosti, razvijeni su i različiti pristupi u merenju konkurentnosti, pri čemu se mogu izdvojiti dve opcije u njenom merenju. Prva se bazira na određivanju dohotka per capita ili rastu produktivnosti, a druga na određivanju učinka u međunarodnoj trgovini (McFetridge, 1995).

S obzirom na to da ne postoji jedinstveni koncept za određivanje konkurentnosti (Sieggel, 2006), mora se uzeti u obzir više različitih aspekata konkurentnosti jedne privrede pri donošenju konačne ocene, pa tako merenje nacionalne konkurentnosti podrazumeva šire istraživanje. Istraživanje se najčešće vezuje za okvir postavljen od strane Svetskog ekonomskog foruma, odnosno za Globalni indeks konkurentnosti (GIK), zatim za Economic Freedom Index (indeks ekonomskih sloboda) koji objavljuje Heritage Foundation, kao i ocenu prema Doing Business listi koju utvrđuje Svetska banka.

Globalni indeks konkurentnosti je kompozitni indeks koji se sastoji od dvanaest stubova konkurentnosti organizovanih u tri grupe. Prvu grupu čine Osnovni zahtevi koji u sebe uključuju sledeće stubove konkurentnosti: 1) Institucije, 2) Infrastruktura, 3) Makroekonomska stabilnost, 4) Zdravstvo i primarno obrazovanje. U drugu grupu se ubrajaju Faktori povećanja efikasnosti koju formiraju sledeći stubovi: 5) Visoko obrazovanje i obuka, 6) Efikasnost tržišta dobara, 7) Efikasnost tržišta rada, 8) Sofisticiranost finansijskog tržišta, 9) Tehnološka spremnost, i 10) Veličina tržišta. Treća grupa su Faktori inovativnosti i sofisticiranosti koji se sastoje od poslednja dva stuba konkurentnosti i to: 11) Sofisticiranost poslovnih procesa i 12) Inovacije (World Economic Forum, 2017-2018).

Ovakvom konstrukcijom Globalnog indeksa konkurentnosti obuhvaćeni su kako mikroekonomski, tako i makroekonomski faktori konkurentnosti, kao i faktori razvoja institucija, čime je kroz zajedničko preispitivanje omogućeno određenje i procena konkurentnosti jedne nacionalne privrede. Globalni indeks konkurentnosti predstavlja kompozitni indeks i formira se kao ponderisani prosek svih stubova konkurentnosti. Stubovi konkurentnosti

takođe predstavljaju kompozitne indekse formirane na osnovu ponderisanih proseka podindikatora koji se dobijaju iz primarnih i sekundarnih izvora. Svi podaci, bilo da su dobijeni iz primarnih ili sekundarnih izvora, normiraju se na skali od 1 do 7, pri čemu je 1 najlošija, a 7 najbolja ocena. Ova skala važi ujedno i za vrednosti podindikatora, stubove konkurentnosti, kao i za Globalni indeks konkurentnosti u svom sumarnom izrazu. Pri analizi razlikujemo dve vrste podataka, primarne i sekundarne. Učešće primarnih podataka u GIK-u čini približno 70%, dok udeo sekundarnih podataka iznosi oko 30% (World Economic Forum, 2017-2018).

Naime, primarni podaci se dobijaju na osnovu anketa koje su standardizovane i koje se sprovode u obuhvaćenim zemljama svake godine. Anketiraju se top menadžeri preduzeća koji čine reprezentativni uzorak, a podaci dobijeni ovim putem nazivaju se mekim (soft) podacima. Ovakvi podaci, dobijeni primarnom analizom na osnovu anketiranja, koriste se za obračun onih podindikatora koji ne podležu kvantitativnoj analizi i nije ih moguće obuhvatiti putem obrade sekundarnih podataka. Kroz podatke koji se dobijaju na osnovu ankete stiče se uvid u uslove poslovanja, pravnu regulativu, tržišni ambijent, političku situaciju, itd. Za ovako dobijene podatke ne postoje međunarodno uporedive baze podataka, pa se iz tog razloga oni mogu dobiti jedino putem ankete (Ristić & Tanasković, 2011, str. 148).

Sa druge strane, za ocenu i obračun podindikatora konkurentnosti kao što su nivo poreza, stopa inflacije, budžetski deficit, ili broj procedura da se započne neka preduzetnička delatnost, koriste se podaci koje je moguće kvantitativno izraziti i koji su prisutni u bazama podataka međunarodnih ekonomskih i finansijskih institucija kao što su MMF, Svetska banka, Svetska trgovinska organizacija, Ujedinjene nacije itd. Ovi podaci nazivaju se čvrstim (hard) podacima.

Svi indikatori Svetskog ekonomskog foruma ocenjuju se na osnovu transparentne metodologije i konzistentnih kriterijuma. Tako se ulazne veličine, koje podrazumevaju statističke podatke i odgovore dobijene putem anketa, kao i algoritmi njihove obrade, pravila agregiranja i finalni rezultati, publikuju u

the ability and speed to embrace technological innovation, the ability of workers to acquire the skills required by the market performance, quality of business management decisions and government policy decisions, and other factors (Dani, 2007). In line with the diversity of competitiveness concepts, different approaches to measuring competitiveness have been developed, with two options in measuring it. The first is based on determining per capita income or productivity growth, and the second is based on determining performance in international trade (McFetridge, 1995).

Given that there is no single concept for determining competitiveness (Sieggel, 2006), several different aspects of the competitiveness of an economy must be taken into account when making a final assessment, and thus measuring national competitiveness requires broader research. The research is most often linked to the framework set by the World Economic Forum, that is, the Global Competitiveness Index (GCI), then the Economic Freedom Index published by the Heritage Foundation, as well as the Doing Business list determined by the World Bank.

The Global Competitiveness Index is a composite index consisting of twelve pillars of competitiveness organized into three groups. The first group consists of the Basic Requirements, which include the following pillars of competitiveness: 1) Institutions, 2) Infrastructure, 3) Macroeconomic Stability, 4) Health and Primary Education. The second group includes the Factors of Efficiency Gains formed by the following pillars: 5) Higher Education and Training, 6) Efficiency of the Goods Market, 7) Efficiency of the Labor Market, 8) Sophistication of the Financial Market, 9) Technological Readiness, and 10) Market Size. The third group is Factors of Innovation and Sophistication, which consist of the last two pillars of competitiveness, namely: 11) Business Process Sophistication and 12) Innovation (World Economic Forum, 2017-2018).

This construction of the Global Competitiveness Index encompasses both microeconomic and macroeconomic competitiveness factors, as well as institutional development factors, enabling, through joint review, the determination and assessment of the competitiveness of a national economy. The

Global Competitiveness Index is a composite index and is formed as a weighted average of all the pillars of competitiveness. Competitiveness pillars also represent composite indices formed on the basis of weighted averages of sub-indicators derived from primary and secondary sources. All data, whether obtained from primary or secondary sources, are normalized on a scale of 1 to 7 with 1 being the worst and 7 being the best. This scale is also valid for the values of the sub-indicators, the pillars of competitiveness, as well as the Global Competitiveness Index in its summary. In the analysis, we distinguish between two types of data, primary and secondary. The share of primary data in the GIK is approximately 70%, while the share of secondary data is approximately 30% (World Economic Forum, 2017-2018).

Specifically, primary data are obtained from standardized surveys conducted in the countries covered each year. Top managers of the companies that make up a representative sample are surveyed, and the data obtained through this is referred to as soft data. Such data, obtained through primary survey-based analysis, are used to calculate those sub-indicators that are not subject to quantitative analysis and cannot be captured through secondary data processing. The data obtained through the survey provides insight into business conditions, legal regulations, market environment, political situation, etc. There are no internationally comparable databases for the data thus obtained, and for this reason they can only be obtained through a survey (Ristić & Tanasković, 2011).

On the other hand, for the assessment and calculation of competitiveness indicators such as tax level, inflation rate, budget deficit, or number of procedures to start an entrepreneurial activity, quantitatively used data is available and is present in the databases of international economic and financial institutions such as the IMF, the World Bank, the World Trade Organization, the United Nations, etc. This data is called hard data.

All indicators of the World Economic Forum are evaluated on the basis of a transparent methodology and consistent criteria. Thus, the input sizes, which include statistics and survey responses, as well as their processing



celosti svake godine (Vujović, 2007, str. 452). Indeks globalne konkurentnosti prati preko 100 indikatora (dimenzija konkurentnosti) za približno 140 ekonomija sveta. Uspostavljanjem zajedničkog okvira i uporedivim podacima, omogućava se praćenje podataka i skreće pažnja na dugoročne determinante konkurentnosti.

