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Reč urednika

Trenutna rusko-ukrajinska kriza, sukobi na Bliskom Istoku, američke ekonomske sankcije protiv određenih zemalja, najavljeni porast broja članica BRICS-a i njihova sve veća uloga u svetskoj ekonomiji, veći udeo nacionalnih valuta u međudržavnim trgovinskim razmenama, poremećaji u trgovini na svetski bitnim ekonomskim rutama, kao i promene geopolitičkog kursa zemalja na afričkom kontinentu, presudno utiču na funkcionisanje svetske ekonomije. Dodatno, veštačka inteligencija se sve više primenjuje u poslovima sa niskim nivoom znanja, što dovodi do potpune ili delimične eliminacije radne snage u pojedinim granama. Pruduktivnost i fleksibilnost i dalje ostaju najbitniji faktori uspeha kako privrednih subjekata, tako i radne snage.

Prvi rad, Constantinos Challoumis pod nazivom "Impact factor of bureaucracy to the tax system", govori o senzibilnosti oporezivanja u birokratiji. Dakle, ovo je istraživanje o faktoru uticaja poreznih prihoda zemalja koje su poreski rajevi. S gledišta koliko je pogođena kompanija koja učestvuje u kontrolisanim transakcijama, može se dobiti uticaj birokratije, kada ne postoji taj faktor s obzirom na slučaj koji postoji u analizi transfernih cena. Metod analize uticaja birokratije u kom-

binaciji sa faktorom uticaja poreskih prihoda je Q.E. metod.

Drugi rad, autora Milana Novovića, Aleksandra Lukića i Nataše Marjanović pod nazivom "Javni dug Republike Srbije u novom milenijumu: analiza stanja i tendencije kretanja u budućnosti", se bavi analizom javnog duga u Republici Srbiji u vremenskom intervalu od 2000. do kraja 2022. godine. Posmatranjem podataka o kretanju javnog duga u novom milenijumu primetno je da postoji trend njegovog porasta nakon svetske ekonomske krize 2008. godine. Osnovni uzrok takvih kretanja je prekomerna potrošnja državnih organa i snižavanje poreskih prihoda, što je posledica, pre svega, smanjene ekonomske aktivnosti usled globalnih negativnih tendencija u pojedinim godinama. Visok nivo javnog duga predstavlja glavnu barijeru za privredni razvoj Republike Srbije. Analiza podataka u posmatranom periodu ukazuje da se problem rasta javnog duga može rešiti povećanjem bruto domaćeg proizvoda i smanjenjem javne potrošnje.

Treći rad, autora Slobodana Milića pod nazivom "Srbija između zapadnog individualizma i pravoslavnog kolektivism", govori o problemima koje sa sobom nose suprotnosti između individualizma i kolektivism. Rasprave o ovim suprotnostima su i danas prisutne u akademskim krugovima. U Istočnim evropskim zemljama individualizam je postao

aktuelan nakon pada Berlinskog zida, do tada je preovladavao kolektivistički duh. Postsocijalističke istočnoevropske zemlje su prihvatanjem neoliberalizma započele, ne samo ekonomsku reformu, već i obrazovnu, zdravstvenu, kulturnu itd. Ta reforma je značila i prelazak iz kolektivismu u individualizam, jer savremeni neoliberalni kapitalizam pripada individualizmu u kojem je glavni fokus usmeren ka pojedincu kao najvećem potrošaču. Prelazak na neoliberalni kapitalizam doveo je do toga da je značajan broj radnika ostao bez posla nakon liberalizacije, deregulacije i privatizacije srpske privrede, što je rezultiralo anemičnom demografskom slikom Srbije, koja se iz godine u godinu značajno pogoršava. Srbija danas ostaje bez radno sposobnog stanovništva koje, pored mladih i visokoobrazovanih radnika, čine i zanatlije različitih zanimanja. Za Srpske političke elite put u EU se ne dovodi u pitanje. Na tom putu smo već dvadeset godina i čini se da se nismo mnogo pomakli od početka. Po principu, „korak napred, nazad dva“.

Četvrti rad, autora Branislava Dimitrijevića, Milice Stanković i Tiane Anđelković pod nazivom "Sinergija cirkularne ekonomije i 3D štampe", konstatuje da je cirkularna ekonomija antiteza linearnoj ekonomiji. Cirkularni proizvodi su dizajnirani tako da se mogu lako ponovo koristiti, rastavljati, popravljati ili reci-

klirati. U sektoru 3D štampanja, postoje brojne inicijative za razvoj proizvodnih procesa u kojima se otpad ponovo koristi i prenamenjuje, čime se smanjuje uticaj aditivne proizvodnje na životnu sredinu. Da bi sinergija 3D štampe i cirkularne ekonomije bila potpuna neophodno je da svi akteri koji učestvuju u procesu projektovanja i proizvodnje poštuju principe modela održive proizvodnje i maksimizacije efikasnosti procesa i materijala. 3D štampa može olakšati cirkularnost u različitim fazama; proizvodnja, održavanje, ponovna upotreba, ponovna proizvodnja i recikliranje. Cilj rada je da ukaže na sinergiju između cirkularne ekonomije i 3D štampe, sa fokusom na doprinose 3D štampe cirkularnoj ekonomiji.

Peti rad, autora Ivana Mirovića i Vesne Petrović pod nazivom "Budućnost dolara kao svetske rezervne valute u novim međunarodnim okolnostima", naglašava da je američki dolar svetska rezervna valuta, a takođe i valuta koja se najčešće koristi za trgovinske i druge međunarodne transakcije. Zbog aktuelnih geopolitičkih, ekonomskih i monetarnih kretanja, evidentno je da veliki broj zemalja traži načine da se udalji od dominacije dolara, kao vodeće svetske valute. Rizik od dedolarizacije porastao je u poslednje vreme, delimično zbog trenutne rusko-ukrajinske krize, kao i američkih ekonomskih sankcija protiv određe-

nih zemalja, a delom zbog sve veće uloge zemalja BRICS-a u svetskoj ekonomiji. Ovaj rad tvrdi i dokazuje hipotezu da su dolar kao svetska rezervna valuta i međunarodni monetarni sistem dve strane istog novčića, da potpuni gubitak poverenja u dolar dovodi do kolapsa globalnog monetarnog sistema i obrnuto, kao i da bi uništenje monetarnog sistema dovelo do nestanka dolara. Rad obrazlaže dolar kao rezervnu svetsku valutu, teorije o novcu, dolar kao dug, deficite i monetarne ekvivalente, dolar i slobodna tržišta, MMF kao svetsku banku i SDR kao svetski novac, potražnju za zlatom kao pokazatelj nepoverenja u dolar, nove globalne igrače i svetsku rezervnu valutu, proširenje BRICS-a i dedolarizaciju, a finalizovan je zaključnim primedbama.

Šesti rad, autora Ivana Kostadinovića, Danijele Krasić i Dragane Nešović pod nazivom "Pravni i ekonomski aspekti kršenja međunarodnih sporazuma o prodaji robe i usluga", bavi se prodajom koja je dostigla ogromne dimenzije širom sveta pod trenutnim poslovnim okruženjem koje su doneli procesi globalizacije, deregulacije i liberalizacije. Ugovori o prodaji su ključni u današnjoj globalnoj trgovini zbog ovih faktora. Spektar robnih razmena koje su predmet komercijalnih transakcija i, produženjem, sporazumi su se u velikoj meri proširili kao rezultat rasta industrije, ekonomije

i multinacionalnih i transnacionalnih korporacija. Ugovori o prodaji imaju različite standarde kolizije, nedoumice i tretmane pored njihovih posledica po ekonomiju i zakon. S obzirom na značaj cena u svim ekonomskim domenima i ogroman obim međunarodne trgovine, ugovori o prodaji imaju veliki značaj u današnjoj međunarodnoj trgovini. Raspon robe koja podleže komercijalnim transakcijama značajno se proširio rastom industrije, ekonomije i multinacionalnih i transnacionalnih korporacija. Ugovor o prodaji ima implikacije na ekonomiju i zakon, a njegove osnovne komponente tretirane su drugačije u pravnoj nauci. Rast i razvoj svih aktivnosti kompanija olakšani su postojanjem međunarodne pravne regulative.

Sedmi rad, autora Nikole Pavlovića, Marka Savića i Aleksandra Stankovića pod nazivom "Uticao digitalnog marketinga na kupce", ima za cilj da se istraži značaj i uticaj online marketinga na kupce, da se istraže metode društvenih medija i predstavi najbolji način da se dođe do kupaca. Cilj je da se pokaže da li su marketinške metode koje koriste kompanije privlačne kupcima, kao i da se otkrije koja je marketinška strategija najuspešnija za ciljno tržište organizovanjem ankete koja je fokusirana na društvene mreže i email marketing, kao i da se pred-

vidi gde kupci žele da vide poslovni marketing.

Osmi rad, autora Nedeljke Dedović pod nazivom "Značaj, sadržaj i životni ciklusi investicionih projekata u savremenim uslovima", naglašava da je investiranje veoma složen i kompleksan proces, koji obuhvata i niz potprocesa, faza i pojedinačnih aktivnosti. Sadrži dve veoma bitne i međusobno povezane dimenzije – vreme i neizvesnost. Vremenski period od pojave ideje o potrebi investiranja do realizacije investicije je najčešće je veoma dug. Sledeći korak je priprema za realizaciju investicije, zatim sledi realizacija investicije i na kraju priprema proizvodnje. Posebna grupa koju čine investicioni projekti usmereni na izgradnju i opremanja objekata različitih namena, tema su ovog rada.

Deveti rad, autora Vladimira Skropada pod nazivom "Rizici planskog upravljanja kineskom ekonomijom", analizira stanje kineske ekonomije. Na osnovu zvanične statistike NRK i analitičkih podataka dobijenih iz savremenih naučnih i javnih istraživanja, proizilazi da je završeno tzv. kinesko ekonomsko čudo. Brzi razvoj Kine bio je vođen upotrebom jeftine radne snage i politike otvorenih vrata za zapadne investicije prema pravilima osnovnih tržišnih zakona nakon reformi Deng Xiaopinga iz 1977. godine. Sva tri faktora su iscrpila svoje resurse. Dalji rast životnog standarda i obra-

zovanja počeo je predstavljati opasnost za komunistički režim. Ignorisanje zakona slobodne tržišne ekonomije, kreiranje vještačkih planova za podsticanje rasta, suzbijanje preduzetnika, pritisak sankcija, trka u naoružanju, agresivni planovi u regionu i demografske promene neminovno dovode do opasnih posledica - usporavanja privrednog rasta, opterećenja duga i odliv kapitala.

Poslovni ambient će dodatno zakomplikovati namera zemalja EU da konfiskuju zamrznuta sredstva Rusije i u budućnosti transferuju Ukrajini, čime se podriva sigurnost međunarodnog finansijskog sistema. To može dovesti do pada poslovne aktivnosti sa zemljama Zapada i značajno uticati na strateško odlučivanje kompanija iz ostatka sveta.

Uticaj veštačke inteligencije na rad će verovatno biti višestruk. Veštačka inteligencija će moći da dopuni rad koji obavljaju ljudi, a u nekim poslovima i da zameni ljude.

Radovi objavljeni u magazinu "Ekonomske signali" u fokusu imaju aktuelne izazove u ekonomiji.

Trenutne promenama u međunarodnim odnosima, kao i ubrzani razvoj i primena novih tehnologija, čine srž globale ekonomije..

Glavni i odgovorni urednik
dr Boris Siljković, prof. s.s.

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IMPACT FACTOR OF BUREAUCRACY TO THE TAX SYSTEM

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Research

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Abstract: This paper is about the sensibility of taxation in the bureaucracy. Therefore, this study is for the impact factor of the tax revenues of the countries which are tax havens subject to the trustworthiness of the tax system. From the view of how much is affected a company that participates in controlled transactions, can obtain the impact of bureaucracy, when there is not that factor with the case that exists in the analysis of transfer pricing. The method of analysis of the impact of bureaucracy in combination with the impact factor of tax revenues is the Q.E. method. It determined the behavior of the tax system subject to bureaucracy.

Keywords: taxes, fees, bureaucracy

1. Introduction

Bureaucracy shall be distinguished at least in the following cases:

Bureaucracy as an organization is a form of organization of an administrative mechanism characterized by fragmentation of labor, the existence of a strict hierarchy, a relatively predictable workflow and a particu-

lar culture (Anguera-Torrell et al., 2020; Bento, 2009; Carfora et al., 2021; De Araujo et al., 2020; de Vasconcelos et al., 2019; Kongats et al., 2019; OECD, 2017; Omrani et al., 2021; Taub, 2015; Wu et al., 2019).