Za agregiranje pojedinačnih indikatora koristi se aritmetička sredina u okviru svake kategorije, dok se za preciznije određenje vrednosti indikatora koristi procenat važnosti pojedine kategorije u okviru svakog stuba. U zavisnosti od faze razvijenosti pojedine zemlje, određeni faktori konkurentnosti imaju veći značaj i ulogu u pokretanju konkurentnosti. Tako se za nisko razvijene zemlje najpre sagledavaju „osnovni zahtevi“, za srednje razvijene zemlje najvažniju ulogu u oživljavanju privrede imaju „faktori povećanja efikasnosti“, dok kod najrazvijenijih zemalja proporcionalno najveći uticaj na nivo konkurentnosti i ukupnu vrednost GIK-a imaju „faktori inovativnosti i sofisticiranosti“ (Ristić & Tanasković, 2011, str. 149). Prilikom konstrukcije ocene Globalnog indeksa konkurentnosti, uzima se u obzir razvojna faza u kojoj se konkretna ekonomija nalazi, tako što se konkretnim stubovima pripisuju veće relativne težine, odnosno veće

podkategorija koristi se aritmetička sredina vrednosti pojedinačnih pokazatelja u okviru jedne kategorije i to prema formuli:

$$\text{Kategorija (i)} = \frac{\sum_{k=1}^k \text{Indikator } k}{K} \quad (1)$$

Za dalje vrednovanje u cilju konstrukcije ukupnog indeksa, koristi se ocena pored svake kategorije u okviru pripadajućih indikatora koja predstavlja težinu, odnosno važnost te kategorije u posmatranom stubu konkurentnosti. U okviru osnovnih zahteva, čije se učešće u ukupnoj oceni kreće u rasponu od 20-60%, i koji uključuje ocene institucija, infrastrukture, makroekonomske stabilnosti, kao i zdravstva i primarnog obrazovanja, sva četiri stuba konkurentnosti u okviru osnovnih zahteva podjednako učestvuju u njegovoj oceni sa po 25%. Ocena faktora efikasnosti učestvuje u ukupnom indeksu u rasponu od 35-50% pri čemu u okviru ocene ove grupe pokazatelja, visoko obrazovanje i obuka, efikasnost tržišta dobara i tržišta rada, sofisticiranost finansijskih tržišta, tehnološka opremljenost i veličina tržišta imaju podjednak uticaj na ocenu sa po 17% učešća. Faktori inovativnosti i sofisticiranosti učestvuju u konstrukciji ocene ukupnog indeksa od 5-30%, a obe podkategorije u okviru

Tabela 1: Kriterijum važnosti pojedinih faktora pri izračunavanju vrednosti GIK-a

	Faza 1	1-2	Faza 2	2-3	Faza 3
BDP per capita	<2000	2000-2999	3000-8999	9000-16999	>17000
Osnovni zahtevi	60 %	40-60 %	40 %	20-40 %	20 %
Faktori efikasnosti	35 %	35-50 %	50 %	50%	50 %
Faktori inovativ. i sofisticiranosti	5 %	5-10 %	10 %	10-30 %	30 %

Izvor: Global Competitiveness Index, str. 320

procentualno učešće u strukturi ocene. Da bi se implementirao ovaj koncept, stubovi su organizovani u tri podindeksa od kojih je, kao što je već pomenuto, svaki specifičan za određenu fazu razvoja. Kriterijum koji se primenjuje u ovoj proceni jeste BDP po glavi stanovnika, što je prikazano u tabeli 1 (World Economic Forum, 2017-2018).

Izračunavanje Globalnog indeksa konkurentnosti je zasnovano na uzastopnoj agregaciji rezultata od nivoa pojedinačnih merila prema ukupnoj oceni. Za ocenu pojedinačnih

ove grupe imaju podjednak uticaj od 50% u formiranju ocene ove grupe (World Economic Forum, 2017-2018).

Kako bi ukupno sumiranje rezultata bilo moguće, indikator se pretvaraju u vrednost na skali od 1 do 7, gde se rangiranje vrši na osnovu minimalne i maksimalne vrednosti dobijenih indikatora, čime se obezbeđuje redosled i uspostavlja razlika među zemljama. Pojedini pokazatelji se javljaju u dva različita stuba, pa se njihova vrednost ocenjuje polovično u svakom od stubova kako bi se izbeglo dvostruko

algorithms, aggregation rules and final results, are published in full each year (Vujović, 2007). The Global Competitiveness Index monitors over 100 indicators (the competitiveness dimension) for approximately 140 economies in the world. By establishing a common framework and comparable data, it enables the monitoring of data and draws attention to the long-term determinants of competitiveness.

The aggregation of individual indicators uses the arithmetic mean within each category, while the more accurate determination of indicator values uses the percentage of importance of each category within each pillar. Depending on the development stage of a particular country, certain competitive factors play a greater role in driving competitiveness. Thus, for the low-developed countries, the “Basic Requirements” are first considered, for the middle-developed countries the most important role in the economic recovery is the “Efficiency Factors”, while in the most developed countries the “Innovation and Sophistication Factors” have the largest impact on the level of competitiveness and the overall value of the GCI (Ristić & Tanasković, 2011). In constructing the Global Competitiveness Index score, the development phase in which

Index is based on the successive aggregation of results from the level of individual benchmarks by the total score. For the evaluation of individual subcategories, the arithmetic mean of the values of individual indicators within one category is used, according to the formula:

$$\text{Category (i)} = \frac{\sum_{k=1}^k \text{indicator } k}{K} \quad (1)$$

For further evaluation in order to construct the overall index, a rating is used next to each category within the relevant indicators representing the weight, that is, the importance of that category in the observed pillar of competitiveness. Within the framework of basic requirements, whose participation in the overall assessment ranges from 20-60%, and which includes assessments of institutions, infrastructure, macroeconomic stability, as well as health and primary education, all four pillars of competitiveness within the basic requirements participate equally in its requirements scores with 25% each. Efficiency factor ratings account for 35-50% of the overall index, and within this group of indicators, higher education and training, commodity and labor market efficiency, financial market sophistication, technological equipment and

Table 1: GCI Criteria for the importance of individual factors in the calculation of values

	Stage 1	1-2	Stage 2	2-3	Stage 3
GDP per capita	<2000	2000-2999	3000-8999	9000-16999	>17000
Basic Requirements	60 %	40-60 %	40 %	20-40 %	20 %
Efficiency Factors	35 %	35-50 %	50 %	50%	50 %
Innovation and Sophistication Factors	5 %	5-10 %	10 %	10-30 %	30 %

Source: Global Competitiveness Index, p. 320

a particular economy is located is taken into account by attributing greater relative weights to the pillars, or greater percentage participation in the rating structure. In order to implement this concept, the pillars are organized into three sub-indices, each of which, as mentioned above, is specific to a particular stage of development. The criterion used in this estimate is GDP per capita as shown in Table 1 (World Economic Forum, 2017-2018).

The calculation of the Global Competitiveness

market size all have an equal impact on the assessment with a 17% share each. Innovation and sophistication factors participate in the construction of the overall index score with 5-30% share, and both subcategories within this group have an equal impact of 50% in the formation of this group's rating (World Economic Forum, 2017-2018).

In order to make the total summation of the results possible, the indicators are converted to a value on a scale of 1 to 7, where the ranking

vrednovanje. Konkretno svođenje indikatora na vrednost na skali od 1 do 7 vrši se prema sledećem obrascu:

$$6 \times \frac{\text{ocena zemlje} - \text{minimum ocene u uzorku}}{\text{maksimum ocene u uzorku} - \text{minimum ocene u uzorku}} + 1 \quad (2)$$

Nakon ovoga, agregiranjem ocena i njihovih vrednosti dobija se ukupan rang ocene konkretne privrede. Kako bi se pri tome dobila što preciznija slika, neki parametri moraju biti precizno sagledani, kao što je slučaj sa inflacijom, koja se u okviru stuba makroekonomske stabilnosti, kao i ostali parametri, svodi na rang ocene od 1 do 7. Pri tom za nivoe inflacije od 0,5 do 2,9% zemlja dobija najvišu ocenu 7, dok se udaljavanjem od ovih vrednosti i postojanjem veće ili manje inflacije (deflacije) ocena smanjuje.

Još jedan od mogućih načina sagledavanja stepena razvoja jedne ekonomije, u smislu lakoće poslovanja i regulisanosti tržišta, jeste putem izveštaja Doing Business liste. Za razliku od Globalnog indeksa konkurentnosti, ova lista sagledava i meri propise koji omogućavaju ili sprečavaju učesnike privatnog sektora privrede da započnu, obavljaju i šire svoje poslovanje. Ova regulativa se ocenjuje pomoću 11 indikatora koji utiču na mogućnost i lakoću poslovanja a to su: 1) uslovi započinjanja novog biznisa, 2) dobijanje građevinske dozvole, 3) proizvodnja električne energije, 4) registracija imovine, 5) dobijanje kredita, 6) zaštita manjina, 7) investitori, 8) plaćanje poreza, 9) međunarodna trgovina, 10) izvršavanje ugovornih obaveza i 11) rešavanje nesolventnosti. Uz sve to, vrši se i ocenjivanje tržišta rada, ali ovaj kriterijum nije uključen u rangiranje (World Bank, 2017).

Ovi parametri usmereni su na ocenu prvenstveno malih i srednjih preduzeća, odnosno ambijenta u kojem ona posluju. Jedna od novina od 2017. godine predstavlja i uvođenje efikasnijeg praćenja poreza, poreskih olakšica i poreske revizije, a isto tako pažnja je od ove godine usmerena i na stepen polne ravnopravnosti i stepen angožovanja žena u poslovanju na višim nivoima rukovođenja.

Podaci koji se analiziraju zasnivaju se na detaljnom uvidu u domaće zakone, propise i administrativne zahteve. Izveštaj pokriva 190 zemalja, uključujući i neke od najmanjih i najsiromašnijih ekonomija za koje je dostupan

samo mali broj podataka i informacija. Podaci se prikupljaju kroz nekoliko krugova komunikacije sa stručnim ispitanicima iz privatnog i državnog sektora. Kroz odgovore na unapred sastavljene upitnike, konferencije, slanje dopisa i posete ekspertskih timova, dolazi se do svih relevantnih podataka. Doing Business lista se oslanja na četiri glavna izvora informacija i to su: relevantni zakoni, propisi i regulacije; ispitanici; državno rukovodstvo i regionalni timovi Svetske banke.

Indikatori Doing Business liste se obračunavaju na osnovu podataka Svetske banke, kao i anketiranja menadžmenta preduzeća. Ovakva istraživanja omogućavaju saznanje o glavnim prednostima, ali i preprekama za razvoj poslovne aktivnosti i daju uvid u stepen ozbiljnosti određenih problema. Veća vrednost pokazatelja upućuje na bolje propise i efikasnije funkcionisanje institucija, kao i na jednostavniji način prihvatanja određenih propisa uz manje troškove njihovog implementiranja. Ocena se vrši po principu određivanja vrednosti zadatog parametra i stavljanjem u odnos te vrednosti sa ostalim, čime se vrši rangiranje zemalja. Svaki od indikatora odnosi se na poseban segment poslovanja i zahteva poseban i adekvatan pristup prilikom njegove procene (World Bank, 2017).

Metodologija Svetske banke (Doing Business lista) je dizajnirana tako da se može lako ponoviti način za određivanje specifičnih aspekata poslovne regulacije. Prilikom korišćenja podataka moraju se imati na umu prednosti i ograničenja ovih pokazatelja, a osiguranje uporedivosti podataka na globalnom nivou je centralno razmatranje pri konstrukciji indikatora Doing Business liste. Oni se baziraju na standardizovanom scenariju slučajeva sa određenim pretpostavkama. Vrednovanje pokretanja biznisa vrši se ocenom neophodnog broja procedura, potrebnim vremenom i minimalnim sredstvima za pokretanje sopstvenog biznisa. Izdavanje građevinskih dozvola takođe se ocenjuje na osnovu brzine dobijanja svih potrebnih dokumenata za izgradnju i procene kvaliteta i sigurnosti ovih postupaka. U oceni dobijanja električne energije sagledava se potrebno vreme za priključenje na električnu mrežu, pouzdanost snabdevanja i transparentnost tarifnog sistema, dok se

is made on the basis of the minimum and maximum values of the obtained indicators, thus providing order and establishing a difference between countries. Individual indicators occur in two different pillars, so their value is halved in each of the pillars to avoid double calculation. The specific reduction of the indicator to a value on a scale from 1 to 7 is done according to the following formula:

$$6 \times \frac{\text{country rating} - \text{minimum grade in the sample}}{\text{maximum grade in the sample} - \text{minimum grade in the sample}} + 1 \quad (2)$$

After this, aggregating the ratings and their values gives the overall ranking of a particular economy. In order to get a more accurate picture, some parameters need to be carefully considered, as in the case of inflation, which, within the pillar of macroeconomic stability, as well as other parameters, comes down to a rating of 1 to 7. At the same time, for inflation levels of 0.5 to 2.9%, the country gets the highest score of 7, while moving away from these values and with the existence of higher or lower inflation (deflation), the score decreases.

Another possible way of looking at the level of development of an economy, in terms of ease of doing business and market regulation, is through the Doing Business List report. Unlike the Global Competitiveness Index, this notes and measures the regulations that enable or prevent private sector participants from starting, running and expanding their businesses. This regulation is evaluated using 11 indicators that affect the ability and ease of doing business, namely: 1) conditions for starting a new business, 2) obtaining a building permit, 3) generating electricity, 4) registering property, 5) obtaining a loan, 6) protecting minorities, 7) investors, 8) tax payment, 9) international trade, 10) contractual obligations, and 11) insolvency resolution. In addition, the labor market is evaluated, but this criterion is not included in the ranking (World Bank, 2017).

These parameters are aimed at evaluating primarily small and medium-sized enterprises and the environment in which they operate. One of the innovations of 2017 is the introduction of more efficient monitoring of taxes, tax breaks and tax audit, as well as the focus on gender equality and the share of women engaged at higher level management positions.

The data to be analyzed is based on a thorough insight into national laws, regulations and administrative requirements. The report covers 190 countries, including some of the smallest and poorest economies for which only a small amount of data and information is available. The data is collected through several rounds of communication with expert respondents from both the private and public sectors. All relevant information is obtained through responses to pre-prepared questionnaires, conferences, correspondence and visits by expert teams. The Doing Business List relies on four main sources of information: relevant laws and regulations; respondents; government and World Bank regional teams.

The Doing Business list indicators are calculated based on World Bank's data as well as business management surveys. Such research provides an insight into the main advantages and obstacles for the development of business activity and gives insight into the severity of certain problems. The higher value of the indicators points to better regulations and more efficient functioning of institutions, as well as a simpler way of adopting certain regulations at lower costs for their implementation. The assessment is made on the principle of determining the value of a given parameter and putting it in relation to the rest, which results in the ranking of countries. Each of the indicators relates to a specific segment of the business and requires a separate and adequate approach to its assessment (World Bank, 2017).

The World Bank's Doing Business List methodology is designed in such a way that it is easy to repeat the way to determine specific aspects of business regulation. When using data, the benefits and limitations of these indicators must be kept in mind, and ensuring comparability of data globally is a central consideration when constructing Doing Business list indicators. They are based on a standardized case scenario with specific assumptions. Valuation of starting a business is done by evaluating the required number of procedures, the time required and the minimum means to start your own business. The issuance of building permits is also evaluated on the basis of the speed of obtaining all the necessary documents for construction and the assessment of the quality and safety of

prilikom ocene registracije imovine takođe koristi merilo zahtevanog vremena i troškovi sticanja i prenosa vlasničkih prava. Proces izdavanja kredita i zaštite imovinskih prava ocenjuje se na osnovu zakonskih propisa u ovim oblastima. Plaćanje poreza takođe obuhvata ocenu propisa i visine pojedinačnih poreskih stopa, a međunarodna trgovina ispituje se prema vremenu i troškovima izvoza, kao i sagledavanjem komparativnih prednosti. Efikasnost sprovođenja ugovora procenjuje se na osnovu vremena i troškova rešavanja sporova i kvaliteta sudskih procesa, a efikasnost procesa rešavanja nesolventnosti poistovećuje se sa potrebnim vremenom i snagom finansijskog sistema i pravnog okvira koji se tiče ove oblasti, što važi i za ocenu tržišta rada (World Bank, 2017). Ovi parametri ocenjuju se prema utvrđenoj skali ocena i pripisuju se ovim kategorijama, čime je moguće ustanoviti stepen efikasnosti svih pojedinačnih indikatora, kao i izvršiti rangiranje ukupne liste.

Korist od ovakvog istraživanja ostvaruju vlade zemalja prilikom sagledavanja i procene ekonomske politike i uočavanja prednosti i nedostataka postojećeg stanja, kao i istraživači, koji na osnovu uvida u rang zemalja mogu donositi određene procene. Pojedinačni podaci mogu biti irelevantni za donošenje zaključaka, pa se iz tog razloga uzima ukupan rang ocena kao merodavan reprezent razvijenosti tržišnog ambijenta i institucija. Adekvatnost tržišnog ambijenta i njegova pogodnost za poslovanje analizira se kroz sagledavanje konkretnih slučajeva i fokusira se na pravila koja su relevantna za analizu. Jedinstven skup podataka omogućava analizu sa ciljem boljeg razumevanja regulisanja poslovanja, postojeće situacije i mogućnosti postizanja održivog rasta i razvoja.

Ispitivanje stanja jedne ekonomije i njenih performansi može se obaviti i putem izveštaja koji objavljuje Heritage fondacija, i to putem indeksa ekonomskih sloboda (Index of Economic Freedom). Prema ovom izveštaju, ekonomska sloboda predstavlja ključni element ljudskog blagostanja i glavni faktor u održavanju slobode ljudskog društva. Ključne odrednice ovakvog stava jesu da put svake zemlje ka rastu i razvoju mora biti prilagođen vlastitoj kulturi, istoriji i jedinstvenim

uslovima. Međutim, postoje određene osnovne karakteristike koje su zajedničke za sve zemlje, tako da nacije sa većim stepenom ekonomske slobode imaju tendenciju da u potpunosti iskoriste i kapitalizuju znanje i sposobnosti svakog pojedinca u društvu. Za društvo u celini to će stvoriti uslove za dinamičan ekonomski rast, povećanje inovativnosti i efikasnu alokaciju resursa. Pojedinac je ekonomski slobodan ako ima potpunu kontrolu nad svojim radom i vlasništvom, bez uplitanja države. Uloga države svedena je na zaštitu tako definisane slobode, a idealni (najviši) stupanj ekonomske slobode osigurava pojedincu apsolutno pravo privatne svojine, potpunu slobodu kretanja kapitala, rada i prometa robe, navodi se u izveštaju Heritage fondacije (Economic Freedom, 2017).

Indeks ekonomske slobode obezbeđuje ubedljiv dokaz o širokom opsegu opipljive prednosti življenja u društvu sa većim stepenom ekonomske slobode. Indeks analizira razvoj ekonomske politike u 186 zemalja koje su ocenjene i rangirane u okviru 12 kriterijuma ekonomskih sloboda, a koji ocenjuju vladavinu prava, veličinu javne uprave i državnog sektora, regulatornu efikasnost i otvorenost tržišta.

U okviru vladavine prava posebno se ocenjuju prava svojine, efikasnost sudstva, kao i integritet države. Analiza veličine državnog sektora uključuje poresko opterećenje, upravljanje državnom potrošnjom i „fiskalno zdravlje“, odnosno stanje državnih finansija. U sklopu regulatorne efikasnosti ocenjuje se poslovna sloboda, sloboda tržišta rada i monetarnih institucija, dok otvorenost tržišta podrazumeva slobodnu trgovinu, finansijske i investicione slobode. Ocnom svakog pojedinačnog kriterijuma, u skladu sa postavljenom skalom, dobija se ukupna ocena svake zemlje iz čega se uviđa njen položaj i stepen ekonomskih sloboda u odnosu ostale zemalje (Economic Freedom, 2017).