Bureaucracy as a functional feature is the operation of an organization in a complex way, with rigid, de-

manding, opaque, impersonal procedures, with unpredictable outcomes and ultimately inefficiency (Challoumis, 2018c, 2019c, 2019e, 2019f, 2020c, 2021f).

The quantification analysis of the sensitivity of the tax system to the bureaucracy is done by the application of the Q.E. method. The background of this method stands on the behavior analysis of mathematical equations. Thus, there we determine two axes to the analysis of the Q.E. method which is:

The analysis of the behavior of the model stands on the scrutiny of the structural characteristics of each model accordingly allowing with that way the extraction of general conclusions about the model which is under examination.

The frequency analysis behavior scrutinizes the behavior of the dependent variables, but from the view of the number of appearances of a variable than another, estimating the impact that one independent variable has with one or more other independent variables.

Therefrom, using the prior two axes of methodology, is plausible to extract conclusions about the behavior of mathematical equations, and how some factors react to changes. Consequently, is plausible the

transformation of quality data to quantity data (Acs et al., 2016; Cascajo et al., 2018; de A. Dantas et al., 2018; Khadzhyradieva et al., 2019; Kreft & Sobel, 2005; Maxwell, 2020; Muñoz & Flores, 2020; Ribašauskiene et al., 2019; Romme & Meijer, 2020; Sikka, 2018; Suslov & Basareva, 2020; Swanstrom et al., 2002). This method is applied for this study for controlled transactions and more precisely in the variables of the impact factor of the tax revenue. The mechanism of Q.E. is based on the dependent variables which are modified for the generator. Thereupon, the generator produces values for the dependent variables (Challoumis, 2018a, 2018b, 2019d, 2019g, 2020b, 2020a, 2021e, 2021b, 2021d, 2021g). The extracted values of the generator permit the creation of values, which are the base for comparisons, and for the scrutiny of mathematical equations (Béland, 2017; Bourdin & Nadou, 2018; Burstein, 2020; de Queiroz & Capelari, 2020; Forson, 2020; Hartz & John, 2009; Jeon et al., 2020; Khan & Liu, 2019; Schwartz, 2019; Waardenburg et al., 2020). Thus, is plausible to quantify qualitative data. In our analysis, this method is used for clarification of the behavior of the impact factor of the global tax revenue (Nowlin et al., 2020)

2. Impact factor of tax revenues

The impact factor of tax revenues of countries which are tax heavens, s according to the “Methods of controlled transactions and identifications of tax avoidance” is determined as that:

$$s = \frac{k+l}{r+c+t+i} \quad (1)$$

Therefore are countries that receive the products that are taxed in different countries. This allocation of profits between profits and losses permits the enterprises which participate in controlled transactions of the transfer pricing activities to maximize their utility. But, contemporaneously the tax revenue from a global view is declined. Then, the loss of tax income from some countries is more than the profits that make the countries which are tax havens. Thereupon, the symbol of s the impact factor of tax revenue from a global view, and there are some coefficients which are $k, l, r, t,$ and $c.$] Thus, the symbol of k is about the impact factor of capital, l is the impact factor about the liability of the authorities on the tax system. The interpretation of the liability is about how much unbalanced it is the tax system. The parameter of r is about the risk, the t is about how much trustworthy is

the tax system from the view of bureaucracy. This means that t examines the case of the sensitivity of the tax system to the bureaucracy. Additionally, the symbol of c is about the cost of enterprises. The symbols with the “ \sim ” are accordingly the same thing but from the view of uncontrolled transactions. Thus, the numerator is proportional to the income of taxes, as the investments and the stable tax environments, with a lack of bureaucracy, enhance the tax income. On the other hand, the denominator is inverted and proportional to the tax income, as the risk, the cost, and the unbalance of taxation cause less tax income. Moreover, for \tilde{s} we have that:

$$\tilde{s} = \frac{\tilde{k}+\tilde{l}}{\tilde{r}+\tilde{c}+\tilde{t}+\tilde{i}} \quad (2)$$

Since eq. (3) is determined the aggregate impact factor of tax revenues, which is symbolized by \hat{s} , and is defined by the next equation:

$$\hat{s} = s + \tilde{s} \quad (3)$$

Based on the prior equations we could proceed to the identification of the behavior of the impact factors of tax revenues in the case of tax heavens, and in the case of the non-tax heavens (Challoumis, 2018e, 2018d, 2019a, 2019b, 2021c, 2021a). Then, s is a factor that allows the comparison between the controlled the uncontrolled transactions. Thence is

plausible to have a standalone behavior analysis of controlled transactions and a combined behavior analysis between the controlled transactions with the uncontrolled transactions. The next section is analyzed the impact factor of tax revenues with the rest impact factors.

3. Determination of bureaucracy

The determination of bureaucracy is established by the impact factor of tax sensibility (the level of bureaucracy). To determine the way that bureaucracy affects global tax revenues, we proceed with the following diversion:

- In the first application of Q.E. methodology are applied all the factors of the global tax revenue,
- In the second application of the Q.E. methodology are applied all the factors are except the factor which is under review.

This methodology is illustrated below:

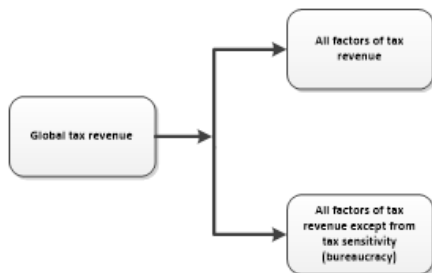


Figure 1: Steps of Q.E. application

The previous scheme is shown the methodology followed by the Q.E. method to determine the behavior of the global tax revenue in the case that we have the existence of the bureaucracy and the ideal case that this factor is avoided.