U procenivanju uslova u ove četiri kategorije, indeks uključuje 12 specifičnih komponenti ekonomske slobode koji su standardizovani i podobni za stvaranje ukupne ekonomske procene svake privrede. Rang ukupne ocene se kreće u intervalu od 0 do 100, pri čemu sa većim stepenom ekonomske slobode raste i rang ocene. Zemlje su klasifikovane u zavisnosti od ocene u 5 kategorija, od „potisnute“ do

these procedures. The assessment of electricity generation takes into account the time required to connect to the electricity grid, security of supply and transparency of the tariff system, while the assessment of property registration also uses the measure of required time and the cost of acquiring and transferring ownership rights. The process of granting loans and protecting property rights is evaluated on the basis of legal regulations in these areas. Payment of taxes also includes the assessment of regulations and the amount of individual tax rates, and international trade is examined according to the time and cost of exports, as well as considering the comparative advantages. The effectiveness of contract implementation is evaluated on the basis of the time and cost of dispute resolution and the quality of litigation, and the efficiency of the insolvency resolution process is equated with the time and strength of the financial system and the legal framework relevant to this area, which also applies to labor market assessments (World Bank, 2017). These parameters are evaluated according to the established rating scale and are assigned to these categories, which makes it possible to determine the degree of efficiency of all individual indicators and to rank the overall list.

The governments of countries benefit from such research when reviewing and evaluating economic policies and identifying the strengths and weaknesses of the current situation, while researchers benefit from the ability to make certain estimates based on insights into the ranking of countries. Individual data may be irrelevant for drawing conclusions, and for this reason the overall ranking is considered as a relevant representative of the development of the market environment and institutions. The adequacy of the market environment and its suitability for business is analyzed through case studies and focuses on rules that are relevant to the analysis. The unique data set enables analysis in order to better understand business regulation, the current situation, and the ability to achieve sustainable growth and development.

An examination of the state of an economy and its performance can also be done through a report published by the Heritage Foundation, through the Index of Economic Freedom. According to this report, economic freedom is a key element of human well-being and a major

factor in maintaining the freedom of human society. The key determinants of this attitude are that each country's path to growth and development must be adapted to its own culture, history and unique conditions. However, there are certain basic characteristics common to all countries, so nations with greater degrees of economic freedom tend to fully utilize and capitalize on the knowledge and capabilities of each individual in their society. For society as a whole, this will create the conditions for dynamic economic growth, increased innovation and efficient allocation of resources. An individual is economically free if they have complete control over their work and property, without government interference. The role of the state is reduced to protecting such a defined freedom, and the ideal (highest) degree of economic freedom provides an individual with an absolute right of private property, complete freedom of movement of capital, labor and trade in goods, according to a report by the Heritage Foundation (Economic Freedom, 2017).

The Economic Freedom Index provides compelling evidence of the wide range of tangible benefits of living in a society with greater degrees of economic freedom. The index analyzes the development of economic policy in 186 countries that are rated and ranked within the 12 criteria of economic freedom, and which assess the rule of law, size of public administration and public sector, regulatory efficiency and market openness.

Within the rule of law, property rights, the efficiency of the judiciary and the integrity of the state are evaluated separately. The analysis of the size of the public sector includes tax burden, government spending management and "fiscal health", the state of public finances. Regulatory efficiency assesses business freedom, freedom of the labor market and monetary institutions, while market openness implies free trade, financial and investment freedoms. The assessment of each individual criterion, in accordance with the set scale, gives an overall rating of each country, which gives an insight into its position and the degree of economic freedom in relation to other countries (Economic Freedom, 2017).

In assessing the conditions in these four categories, the index includes 12 specific

„slobodne“.<sup>1</sup> Zemlje su rangirane po ukupnoj oceni, ali i po regionima kojima pripadaju, pa je tako omogućeno preciznije poređenje i donošenje zaključaka.

### **Nedostaci postojećih načina merenja konkurentnosti i ocene institucionalnog ambijenta**

Pri izračunavanju i merenju toga koliko je neka privreda zaista konkurentna može se naići na određen broj nedostataka i propusta koji su posledica neadekvatnosti izabrane metodologije i načina konstruisanja pojedinih kompozitnih indeksa. Iz tog razloga, stvarno stanje može u većoj ili manjoj meri da odstupa od prikazanog sumarnog indikatora, u zavisnosti od načina ponderisanja, uključivanja i izostavljanja pojedinih podindikatora i načina vrednovanja pojedinih pozicija koje se uključuju u konačnu ocenu. Pored toga, postoje mišljenja da ovako visoka detaljizacija faktora može imati za posledicu sakrivanje same suštine konkurentnosti i načina njenog unapređenja (Matejić, 2003). Prilikom sagledavanja ocena konkurentnosti, može se primetiti precejenost, kao i podcejenost pojedinih zemalja prema postojećim kriterijumima, što ukazuje na to da važeća merila ne pružaju dovoljno dobar pregled trenutne konkurentnosti zemalja i da postoji prostor za napredak postojećih indikatora (Djogo & Stanisic, 2016).

U analizi putem Globalnog indeksa konkurentnosti, naročita pristrasnost ocena može se videti kod tzv. mekih (soft) indikatora koji su rezultat anketiranja. Međutim, kvalitet podindikatora, koji se koriste u donošenju konačne ocene i čije su vrednosti dobijene na osnovu međunarodnih komparativnih baza, i koji su kvantitativne prirode, može biti konstruktivan iz razloga što je ista metodologija primenjena na sve zemlje. Čak i u slučaju da metodologija nije ispravna, ona je važeća i ista za sve zemlje, pa se tako može izvršiti validno međunarodno poređenje (Ristić & Tanasković, 2011, p. 154). Generalno, pristrasnosti u poređenjima i ocenama dobijenim na osnovu „čvrstih podataka“ su manja u poređenju sa „mekim podacima“ dobijenim na osnovu ankete.

Prilikom korišćenja subjektivnih ocena u procesu međunarodnog poređenja mogu se javiti određeni nedostaci i samim tim dovesti u pitanje validnost dobijenih ocena. Prilikom ocenjivanja kvaliteta određenih institucija u procesu anketiranja, uprkos postojanju konsenzusa ispitanika oko određenog problema, njihov rang ocena može biti pesimističan ili optimističan, pa tako može doći do različitog vrednovanja i iskazivanja različitih ocena neke konkretne pojave. Pristrasnost prilikom ovog vida ocenjivanja može uticati na pomeranje ranga zemlje u međunarodnom poređenju.

Osim toga, može postojati i problem odabira referentne tačke, odnosno za šta će se ispitanik vezivati kao uzor u svojoj proceni. U zavisnosti od toga da li u poređenju pojava posmatra više ili manje razvijeno okruženje u odnosu na koje formira svoju procenu, rang ocena se može razlikovati. Takođe, pošto su ispitanici menadžeri preduzeća, oni mogu ispoljiti pristrasnost prilikom ocenjivanja.

Jedan od bitnih elemenata u subjektivnom ocenjivanju jeste i informisanost ispitanika, njihova percepcija okruženja, kao i eventualno trenutno nezadovoljstvo postojećim stanjem koje se može projektovati na datu ocenu. Raspored pitanja i sama konstrukcija ankete može takođe imati uticaj na krajnju ocenu privrednog ambijenta (Bertrand & Mullainathan, 2011, str. 68).

Jedan od problema vrednovanja može se javiti i prilikom ocene zdravstvenih institucija i zdravstvene zaštite. Uticaj određenih bolesti na rang ocene manifestuje se kroz njihovu učestalost, ali i troškove lečenja, pri čemu se ovi faktori takođe sagledavaju u odnosu na situacije u drugim zemljama, na osnovu čega se i formira rang ocene. Problem se može javiti usled nedostatka podataka za određene bolesti kada je učestalost jednaka nuli, pri čemu ovaj pokazatelj dobija najveću ocenu 7, pa rang ukupne ocene ovog podindikatora i stuba konkurentnosti može na pogrešan način pokazati stanje u ovoj oblasti (World Economic Forum, 2017-2018).

Uvažavajući navedene zahteve, neophodno je objektivno sagledati vrednosti podindikatora i stubova konkurentnosti i utvrditi načine

1 Prema izveštaju iz Economic Freedom 2017 samo 5 zemalja karakteriše se najvećim stepenom slobode

components of economic freedom that are standardized and eligible for generating an overall economic assessment of each economy. The ranking of the overall grade ranges from 0 to 100, where higher degree of economic freedom increases the ranking of the grade. Countries are classified according to grade in 5 categories, from "suppressed" to "free".<sup>1</sup> Countries are ranked by overall rating and by region to which they belong, hence providing more accurate comparisons and conclusions.

### **Disadvantages of the Existing Ways of Measuring Competitiveness and Assessing the Institutional Setting**

When calculating and measuring how competitive an economy really is, one can come across a number of shortcomings and omissions that result from the inadequacy of the chosen methodology and how to construct individual composite indices. For this reason, the actual situation may deviate to a greater or lesser extent from the summary indicator presented, depending on the weighting, inclusion and omission of individual sub-indicators and the valuation of particular positions to be included in the final assessment. In addition, there are opinions that such a high level of detail of factors can result in hiding the very essence of competitiveness and how to improve it (Matejić, 2003). When looking at competitiveness assessments, one can notice the overestimation, as well as the underestimation, of individual countries according to the existing criteria, which indicates that the current criteria provide an insufficient overview of the current competitiveness of countries, and that there is space for improvement concerning existing indicators (Djogo & Stanisić, 2016).

In the analysis through the Global Competitiveness Index, particular bias of the ratings can be seen in the so-called soft indicators resulting from the survey. However, the quality of the sub-indicators used in making the final assessment and whose values are derived from international comparative bases and which are quantitative in nature, can be constructive because the same methodology is applied to all

countries. Even if the methodology is incorrect, it is valid and the same for all countries, so a valid international comparison can be made (Ristić & Tanasković, 2011). In general, the biases in comparisons and ratings obtained from "hard data" are smaller compared to "soft data" obtained from the survey.

When using subjective assessments in the international comparison process, certain shortcomings may occur and therefore jeopardize the validity of the assessments obtained. When assessing the quality of particular institutions in the survey process, despite the consensus of respondents about a particular problem, their ranking may be pessimistic or optimistic, and thus different evaluations and different ratings of a particular phenomenon may occur. Bias in this type of evaluation can affect the shift of the country ranking in international comparison.

In addition, there may be a problem of selecting a reference point, i.e. what the respondent will relate to as a role model in their assessment. Depending on observation of more or less developed environment in the comparison of phenomena in relation to which assessment is formed, the ranking of the ratings may differ. Also, since respondents are in managing positions, they may exhibit bias when evaluating.

One of the important elements in the subjective evaluation is the information of the respondents, their perception of the environment, as well as any current dissatisfaction with the existing state that can be projected on the given assessment. The layout of the questions and the construction of the survey can also have an impact on the final assessment of the economic environment (Bertrand & Mullainathan, 2011).

One of the problems of this evaluation can also arise when evaluating health institutions and health care. The impact of certain diseases on the rank of the rating is manifested through their frequency and costs of treatment, and these factors are also considered in relation to situations in other countries on the basis of which the rating rank is formed. The problem can be due to the lack of data for certain diseases when the frequency is

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1 According to the Economic Freedom 2017 report, only 5 countries show the highest level of freedom



dobijanja njihove ocene kako bi bili sigurni da krajnji indikatori na odgovarajući način reflektuju stanje određene privrede. Uvidom u vrednosti ocena za analiziranu zemlju mogu se uočiti nedostaci konkretne privrede ali, isto tako, moguće je pronaći prostor za napredak u određenim segmentima. Kao reper poređenja mogu poslužiti privrede sličnog institucionalnog ambijenta, sličnog nivoa razvijenosti, bogatstva i efikasnosti iskorišćenja resursa.

Nedostaci koji su prisutni u okviru Doing Business liste, i procene tržišnog ambijenta u okviru te analize, ogledaju se u zanemarivanju oblasti koje nisu pokrivena njihovom analizom. Oblasti koje nisu uključene u konačnu ocenu su: makroekonomska stabilnost, razvoj finansijskog sistema, kvalitet radne snage, korupcija, veličina tržišta, kao i propusti i nedostaci sigurnosti.

Pored ovoga, prisutne su i oblasti koje nisu obuhvaćene analizom, a nalaze se u području koji se istražuje i uključuje u rang ukupne ocene na Doing Business listi. Na primer, u okviru analize plaćanja poreza nije obuhvaćena stopa poreza na dohodak građana, dok kod analize uslova kreditiranja, nije uključena pozicija monetarne politike, kao ni dostupnost kreditnih uslova. Isto tako, u oblasti analize trgovine preko granice, odnosno međunarodne trgovine, ne obraća se pažnja na izvozne i uvozne tarife i subvencije. U rešavanju nesolventnosti privrede, zanemarena su pravila pri rešavanju pojedinačnih slučajeva nesolventnosti tržišnih učesnika i njihovih stečaja (World Bank, 2017).

Ocena ekonomske slobode, prema kriterijumu Economic Freedom indeksa u okviru Heritage fondacije, karakteriše jasan stav u korelaciji ekonomskog rasta i stepena slobode različitih institucija i segmenata privrede koji utiču na poslovanje u jednoj ekonomiji. Međutim, potrebno je naznačiti da rang ocena, koji je najvećim delom subjektivnog karaktera i može se formirati bez mogućnosti pristupa i uvida u sve relevantne informacije, može predstaviti određenu privredu u izvesnom stepenu slobode koji se razlikuje od stvarnog (Economic Freedom, 2017).

Pojedine pozicije koje naglašavaju stepen sloboda teško su merljive i ne podležu u potpunosti projektovanju na zadatu skalu ocena. Jedan od nedostataka ovog indeksa jeste

i to što prilikom analize uzima u razmatranje 12 kriterijuma u okviru 4 grupe pokazatelja, ali u svojoj oceni zanemaruje makroekonomske pokazatelje koji su prisutni u konstrukciji drugih indeksa sloboda, kao što je slučaj sa kanadskim Fraser Institute indeksom EFW.

Pored toga, uvidom u stepen sloboda određene ekonomije može se proširiti slika celokupne privrede. Dopunjavanjem kvantitativnih ekonomskih pokazatelja indeksom ekonomske sloboda, stiče se kompletan utisak o načinu funkcionisanja tržišnih mehanizama unutar jedne privrede. Različite skale rangiranja pomenutih kompozitnih indeksa mogu ispoljiti određena odstupanja u poziciji pojedine zemlje na svetskoj listi, ali i pored toga primetan je zavidan stepen korespondencije među pozicijama zemalja na ovim listama.

### **Konkurentna pozicija i kvalitet institucija Srbije**

U daljem tekstu će biti analiziran trenutni položaj Republike Srbije, njenih institucija i ključnih pokazatelja konkurentnosti prema izveštajima Svetskog ekonomskog foruma, Doing Business liste, kao i Heritage fondacije, odnosno indeksu Economic Freedom-a. Uvidom u konkretne vrednosti indikatora i pozicije Srbije prema ovim izveštajima, kao i njihovim poređenjem sa indikatorima zemalja iz okruženja, moguće je sagledati kvalitet posmatranih institucija i trenutnu poziciju u regionalnim i međunarodnim okvirima.

Srbija se, prema izveštaju Svetskog ekonomskog foruma za 2017. godinu, nalazi na 90. mestu liste koja obuhvata 138 zemalja, što predstavlja napredak za četiri mesta u odnosu na prethodnu godinu (kada je bila rangirana kao 94. na listi). BDP po glavi stanovnika je 5.119,8 američkih dolara, a vrednost Globalnog indeksa konkurentnosti iznosi 4,0 i predstavlja neznatan napredak u odnosu na raniji period. Najbolju ocenu Srbija ima u grupi pokazatelja Osnovni zahtevi gde prednjači ocena stuba Zdravstvo i primarno obrazovanje sa ocenom 6,0. Nivo ocene ovog stuba konkurentnosti jednak je proseku Evrope i Severne Amerike i u izvesnom stepenu podiže rang ukupne ocene. Gledajući samo ovaj stub, Srbija se nalazi na 53. mestu od 138 zemalja.

zero, with this indicator getting the highest score 7, so the ranking of the overall score of this sub-indicator and the competitiveness pillar may misrepresent the situation in this field (World Economic Forum, 2017-2018).

In view of the above requirements, it is necessary to objectively consider the values of the sub-indicators and pillars of competitiveness and to determine ways of obtaining their assessment in order to be sure that the end indicators adequately reflect the state of a particular economy. An insight into the value of the ratings for the analyzed country can reveal the shortcomings of a particular economy, but it is also possible to find room for progress in certain segments. As a benchmark, economies with a similar institutional environment, and similar levels of development, wealth and resource efficiency can serve as benchmarks.

The shortcomings present in the Doing Business list, and the assessment of the market environment within that analysis, are reflected in the neglect of areas not covered by their analysis. Areas not included in the final assessment are: macroeconomic stability, development of the financial system, quality of the workforce, corruption, size of the market, as well as security gaps.

In addition, there are areas that are not covered by the analysis and are in the area under study and included in the ranking of the overall Doing Business list. For example, the analysis of tax payments does not include the personal income tax rate, while the analysis of credit conditions does not include the position of monetary policy or the availability of credit conditions. Likewise, in the area of trade analysis across borders, international trade, no attention is paid to export and import tariffs and subsidies. In resolving the insolvency of the economy, the rules for resolving individual cases of insolvency of market participants and their bankruptcies were ignored (World Bank, 2017).

The economic freedom rating, according to the criteria of the Economic Freedom Index within the Heritage Foundation, is characterized by a clear attitude in the correlation of economic growth and the degree of freedom of different institutions and segments of the economy that affect business in a given economy. However, it should be noted that ratings, which are mostly

subjective and can be formed without the ability to access and view all relevant information, can represent a particular economy in a degree of freedom that is different from the real situation (Economic Freedom, 2017).

Certain positions that emphasize the degree of freedom are difficult to measure and are not fully projectable on a given rating scale. One of the drawbacks of this index is that, when analyzing, it considers 12 criteria within 4 groups of indicators, but in its assessment ignores the macroeconomic indicators present in the construction of other indices of freedom, as is the case with the Canadian Fraser Institute index EFW.

In addition, an insight into the degree of freedom of a particular economy can broaden the picture of the whole economy. By supplementing quantitative economic indicators with the index of economic freedoms, it gets a complete impression of how market mechanisms work within one economy. The different ranking scales of the composite indices mentioned above may show some variations in the position of a particular country on the world list, but there is also an enviable degree of correspondence between the positions of countries on these lists.