4. Impact factor of tax revenues on the bureaucracy

The bureaucracy is in interaction with the impact factor of tax revenues. In this behavioral analysis is determined the model which clarifies the behavior of the impact factor of tax revenues with the existence and with the avoidance of the impact factor of tax sensibility. All the necessary equations have been referred to in the previous sections, except for one condition. Then, for the application of the Q.E. method we use the following condition, which is:

$$t > l > i > r > k > c \quad (4)$$

Consequently, is plausible to proceed to a quantitative analysis using eq. (1), (2), and (4). Thence, applying the Q.E. method and choosing the appropriate magnitudes for the coefficient, we have that:

Factors	Values of s	Values of s'
k	0,4	0,4
i	0.6	0.6
l	0.7	0.7
r	0.5	0.5
c	0.3	0.3
t	0.8	-
fs	<0.3	<0.3
fs _i	<0.3	<0.3

Table 1: Compiling coefficients

The generator of this procedure is based on the coefficients of the previous table. Thereupon, the factors have an upper limit of 1, and a lower limit of 0. Should, be notified that s and \tilde{s} are plausible to receive values greater than one as their mathematical structure allows this. After 461 iterations extracted the next diagrams:

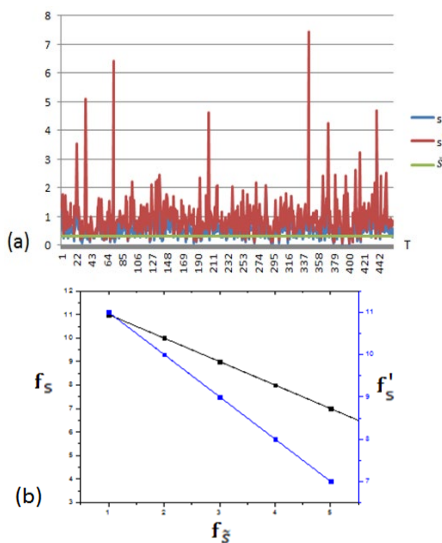


Figure 2: (a) Impact factors of s (series 1) and s' (series 2), (b) frequencies of s and s'

In the previous scheme, we used the \tilde{s} , which here is common for the tangibles and the intangibles. Then s (blue line) is symbolized the case that we have the impact factor of t which symbolizes the sensitivity of the tax system (existence of increased bureaucracy). With s' (red line) is symbolized the case that we have the absence of the impact factor of sensitivity of the tax system, t . Then in the case of s we have an unstable tax system, and with s' we have a stable tax system, with a high bureaucracy. Then, when there exists a tax system that is characterized by increased bureaucracy (blue line) the tax revenue is decreased. In the case that there we have avoided the impact factor of tax sensitivity (bureaucracy) the tax revenue from a global view is increased rapidly. Moreover, in diagram (b) of figure 2, we obtain that the frequency of the f_s (black line), where used the impact factor of t , we have more companies that participate in controlled transactions, than in the case of f_s' (blue line) where the tax system has a lack of bureaucracy.

Thereupon, we obtain as we expected that the bureaucracy causes a decrease in global tax revenue, and increases the number of companies that participate in controlled transactions.

5. Conclusion

This paper examined the case of bureaucracy and the way that interacts with global tax revenue. Then the companies which participate in controlled transactions prefer as expected the tax environments which have no unstable law rules and insecure economies. This has an impact on the companies which participate in controlled transactions to be increased in numbers because that way can allocate better their profits and losses. Then, the decrease in bureaucracy could rapidly increase the tax income from a global view.

Appendix

The following programmed is used for the current results:

```
%Q.E. method Constantinos  
Challoumis 2017 (c)(r)All  
Rights Reserved
```

```
q=0;  
while q<10  
q=q+1;  
count=0;  
counts=1;  
counts51=1;  
  
while count<10  
if rand()<9  
t=0.8*rand();  
end  
if rand()<9  
l=0.7*rand();  
end
```

```
if rand()<9  
i=0.6*rand();  
end  
if rand()<9  
r=0.5*rand();  
end  
if rand()<9  
k=0.4*rand();  
end  
if rand()<9  
c=0.3*rand();  
end  
  
s=(k+1)/(r+c+t+i);  
s5=(l+1)/(r+c+i);  
  
s_tilda=0.3;  
count=count+1  
if s<0.3 %it is one  
limit for comparison above  
than this we think s_tilda,  
but is not the same one as  
s_tilda  
%and it is used as  
meter to compare all the  
different  
%counts1,counts2,....  
counts=counts+1;  
else  
counts1=counts1+1;  
end  
  
if s5<0.3  
counts51=counts51+1;  
else  
counts53=counts53+1;  
end  
  
%to the first compile must  
omit ;tec  
end  
tec=[count,counts51,t,l,i,r  
,k,c,s,s5,s_tilda;tec];  
end
```

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PUBLIC DEBT OF THE REPUBLIC OF SERBIA IN THE NEW MILLENNIUM: ANALYSIS OF THE SITUATION AND FUTURE TREBDS

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Abstract: The subject of research in the paper is focused on the analysis of public debt in the Republic of Serbia in the time interval from 2000 to the end of 2022. Observing the data on the movement of public debt in the new millennium, it is noticeable that there is a trend of its increase after the world economic crisis of 2008. The main cause of such trends is the excessive consumption of state authorities and the reduction of tax revenues, which is a consequence, first of all, of reduced economic activity due to global negative tendencies in certain years. The high level of public debt represents the main barrier for the economic development of the Republic of Serbia. Analysis of the data in the observed period indicates that the problem of public debt growth can be solved by increasing the gross domestic product and reducing public spending.

Keywords: oil and oil derivatives, import dependency, supply management

1. Introduction

The term public debt is generally used as a synonym for financing the public sector deficit and represents one of the key variables in financing government activities. It consists of monetary amounts borrowed by the state in order to finance past budget deficits (Kolačević & Hreljac, 2011, 209). This means that the public debt is the accumulated surplus of spending over the revenues that were realized in the previous period (Rosen, 1999, 458). In other words, it consolidates the total budget deficit, in the sense that the state increases the public debt when the budget continuously generates higher expenditures than revenues.

A major problem of the Republic of Serbia for many years and decades is the chronic occurrence of the budget deficit, i.e. constantly higher public expenditures than public revenues. From this arises the need of the Republic of Serbia to borrow from international financial institutions, which implies the conclusion of credit agreements with the World Bank and the International Monetary Fund. According to the Law on Public Debt, the Republic of Serbia can borrow in the country and abroad, with the aim of financing the budget deficit, current liquidity, refi-

ancing due obligations on the basis of public debt, for financing investment and program projects and the acquisition of financial assets, as well as for fulfilling obligations under given guarantees (Zakon o javnom dugu). Accordingly, the public debt of the Republic of Serbia includes all direct and indirect obligations of the state towards domestic and foreign legal and natural persons.

Considering the importance that public debt has on domestic accumulation and the functioning of detention, the subject of research in the paper will be the analysis of the state and trends of the public debt of the Republic of Serbia in the new millennium. The aim of the work is to monitor the public debt and make recommendations for its reduction. In the Republic of Serbia, the level of public debt in the future will depend on the growth of the gross domestic product, and above all on the reduction of the fiscal deficit.

2. State and structure of the public debt at the beginning of the new millennium

The public debt of the Republic of Serbia includes old foreign currency savings, obligations of social, private and state banks and companies, as well as borrowing to maintain current liquidity (Arsić et al., 2015,

182). In order to analyze the public debt of the Republic of Serbia as accurately as possible, the total observed period was divided into three phases. The first phase refers to the analysis of the state and structure of public debt before the emergence of the world financial and economic crisis (2007-2008). The second phase of the analysis is from 2009 until the emergence of Covid-19, while the third phase includes the last three years of the corona virus.

At the beginning of the new millennium, i.e. at the end of 2000, public debt in Serbia amounted to 14.167 billion euros, of which domestic debt was 4.108 billion euros, and foreign debt was 10.059 billion euros. Such a large public debt of the Republic of Serbia is a consequence of "taking over the debts of companies that made losses and failed banks in the period from the 1970s onwards. In the period up to 2006, the Republic of Serbia, with the support of the IMF in the process of recovery, went through the process of bankruptcy and in that period the debts to the Paris and London clubs were reduced" (Arsić et al., 2015, 182). This is also shown by the reduction of public debt in the early years of the new millennium. Thus, the public debt was reduced to 9.676 billion euros by

the end of 2004, and after a slight increase in 2005, it continued to fall until 2008, when it amounted to 8.781 billion euros. Of that amount, domestic debt was 3.162 billion euros, and foreign debt was 5.620 billion euros. In this period, the total public debt was reduced by 5.781 billion euros, which represents a decrease of 38%. The progress that Serbia achieved in the period 2001-2008. year is the result of institutional reforms, economic and social policy, but also relatively favorable external circumstances on the international capital market (Đorđević & Veselić, 2010, 22).

As a consequence of the world financial and economic crisis, in the following years there will be a constant increase in public debt. The total public debt in 2009 was 9.851 billion euros, and at the end of 2016 it was 24.820 billion euros. In this period, the public debt increased by 14.969 billion euros, which is an increase of as much as 60%. "In 2015, the level of public debt was a warning to foreign creditors that it is necessary to approach fiscal consolidation measures.

Table 1. *Volume and structure of public debt as of December 31. in the period from 2000-2022. year (in millions of euros)*

Years	Direct obligations		Indirect obligations		Total public debt (I+II+III+IV)
	Internal debt (I)	External debt (II)	Internal debt (III)	External debt (IV)	
2000.	4,108.0	10,059.0	0.0	0.0	14,167.1
2001.	3,870.5	9,561.1	0.0	2.2	13,434.9
2002.	4,151.9	7,230.2	0.0	147.2	11,529.3
2003.	4,239.6	6,563.6	0.0	220.0	11,023.2
2004.	4,064.5	5,266.9	0.0	344.4	9,676.8
2005.	4,255.5	5,364.1	0.0	663.1	10,282.7
2006.	3,837.0	4,745.5	0.0	769.5	9,352.0
2007.	3,413.3	4,615.8	0.0	846.2	8,875.3
2008.	3,161.6	4,691.2	0.0	928.7	8,781.4
2009.	4,050.2	4,408.6	135.0	1,257.4	9,851.2
2010.	4,571.8	5,872.7	340.0	1,372.5	12,156.9
2011.	5,440.6	7,238.6	535.8	1,573.8	14,788.8
2012.	6,452.6	8,618.1	722.6	1,877.8	17,671.1
2013.	7,054.6	10,244.9	823.0	1,990.3	20,088.7
2014.	8,225.2	11,991.5	687.3	1,857.6	22,761.6
2015.	8,732.9	13,517.7	637.6	1,806.3	24,694.5
2016.	8,767.7	13,908.2	381.7	1,762.7	24,820.2
2017.	9,089.1	12,357.6	209.3	1,553.6	23,210.0
2018.	9,413.5	12,077.0	154.6	1,369.5	23,014.6
2019.	9,814.9	12,641.0	178.0	1,310.2	23,944.0
2020.	11,217.7	14,028.5	216.2	1,207.0	26,669.3
2021.	11,344.8	17,407.2	262.0	1,120.2	30,134.2
2022.	11,278.4	20,501.3	481.4	1,064.6	33,325.6

Source: Authors based on [Republika Srbija, Ministarstvo finansija, Uprava za javni dug, Mesečni izveštaj, Analiza javnog duga i duga opšte države, decembar 2014. godine, br. 33, str. 5 (od 2000 do 2010. godine), i Republika Srbija, Ministarstvo finansija, Uprava za javni dug, Mesečni izveštaj, Analiza javnog duga i duga opšte države, decembar 2022. godine, br. 129, str. 6 (od 2011 do 2022. godine)]

As a consequence of the world financial and economic crisis, in the following years there will be a constant increase in public debt. The total public debt in 2009 was 9.851 billion euros, and at the end of 2016 it was 24.820 billion euros. In this period, the public debt increased by 14.969 billion euros, which is an increase of as much as 60%. "In 2015, the level of public debt was a warning to foreign creditors that it is necessary to approach fiscal consolidation measures. The IMF and the World Bank imposed these measures on our country at the end of 2014, which had the greatest impact on employees in the state administration, pensioners and persons who have no or very uncertain income" (Bakić, 2020, 185). In 2017, the public debt in Serbia was reduced to 23.210 billion euros, while it further fell in the following year 2018, when it amounted to 23.015 billion euros at the end of the year. In these two years, a total reduction of public debt by 1.806 billion euros was achieved. For Serbia, the year 2018 was quite stable and some of the positive results primarily concern growth that reached the CEE average (countries in the region of Central and Eastern Europe), then the increase in the number of new jobs, maintaining inflation at a stable level, the budget surplus and the decline of the country's public debt

(Bakić, 2020, 184). However, in this period there is a growth in the current wage and trade deficit, an increase in demand above the level of GDP and an outflow of labor force abroad. All this had the effect that at the end of 2019, the public debt increased to nearly 24 billion euros, of which the domestic debt was almost 10 billion euros, and the foreign debt slightly less than 14 billion euros.