## **Competitive Position and Quality of Serbian Institutions**

The following section will analyze the current position of the Republic of Serbia, its institutions and key competitiveness indicators according to the reports of the World Economic Forum, Doing Business List as well as the Heritage Foundation, or the Economic Freedom Index. By looking at the specific values of the indicators and the position of Serbia according to these reports, as well as their comparison with the indicators of the countries from the region, it is possible to see the quality of the observed institutions and the current position in the regional and international frameworks.

According to the 2017 World Economic Forum report, Serbia ranks 90<sup>th</sup> in the list of 138 countries, up four places from the previous year (when it was ranked 94<sup>th</sup> on the list). The GDP per capita is US \$ 5,119.8, and the value of the Global Competitiveness Index is 4.0 and represents a slight improvement over the previous period.

Sa druge strane, daleko najslabiju grupu pokazatelja konkurentnosti čine stubovi iz grupe Faktora inovativnosti i sofisticiranosti, sa rangom ocene (3,1). To je ispod proseka zemalja Zapadne Evrope, najviše usled jako niskih izdvajanja sredstava za istraživanje i razvoj u okviru domaćih preduzeća i slabe nabavke i uvođenja savremenih tehnologija. Ova grupa pokazatelja svrstava Srbiju tek na 120. mesto liste rangiranih država. Pokazatelji druge grupe konkurentnosti, faktori povećanja efikasnosti, takođe su ispod prosečnih vrednosti. Visoko obrazovanje i obuka odlikuju se najvišim rangom ocene u ovoj grupi pokazatelja, a ocene ovih stubova konkurentnosti nije se bitnije menjala, iako je status Srbije i mogući napredak konkurentskih prednosti najviše opredeljen statusom i kretanjem ovih indikatora.

Ono što pravi razliku, posmatrajući stubove konkurentnosti ovih zemalja, jesu drugi i treći stub konkurentnosti, odnosno faktori povećanja efikasnosti i faktori inovativnosti i sofisticiranosti. Ovo nam ukazuje na to da su pomenute zemlje, koje su sada članice EU, napredak ostvarile u najvećoj meri upravo kroz unapređenje podindikatora pomenutih stubova. Ipak, podindikator faktora inovativnosti i sofisticiranosti i dalje su ispod proseka razvijenih zemalja.

Prema stepenu lakoće poslovanja, odnosno Doing Business listi, Srbija se nalazi na 47. mestu od 190 rangiranih zemalja. Napredak u odnosu na prošlu godinu je značajan s obzirom da je u 2016. Srbija bila na 59. mestu ove liste. Rang ukupne ocene iznosi 72,29 (na skali od 1-100), a najbolja pozicija je na polju Međunarodne

Tabela 2: Rang i vrednost ocene Globalnog indeksa konkurentnosti za Srbiju, Hrvatsku, Bosnu i Hercegovinu, Rumuniju i Bugarsku u 2017.

Zemlja	BDP per capita US\$	GCI, rang	Ocena 1-7	Osnovni uslovi, rang	Faktori efikasnosti, rang	Faktori inovativnosti, rang
Srbija	5.119,8	90	4,0	4,3	3,9	3,1
Hrvatska	11.572,9	74	4,1	4,6	4,1	3,4
B i H	4.088,2	107	3,8	4,2	3,6	3,0
Rumunija	8.906,3	62	4,3	4,6	4,3	3,3
Bugarska	6.831,7	50	4,4	4,7	4,4	3,6

Izvor: Global Competitiveness Report 2016-2017, str. 326-327.

Poredeći Srbiju sa ostalim zemljama Balkana, na osnovu podataka WEF-a vidimo, na osnovu sličnosti pojedinih podataka, da je reč o zemljama koje su prošle ili još uvek prolaze proces tranzicije. Najbolje rangirana ekonomija prema GIK-u jeste Bugarska koja zauzima 50. mesto na listi sa najvišom ocenom konkurentnosti među analiziranim zemljama (4,4). Stubovi konkurentnosti beleže najviše vrednosti od svih posmatranih zemalja. Sličan rang ocene ima i Rumunija (4,3), dok se Hrvatska, poslednja pridružena članica EU, odlikuje daleko najvećom vrednošću BDP per capita od 11.572,9 američkih dolara, što u poređenju sa Srbijom predstavlja više od dvostruke vrednosti. Najniži rang ocene posmatranih zemalja ima Bosna i Hercegovina koja se nalazi na 107. mestu liste i ima najslabije ocene indikatora konkurentnosti.

trgovine gde je Srbija ocenjena kao 23. zemlja od svih rangiranih zemalja. Najnezavidnija situacija je sa kategorijom Proizvodnja električne energije, po kom parametru je Republika Srbija tek na 92. mestu. Pozitivan pomak ostvaren je kroz olakšavanje plaćanja poreza čime je rang ocene ovog indikatora porastao i uslovio promenu pozicije sa 143. na 78. mesto liste rangiranih zemalja prema ovom kriterijumu.

Posmatrane države regiona pokazuju sličan položaj u odnosu na Srbiju, kao što je slučaj i u analizi prema Globalnom indeksu konkurentnosti. Najbolju poziciju na Doing Business listi imaju Rumunija i Bugarska kao 36, odnosno 39. zemlja prema rangui ukupne ocene. Hrvatska zauzima 43, a Bosna i Hercegovina 81. mesto (World Bank, 2017). Ono što izdvaja Hrvatsku i Rumuniju, i umnogome doprinosi njihovom rejtingu, jeste najviša moguća

Serbia has the highest score in the indicator group Basic Requirements where the pillar score is Health and Primary Education with a score of 6.0. The rating level of this pillar of competition is equal to the average of Europe and North America and to some extent raises the ranking of the overall rating. Looking at this pillar alone, Serbia ranks 53<sup>rd</sup> out of 138 countries.

On the other hand, the weakest group of competitiveness indicators is the pillars of the Innovation and Sophistication Factors group, with a rating of (3.1). This is below the average of Western European countries, mainly due to the very low R&D allocation of domestic enterprises and poor procurement and introduction of modern technologies. This group of indicators ranked Serbia only 120<sup>th</sup> on the list of ranked countries. Indicators of the

pillars record the highest values of all countries observed. Romania (4.3) has a similar rating, while Croatia, the last associated EU member state, has by far the highest GDP per capita value of US \$ 11,572.9, which is more than double that of Serbia. Bosnia and Herzegovina has the lowest ranking of the observed countries, ranks as 107<sup>th</sup> in the list of competitiveness indicators.

What makes the difference when looking at the pillars of competitiveness of these countries are the second and third pillars of competitiveness, respectively, the factors of efficiency increase and the factors of innovation and sophistication. This indicates to us that the mentioned countries, which are now EU members, have made the most progress through the improvement of the sub-indicators of the mentioned pillars. However, the indicators of

Table 2: Rank and Value of the Global Competitiveness Index for Serbia, Croatia, Bosnia and Herzegovina, Romania and Bulgaria in 2017

Country	GDP per capita US\$	GCI, rank	Value 1-7	Basic requirements, rank	Efficiency Factors, rank	Innovation and sophistication factors, rank
Serbia	5,119.8	90	4.0	4.3	3.9	3.1
Croatia	11,572.9	74	4.1	4.6	4.1	3.4
B&H	4,088.2	107	3.8	4.2	3.6	3.0
Romania	8,906.3	62	4.3	4.6	4.3	3.3
Bulgaria	6,831.7	50	4.4	4.7	4.4	3.6

Source: Global Competitiveness Report 2016-2017, p. 326-327.

other competitiveness group, the Efficiency Increasing Factors, are also below average. Higher education and training have the highest ranking in this group of indicators, and the ratings of these pillars of competitiveness have not changed significantly, although the status of Serbia and the possible advancement of competitive advantages are mostly determined by the status and movement of these indicators.

Comparing Serbia with other Balkan countries, we see from WEF data, based on the similarity of individual data, that these are countries that have undergone or are still undergoing a transition process. The most ranked economy according to the GIK is Bulgaria, which ranks 50<sup>th</sup> in the list with the highest competitiveness score among the analyzed countries (4.4). Competitiveness

innovation and sophistication are still below the average of developed countries.

According to the degree of ease of doing business, or Doing Business list, Serbia ranks 47<sup>th</sup> out of 190 ranked countries. Progress over last year is significant given that in 2016 Serbia was ranked 59<sup>th</sup> on this list. The overall rating is 72.29 (on a scale of 1-100), and the best position is in the field of International Trade, where Serbia is ranked 23<sup>rd</sup> out of all ranked countries. The most unenviable situation is with the category Electricity Generation, by which parameter the Republic of Serbia is only in 92<sup>nd</sup> place. A positive shift was made by facilitating tax payments, which increased the ranking of this indicator and caused the change of position from 143<sup>rd</sup> to 78<sup>th</sup> place in the list of ranked countries according to this criterion.

ocena parametra Međunarodne trgovine. Relativno visok rejting ovog parametra kod svih posmatranih zemalja ukazuje na nužnost otvorenosti ovih privreda prema međunarodnom okruženju, čime se ostvaruje mogućnost za dalji privredni rast i razvoj. Ono što je negativna konstatacija parametara Doing Business liste posmatranih zemalja jeste jako niska ocena indikatora Dobijanje električne energije po čemu se sve posmatrane države nalaze na niskoj poziciji liste rangiranih zemalja.

Tabela 3: Ocena, trenutna i prethodna pozicija na Doing Business listi za Srbiju, Hrvatsku, Bosnu i Hercegovinu, Rumuniju i Bugarsku u 2017.

Zemlja	Ocena 0-100	Pozicija na DB listi 2017	Pozicija na DB listi 2016
Srbija	72,29	47	59
Hrvatska	72,99	43	40
B i H	63,87	81	79
Rumunija	74,26	36	37
Bugarska	73,51	39	38

Izvor: Doing Business Report 2017, str. 7.