The public debt of the Republic of Serbia at the end of December 2020 amounted to 26.669 billion euros, which was an increase of 2.7 billion euros compared to the previous year. Serbia's public debt continued to grow in the following two years. Thus, at the end of 2021, it amounted to 30.134 billion euros, and at the end of 2022, it would be 33.326 billion euros. The total increase for three years, in which different strains of the corona virus appeared, is 9.4 billion euros, which is more than the total public debt in the years before the emergence of the global financial and economic crisis.

3. Share of public debt in gross domestic product

Public debt is usually expressed as a ratio to GDP, and this relative indicator is often used to compare indebtedness between countries (Švaljek, 2007, 75). However, the public debt

expressed in this way in a relative amount does not show the true picture of the state of public finances in a country. Namely, the ratio of public debt to GDP omits information about the average price of that debt, i.e. the average interest rate at which a country borrows, but also information about the currency and maturity structure of the debt, i.e. potential risks arising from the public debt structure of a country (Biznis i finansije, 2020).

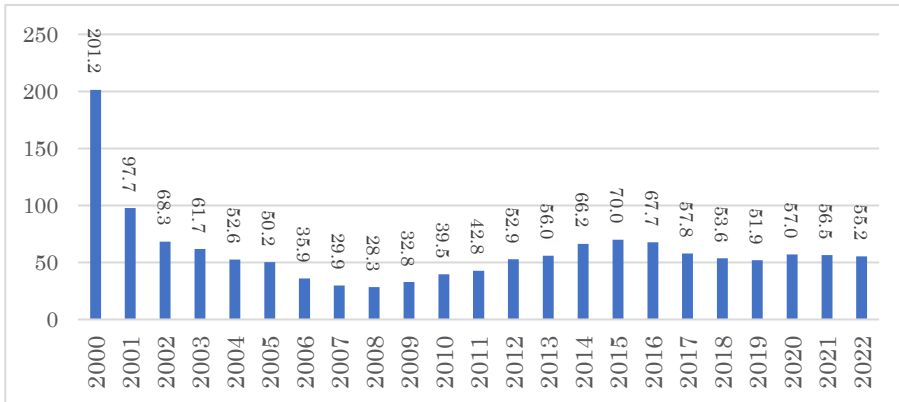
The share of public debt in the GDP of the Republic of Serbia in 2000 was extremely high and amounted to 201.2% of GDP, which means that it was unsustainable. "Such a high public debt was primarily caused by a high external debt, which means that Serbia was over-indebted to foreign creditors. A good part of the external debt can be attributed to debts dating from the time of the former Yugoslavia, whereby each former member state had to take on a part of this debt" (Rakita, 2016, 102). However, in the period from 2001-2008. there is a constant decrease in the share of public debt in the gross domestic product. Thus, the public debt was already 97.7% of GDP in 2001, and 52.2% of GDP in 2005, only to reach its historical minimum in 2008, when it amounted to only 28.3% of GDP. Such a signi-

ficant decrease in the share of public debt in GDP was due to more moderate economic prosperity in the period after the political changes in 2000. According to Trklja (2015, 27), the main causes of the reduction of public debt were:

- debt write-off of 66% to the Paris Club and 62% to the London Club;
- returning 1.3 billion euros of foreign currency savings, and
- reduced volume of borrowing, because the budget deficit was financed, first of all, by revenues from the privatization of public companies.

However, the emergence of the world financial and economic crisis at the end of 2007 and the beginning of 2008 had a negative impact on our country. This, among other things, led to the growth of the public debt in absolute amount, and thus its increasing share in the gross domestic product from 2009 to 2015. Namely, the share of public debt in GDP in the mentioned period increased from 32.8% to 70%, respectively. In the period from 2008-2011. In 2008, the Government's measures aimed at preserving economic activity and preventing the reduction of the gross domestic product had an impact on the increase in the budget deficit. In 2012, the legally defined upper limit of public debt of 45% of

Graph 1. *The share of public debt in the GDP of the Republic of Serbia in the period from 2000-2022. years (%)*



Source: [Republika Srbija, Ministarstvo finansija, Uprava za javni dug, Mesečni izveštaj, Analiza javnog duga i duga opšte države, decembar 2014. godine, br. 33, str. 5 (od 2000. do 2010. godine), i Republika Srbija, Ministarstvo finansija, Uprava za javni dug, Mesečni izveštaj, Analiza javnog duga i duga opšte države, decembar 2022. godine, br. 129, str. 6 (od 2011 do 2022. godine)]

GDP was exceeded (Zakon o budžet-skom sistemu). Even then, "it became clear that without a radical turn in the conduct of fiscal policy, domestic public finances are on an unsustainable path. In order to prevent the possibility of a debt crisis, since the second half of 2012 there have been several attempts to permanently reduce the deficit and bring the public debt under control. First, several tax rates were increased (general VAT rate from 18% to 20%, profit tax rate from 10% to 15%, excise taxes were also increased), while relatively mild measures were taken on the

expenditure side, such as reduced indexation of pensions and salaries. in the state sector" (Petrović et al., 2015, 29). Together with fiscal policy measures, structural reforms were also planned, but they were completely absent.

In addition to weak institutions and large fiscal imbalances, which led to a sharp increase in the public debt in the mentioned years, the Republic of Serbia was hit by large floods in 2014, which caused even greater pressure on the public debt. That is why the Government started fiscal consolidation at the end of the same year.

Fiscal consolidation measures taken have yielded positive results in the following years. The level of public debt at the end of 2016 was reduced to 67.7% of GDP, at the end of 2017 to 57.8% of GDP and at the end of 2018 to 53.6% of GDP. The results of the successfully implemented fiscal consolidation led to the fact that the public debt in the Republic of Serbia in 2019 amounted to 51.9% of GDP and was the lowest since 2012. However, the structure of the public debt was not favorable considering that a large share was made up of debt denominated in foreign currency as well as debt owned by non-residents. A large program of fiscal measures, which amounted to close to 13% of GDP in 2020, helped the recession caused by the Covid-19 pandemic in Serbia to remain relatively mild (Marjanović & Ivanović, 2021, 18).

The increase in public debt in 2020 to 57% of GDP "was among the smallest in Europe and was driven by a strong fiscal policy response (with a general government deficit of around 8.0 GDP), in order to minimize the negative effects of the pandemic possible measure. Significant fiscal space for intervention was provided in previous years by responsible fiscal policy and consolidation measures, provided by favorable finan-

cing conditions and economic growth, as well as low inflation and a stable exchange rate, which reversed the growing path of public debt in GDP in 2016" (Narodna banka Srbije, 2021, 65). The downward trajectory lasted until the beginning of the pandemic and resulted in a reduction of the public debt of the Republic of Serbia by as much as 18.1 percentage points compared to the end of 2015 (70%). The share of public debt in the GDP of the Republic of Serbia in 2021 and 2022 was slightly reduced (56.5% and 55.2%, respectively) compared to the share of public debt in the year of the beginning of the pandemic (57%).

The public debt of the Republic of Serbia in 2021 is lower than the European average. According to Eurostat data, the average share of public debt in the GDP of the European Union this year is 87.9%. Countries with a higher share of public debt measured by GDP compared to the European average are Greece (194.5%), Italy (150.3%), Portugal (125.5%), Spain (118.3%), France (112.8%), Belgium (109.2%) and Cyprus (101%). Other countries have a lower level of public debt compared to the EU average, of which Luxembourg (24.5%), Bulgaria (23.9%) and Estonia (17.6%) have the lowest share of public debt in

GDP (Eurostat, General government gross debt - annual data, 2022). As can be seen, the debt level of the Republic of Serbia is lower than in developed countries, due to a worse credit rating.

4. Factors of public debt of the Republic of Serbia at the end of 2022 and its currency structure

Based on the previous analysis, it can be seen that the public debt of the Republic of Serbia at the end of 2022 amounts to 33.326 billion euros, which is 55.2% of GDP. In order to gain insight into the factors that had the greatest impact on the high level of public debt as of December 31, 2022. year, it is expedient to provide a comprehensive overview of the state of public debt, from which the largest creditors of the Republic of Serbia can be easily identified. For the sake of a clearer analysis, it is necessary to mention that the internal public debt refers to the direct and indirect obligations of the Republic of Serbia to domestic investors and lenders, while the external public debt includes direct and indirect obligations to foreign investors and creditors (Rakita, 2016, 102).

Table 2. *Overview of the public debt of the Republic of Serbia as of December 31, 2022. years - Central level of government (in thousands)*

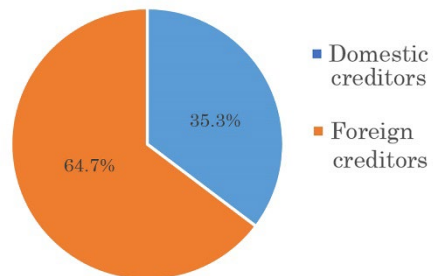
	EUR	USD	RSD
1. DIRECT OBLIGATIONS (1.1. + 1.2.)	31,779,667	33,848,534	3,728,466,838
<i>1.1. Internal debt</i>	<i>11,278,411</i>	<i>12,012,639</i>	<i>1,323,210,245</i>
Government securities issued on the domestic market	10,449,624	11,129,898	1,225,974,958
Savings bonds	11,301	12,037	1,325,918
Government bonds - restitution	69,445	73,966	8,147,493
Old currency savings	394,959	420,671	46,337,490
Loans from commercial banks	283,493	301,949	33,260,104
Other obligations	69,588	74,119	8,164,282
<i>1.2. External debt</i>	<i>20,501,256</i>	<i>21,835,895</i>	<i>2,405,256,593</i>
International Bank for Reconstruction and Development	2,224,194	2,368,990	260,947,776
International Association for Development	56,975	60,684	6,684,401
European Investment Bank	1,398,742	1,489,801	164,103,791
European Bank for Reconstruction and Development	127,406	135,701	14,947,620
Council of Europe Development Bank	518,687	552,453	60,853,570
Export-Import Bank of China	2,211,171	2,355,119	259,419,857
Foreign governments	3,599,358	3,833,677	422,285,315
Eurobonds of the Republic of Serbia	7,316,432	7,792,735	858,381,400
German Development Bank	61,469	65,471	7,211,704
Creditors' Club of Paris	600,439	639,528	70,444,920
International Monetary Fund	1,269,448	1,352,090	148,934,711
Loans from commercial banks for financing projects	723,756	770,873	84,912,824
Other obligations	393,179	418,775	46,128,706

2. INDIRECT OBLIGATIONS (2.1. + 2.2.)	1,545,943	1,646,584	181,373,745
2.1. Internal debt	481,358	512,695	56,474,087
Loans from commercial banks	481,358	512,695	56,474,087
2.2. External debt	1,064,585	1,133,890	124,373,745
European Bank for Reconstruction and Development	335,526	357,369	39,364,767
European Investment Bank	455,868	485,545	53,483,484
German Development Bank	78,926	84,064	9,259,729
Eurofima	00	00	00
Loans from commercial banks	14,286	15,216	1,676,034
International Association for Development	4,147	4,417	486,520
Japan International Cooperation Agency	146,073	155,583	17,137,692
Foreign governments	10,270	10,939	1,204,953
Other obligations	19,489	20,758	2,286,478
Total internal debt (1.1.+ 2.1.)	11,759,769	12,525,334	1,379,684,332
Total external debt (1.2.+ 2.2.)	21,565,841	22,969,785	2,530,156,251
TOTAL STATE OF PUBLIC DEBT OF THE CENTRAL LEVEL OF GOVERNMENT (1+2)	33,325,610	35,495,119	3,909,840,582

Source: [Republika Srbija, Ministarstvo finansija, Uprava za javni dug, Mesečni izveštaj, Analiza javnog duga i duga opšte države, decembar 2022. godine, br. 129, str. 5]

Based on the data from the table, it can be seen that in the structure of public debt, the share of external debt (21,565,841,000 euros) is significantly higher than that of internal debt (11,759,769,000 euros) in the total public debt of the Republic of Serbia (33,325,610,000 euros). This means that, relatively speaking, domestic creditors have a 35.3% share, and foreign creditors a 64.7% share in the total withdrawn funds at the end of 2022.