Parametar koji meri stepen slobode tržišta i tržišnih učesnika, indeks Ekonomskih sloboda (Economic Freedom, The Heritage Foundation), svrstava Srbiju na 99. mesto rangiranih država sveta prema kriterijumu ekonomskih sloboda sa vrednošću indeksa od 58,9. Ova pozicija predstavlja nazadovanje u odnosu na izveštaj za prethodnu godinu kada se Srbija nalazila na 77. mestu ove liste (62,1 indeksnih poena).

Prosek ocene za region Evrope iznosi 68 indeksnih poena, a među evropskim zemljama Srbija zauzima nezavidno 39. mesto od 45 rangiranih zemalja. I prema svetskom nivou

ocene ekonomskih sloboda, Srbija se svrstava među „neslobodne“ (mostly unfree) privrede. Od svih pokazatelja stanja tržišnih institucija i ocene konkurentnosti, ovaj indeks karakteriše privredu Srbije sa najlošijom ocenom.

Međutim, prema izveštaju Economic Freedom-a, konkurentnost domaće privrede podržavaju niske fiksne stope poreza, relativna otvorenost prema međunarodnoj trgovini i sprovođenje tekućih regulatornih reformi koje podrazumevaju konsolidaciju,

privatizaciju i oživljavanje bankarskog sektora. Uprkos izvesnim naznakama napretka, ukupne ekonomske slobode u Srbiji su ograničene zbog, kako se naglašava u ovom izveštaju, nedostatka političke volje za preduzimanjem potrebnih reformi i sporog procesa njihove implementacije. Državna potrošnja se ocenjuje kao visoka i loša, a prvenstveni zahtevi tiču se sprovođenja institucionalnih reformi u cilju suzbijanja birokratije, smanjenja korupcije i jačanja pravosudnog sistema koji je, prema proceni, osetljiv

na političko uplitanje. Napredak je do sada ostvaren u poreskoj politici, monetarnoj stabilnosti i trgovini, dok još uvek zabrinjavaju i zahtevaju progres oblasti koje se tiču vladavine prava, državna potrošnja i stanje fiskalnih pokazatelja (Economic Freedom, 2017).

Prema ovom izveštaju ekonomija Srbije se karakteriše niskom stopom inflacije od 1,4%, stopom nezaposlenosti od 19% i učešćem javnog duga u BDP-u od 77,4%, dok je priliv stranih direktnih investicija u prethodnoj godini iznosio 2,3 milijarde američkih dolara (Economic Freedom, 2017). U poređenju sa

Tabela 4: Ocena ekonomskih sloboda i pozicije ključnih makroekonomskih pokazatelja za Srbiju, Hrvatsku, Bosnu i Hercegovinu, Rumuniju i Bugarsku u 2017.

Zemlja	EF, rang (svet/region)	Ocena 0-100	Nezaposlenost u %	% javnog duga u BDP	% rasta BDP za poslednjih 5 godina
Srbija	99/39	58,9	19	77,4	0,4
Hrvatska	95/37	59,4	16,1	87,7	- 0,4
B i H	92/36	60,2	30,3	45,5	1,3
Rumunija	39/20	69,7	6,9	39,4	2,4
Bugarska	47/23	67,9	9,8	26,9	1,5

Izvor: Economic Freedom Index, Heritage Foundation 2017, str. 216-220, 274, 278.

Observed countries in the region show a similar position to Serbia as in the Global Competitiveness Index. Romania and Bulgaria are ranked 36<sup>th</sup> and 39<sup>th</sup>, respectively, in the Doing Business list by overall ranking. Croatia ranks 43<sup>rd</sup> and Bosnia and Herzegovina 81<sup>st</sup> (World Bank, 2017). What sets Croatia and Romania apart, and largely contributes to their rating, is the highest possible estimate of the International Trade parameter. The relatively high rating of this parameter in all observed countries indicates the necessity of openness of these economies to the international environment, thus creating the opportunity for further economic growth and development. The negative finding of the parameters of the Doing Business list of the observed countries is the very low rating of the Obtaining Electricity indicator, whereby all the observed countries are in the low position on the global list.

The parameter that measures the degree of freedom of the market and market participants, the Economic Freedom Index (Heritage Foundation), ranks Serbia in 99<sup>th</sup> place in the ranked countries of the world according to the criterion of economic freedoms with an index value of 58.9. This position is a setback compared to the previous year's report when Serbia ranked 77<sup>th</sup> on this list (62.1 index points). The average score for the region of Europe is 68 index points, and among European countries, Serbia is ranked 39<sup>th</sup> out of 45 ranked countries. According to the global level of assessment of economic freedoms, Serbia ranks among the "mostly unfree" economies. Of all the

indicators of the state of market institutions and competitiveness assessment, this index characterizes the economy of Serbia with the worst rating.

However, according to the Economic Freedom report, the competitiveness of the domestic economy is supported by low fixed tax rates, relative openness to international trade and the implementation of ongoing regulatory reforms that entail consolidation, privatization and the revival of the banking sector. Despite some signs of progress, overall economic freedom in Serbia is limited, as highlighted in this

Table 3: Rating, Current and Previous Position on Doing Business List for Serbia, Croatia, Bosnia and Herzegovina, Romania and Bulgaria in 2017

Country	Rating 0-100	Position on DB list in 2017	Position on DB list in 2016
Serbia	72.29	47	59
Croatia	72.99	43	40
B&H	63.87	81	79
Romania	74.26	36	37
Bulgaria	73.51	39	38

Source: Doing Business Report 2017, p. 7.

report, by the lack of political will to undertake the necessary reforms and the slow process of their implementation. Government spending is judged to be high and poor, and the primary requirements concern the implementation of institutional reforms aimed at suppressing red tape, reducing corruption and strengthening the judiciary, which is estimated to be vulnerable to political interference. Progress has been made so far in tax policy, monetary stability and trade,

Table 4: Assessment of Economic Freedoms and the Position of Key Macroeconomic Indicators for Serbia, Croatia, Bosnia and Herzegovina, Romania and Bulgaria in 2017

Country	EF, rank (world/region)	Rating 0-100	Unemployment in %	% of public debt in GDP	% of GDP growth over the last 5 years
Serbia	99/39	58.9	19	77.4	0.4
Croatia	95/37	59.4	16.1	87.7	- 0.4
B&H	92/36	60.2	30.3	45.5	1.3
Romania	39/20	69.7	6.9	39.4	2.4
Bulgaria	47/23	67.9	9.8	26.9	1.5

Source: Economic Freedom Index, Heritage Foundation 2017, p. 216-220, 274, 278.

državama regiona, Srbija se uz Hrvatsku odlikuje visokom stopom učešća javnog duga u BDP-u kao i dvocifrenom stopom nezaposlenosti. Ono što je primetno jeste i to da je pozitivna stopa inflacije, od svih analiziranih zemalja, prisutna samo u Srbiji. U susjednim zemljama vidimo prisustvo blagog iznosa negativne inflacije, odnosno deflacije.

Najviši rang prema kriterijumu ekonomskih sloboda od ovih posmatranih država poseduju Rumunija i Bugarska (Rumunija 39, Bugarska 47. zemlja na listi), dok je Srbija u najnezavidnijem položaju među posmatranim

Tabela 5: Korelacioni pokazatelji Pirsonovog koeficijenta

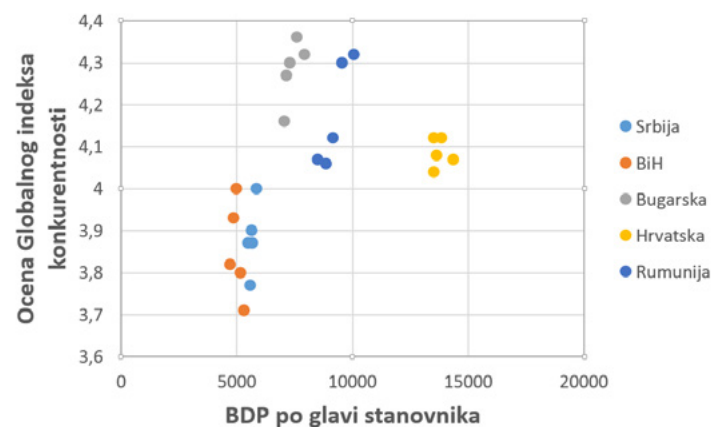
		BDP po glavi stanovnika	Ocena GIK-a
BDP po glavi stanovnika	Pirsonov koef. korelacije	1	0,447*
	Sig.		0,025
	N	25	25
Ocena GIK-a	Pirsonov koef. korelacije	0,447*	1
	Sig.	0,025	
	N	25	25

\*Korelacija je značajna na nivou 0,05

određenih zemalja prema ova dva parametra ali uz određena odstupanja, naročito kada je reč o značajnijoj promeni ocene GIK-a uz istovremenu stagnaciju BDP-a po stanovniku, što je primetno na primeru Bosne i Hercegovine i Rumunije. Takođe, primećujemo i to da Hrvatska u svim posmatranim godinama beleži najveći iznos BDP-a po glavi stanovnika, ali ne i najveću ocenu Globalnog indeksa konkurentnosti, što ukazuje na ne baš jak odnos ove dve varijable.

Precizniji odnos među posmatranim varijablama i njihova međuzavisnost u poslednjih pet godina može se utvrditi putem statističkog metoda korelacije, tačnije Pirsonovog koeficijenta linearne korelacije. Primenom ove metode biće utvrđen smer i intenzitet veze između ocene Globalnog indeksa konkurentnosti i BDP-a po glavi stanovnika, što omogućava precizan uvid u njihov odnos. Dobijeni rezultati mogu se videti u tabeli 5.

Grafikon 1: Ocene Globalnog indeksa konkurentnosti i BDP-a po glavi stanovnika za posmatrane zemlje za period od 2013. do 2017. godine



Izvor: Projekcija autora prema podacima WEF-a (The Global Competitiveness Report)

zemljama regiona sa najnižim indeksom ocene Economic Freedom-a. Prema kategorijama ocene proizilazi da je ocena otvorenosti tržišta zadovoljavajuća za sve posmatrane zemlje regiona, dok se kao najlošije ocenjeni ističu indikatori vladavine prava.

Validnost ocena institucija i parametara konkurentnosti mogu se uporediti sa privrednim rastom, odnosno razvijenošću jedne privrede merenim BDP-om po glavi stanovnika. Na grafikonu 1 može se uočiti odnos ocene konkurentnosti prema GIK-u i BDP-a po glavi stanovnika za posmatrane zemlje. Za posmatrani period od pet godina uočava se koncentrisanost podataka

Dobijena vrednost Pirsonovog koeficijenta je pozitivna, što ukazuje na to da postoji pozitivna korelacija između ocene Globalnog indeksa konkurentnosti i BDP-a po glavi stanovnika, a vrednost koeficijenta od 0,447 ( $r=0,447$ ) pokazuje da je odnos ovih promenljivih na srednjem nivou.

## Zaključak

Nivo konkurentnosti jedne privrede svakako predstavlja jedan od osnovnih faktora rasta i unapređenja životnog standarda svake tržišno orijentisane ekonomije. Ostvarenjem konkurentskih prednosti stiže se mogućnost

Table 5: Pearson Coefficient Correlation Indicators

		GDP per capita	GCI assessment
GDP per capita	Pearson correlation coeff.	1	0.447*
	Sig.		0.025
	N	25	25
GCI assessment	Pearson correlation coeff.	0.447*	1
	Sig.	0.025	
	N	25	25

\*The correlation is significant at the 0.05 level

while still worrying and requiring progress in the areas of rule of law, government spending and the state of fiscal indicators (Economic Freedom, 2017).

According to this report, Serbia's economy is characterized by a low inflation rate of 1.4%, unemployment rate of 19% and a share of public debt in GDP of 77.4%, while the inflow of foreign direct investment in the previous year amounted to US\$ 2.3 billion (Economic Freedom, 2017). Compared to the countries in the region, Serbia is characterized by a high public debt-to-GDP ratio and a double-digit unemployment rate alongside Croatia. What is noticeable is that a positive inflation rate, out of all the analyzed countries, is present only in Serbia. In the neighboring countries, we see the presence of a slight amount of negative inflation, i.e. deflation.

Romania and Bulgaria have the highest rank on the criterion of economic freedom from these observed countries (Romania is 39<sup>th</sup>, Bulgaria is 47<sup>th</sup> on the list), while Serbia is in the most unenviable position among the observed countries of the region with the lowest Economic Freedom rating index. According to the rating categories, it appears that the market openness rating is satisfactory for all observed countries in the region, while the rule of law indicators are the worst rated.

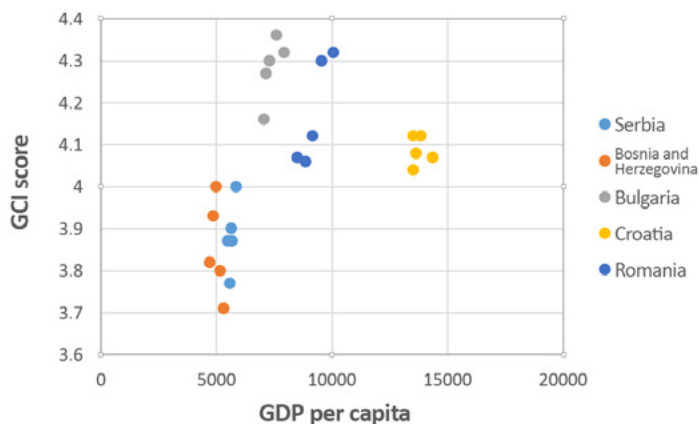
The validity of the institutions' ratings and competitiveness parameters can be compared with economic growth, that is, the development of an economy as measured by GDP per capita. Chart 1 shows the ratio of competitiveness assessment to GCI and GDP per capita for the observed countries. For the observed period

of five years, there is a concentration of data of certain countries according to these two parameters, but with certain deviations, especially when it comes to a significant change in the GCI estimate with the simultaneous stagnation of GDP per capita, which is

noticeable in the case of Bosnia and Herzegovina and Romania. Also, we note that in all observed years, Croatia has recorded the highest amount of GDP per capita but not the highest score of the Global Competitiveness Index, which indicates a not very strong relationship between these two variables.

The more precise relationship between the observed variables and their interdependence over the last five years can be determined by the statistical method of correlation, more precisely the Pearson coefficient of linear correlation.

Chart 1: Global Competitiveness Index and GDP Per Capita Estimates for Observed Countries for 2013-2017



Source: Author projection according to WEF data (The Global Competitiveness Report)

Applying this method will determine the direction and intensity of the link between the Global Competitiveness Index and GDP per capita assessment, which allows for an accurate insight into their relationship. The results obtained can be seen in Table 5.

The Pearson coefficient obtained is positive, indicating that there is a positive correlation between the Global Competitiveness Index score and GDP per capita, and the coefficient value of 0.447 ( $r = 0.447$ ) shows that the ratio of these variables is medium.



razvoja celokupne privrede čije pozitivne efekte mogu osetiti pojedini tržišni akteri, ali i celokupan sistem jedne nacionalne privrede, naročito ukoliko se odgovarajuća strategija unapređenja konkurentnosti primenjuje na dugoročnom planu.

Pitanje adekvatnosti ocenjivanja pojedinih aspekata konkurentnosti i ukupne ocene konkurentnosti jedne privrede prolazi kroz stalan proces ispitivanja. Pri tome se ovlašćene institucije, zadužene za rangiranje ovih parametara, konstantno prilagođavaju određenim bitnim determinantama konkurentnosti, trudeći se da svojom metodologijom i projekcijom ukupnog ranga zadovolje potrebe adekvatnog ocenjivanja. Određeni parametri su diskutabilni iz ugla valjanosti i reprezentativnosti dobijenih vrednosti, pa se tako može doći u poziciju da ukupan rang ne pokazuje pravo stanje neke privrede ili prikazuje neadekvatan odnos pojedinih svetskih privreda. U cilju prevazileženja ovog ograničenja potrebno je neprestano ukazivati na određene nedostatke i, ukoliko je to moguće, ispraviti ih u kratkom

roku. Pojedine segmente privrede ipak nije lako oceniti zbog načina prikupljanja i istinitosti pojedinih podataka, pa je poželjno određene indikatore i njihove vrednosti uzeti sa rezervom prilikom donošenja konačnog suda. Kreatori ekonomske politike, naročito kada je reč o zemljama koje su nedavno izašle iz procesa tranzicije, ili se još uvek nalaze u tranziciji, treba da pridaju značaj unapređenju tržišnog ambijenta, vodeći se unapređenjem indikatora utvrđenih od strane institucija za ocenu konkurentnosti i stanja privrede.

Sagledavanjem odnosa i analizom ocene zemalja prema Globalnom indeksu konkurentnosti i BDP-a po glavi stanovnika, došlo se do zaključka da postoji pozitivna korelacija između ova dva pokazatelja, ali je ona na srednjem nivou i pokazuje određena odstupanja na primeru pojedinih posmatranih zemalja. Ovime je potvrđena hipoteza da kompozitni indeksi u merenju konkurentnosti ne odslikavaju u potpunosti razvijenost jedne privrede, a veza između ove dve pomenute varijable je na srednjem nivou korelacije, mereno Pirsonovim koeficijentom.

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## Conclusion

The level of competitiveness of an economy is certainly one of the basic factors for the growth and improvement of the standard of living in any market-oriented economy. Achieving competitive advantages gives rise to the possibility of developing an entire economy whose positive effects can be felt by individual market players, but also the whole system of a national economy, especially if the appropriate strategy for improving competitiveness is applied in the long term.

The question of the adequacy of the assessment of certain aspects of competitiveness and the overall assessment of the competitiveness of an economy is undergoing a continuous examination process. In doing so, the authorized institutions in charge of ranking these parameters are constantly adapting to certain important determinants of competitiveness, striving to meet the needs of adequate assessment with their methodology and projection of the overall ranking. Certain parameters are debatable from the angle of validity and representativeness of the obtained values, so one can come to the position that the overall ranking does not show the true state of an economy or depict the inadequate relationship of individual world

economies. In order to overcome this limitation, certain deficiencies should be constantly pointed out and, if possible, corrected in the short term. However, it is not easy to evaluate certain segments of the economy because of the way data is collected and the truthfulness of data, so it is advisable to reserve certain indicators and their values when making a final judgment. Economic policy makers, especially when it comes to countries that have recently left the transition process or are still in transition, should attach importance to improving the market environment, taking into account the improvement of indicators established by the institutions for assessing competitiveness and the state of the economy.

Considering the relations and analyzing the country's assessment of the Global Competitiveness Index and GDP per capita, it was concluded that there is a positive correlation between the two indicators, but it is at the intermediate level and shows some variations in the case of some observed countries. This confirms the hypothesis that composite indices in measuring competitiveness do not fully reflect the development of an economy, and the relationship between these two variables is at the mean level of correlation, as measured by the Pearson coefficient.

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