Graph 2. The share of domestic and foreign creditors in the public debt of the Republic of Serbia at the end of 2022 (%)



Source: Authors based on [Table 3]

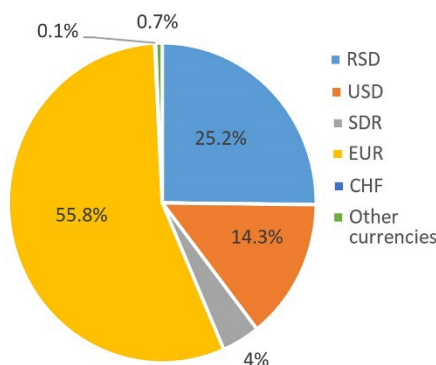
In the internal debt structure, the largest liabilities of the Republic of Serbia are based on issued government securities (10,449,624,000 euros). In terms of foreign debt, the Republic of Serbia has the largest debts based on issued Eurobonds (7,316,432,000 euros) and to foreign governments (3,599,358,000 euros). In addition, the International Bank for Reconstruction and Development (EUR 2,224,194,000), the Export-Import Bank of China (EUR 2,211,171,000) and the European Investment Bank (EUR 1,398,742,000) are among the foreign creditors who have the largest claims against the Republic of Serbia.

In addition to the absolute amount of the public debt and the public debt/GDP ratio (relative amount - ratio) and the currency structure of the public debt, i.e. the participation of different currencies in the total public debt "represents an important signal for the regulators of a country's monetary and economic policy. Constant oscillations on the market and the continuous need of the state to carry out market interventions imposes the need to dispose of some additional liquid sources denominated in foreign currency" (Bakić, 2020, 189).

Official data from the Public Debt Administration of the Ministry of

Finance of the Republic of Serbia show that a quarter of our country's public debt (25.2%) is denominated in dinars, while the rest of the debt is denominated in foreign currencies.

Graph 3. Currency structure of the public debt of the Republic of Serbia as of December 31, 2022. years (%)



Source: [Republika Srbija, Ministarstvo finansija, Uprava za javni dug, Mesečni izveštaj, Analiza javnog duga i duga opšte države, decembar 2022. godine, br. 129, str. 7]

A characteristic of the currency structure of the public debt of the Republic of Serbia at the end of 2022 is a high share of obligations in the currencies of the euro (55.8%) and the dollar (14.3%). In this way, Serbia is significantly exposed to currency risk and external shocks that can increase rapidly in periods of instability. A quarter of the public debt of the Republic of Serbia denominated in local currency can be assessed as positive. The share of dinars in the currency structure of

public debt was higher in previous years. At the end of 2020, it amounted to 30.5%. However, due to borrowing during the previous two years on the foreign market due to more favorable conditions, the share of dinars will drop to 25.2% at the end of December 2022. Observing the currency structure of the public debt in the previous five years, one can observe the tendency of the dinar to stagnate, the dollar share to decrease and the debt in euros to increase more significantly.

5. Projection of the public debt in the coming years and strategies for its reduction

The end of the corona virus pandemic, increasing inflation as a result of the crisis on the international market and the special operation of the Russian Federation in Ukraine are the main features of the year 2022 in the world. Because of all this, there is a real danger that uncertainty and crisis will be present in the coming years. In such conditions, the Government of the Republic of Serbia has the task of ensuring stable economic flows and preserving the standard of citizens. Starting from the projected primary result of the budget of the Republic of Serbia for the period 2022-2025. year, including the volume of withdrawal of loan funds for project financing from budget beneficiaries, the effects of the exchange

rate change of the dinar against the euro and the US dollar, in the basic macroeconomic scenario, the debt balance of the central level of the state should be at the level of 53.0% of GDP at the end of 2025 (Strategija upravljanja javnim dugom od 2023. do 2025. godine, 79).

Table 3. Basic projection of the state of public debt at the general level of the state until 2025

	2023	2024	2025
Public debt (central level of government), billion.	4,419.1	4,745.1	5,041.1
Central government debt, in % of GDP	55.1%	54.1%	53.0%
Unguaranteed debt of local self-government units and other government sectors, in % of GDP	1.0%	1.0%	1.0%
General government debt, in % of GDP	56.1%	55.1%	54.0%

Source: [Strategija upravljanja javnim dugom od 2023. do 2025. godine, str. 79]

As for the share of public debt at the general level of the state in GDP, it is expected to be 56.1% at the end of 2023, 55.1% at the end of 2024, and 54.0% at the end of 2025. In the coming period, the implementation of large projects in the field of infrastructure is announced, which will be financed primarily from project loans, as well as their more active implementation compared to previous years. "This is precisely one of the points where a clear coordination of fiscal and development goals can be seen. The sustainability of public debt and the gradual decline of its share in GDP are taken into account, while at the same time new borrowing is used to improve infrastructure conditions that lead to the growth of GDP, living standards and new investments. It is predicted that the non-guaranteed debt of local self-government units and other sectors of the state will be at a relatively stable level of around 1.0% of GDP in the coming period" (Strategija upravljanja javnim dugom od 2023. do 2025. godine, 79).

Based on the planned macroeconomic concept, the public debt of the Republic of Serbia (central level of government) should amount to 53.0% of GDP at the end of 2023, in the absence of the influence of possible risks. The main factors that should influence the stabilization of public debt/GDP ratio

are: GDP growth, primary deficit, dinar exchange rate against foreign currencies and interest rate (Rakita, 2016, 106).

Table 4. Contributions of the basic macroeconomic variables to the change in ratios public debt (central government level)/GDP, in %

	2023	2024	2025
Central government debt/GDP	55.1	54.1	53.0
Change compared to the previous year, in % of GDP	-1.0	-1.0	-1.1
Contribution of the primary fiscal	1.2	0.1	-0.5
Interest contribution	1.8	2.0	1.9
Contribution to nominal GDP growth	-6.6	-4.7	-4.2
Contribution of other factors	2.6	1.5	1.7

Source: [Vlada Republike Srbije (2022). Revidirana Fiskalna strategija za 2023. godinu sa projekcijama za 2024. i 2025. godinu, str. 85]

In accordance with the Law on the Budget System, in the event that the debt of the general government has exceeded the level of 45% of GDP, the Government of the Republic of Serbia should propose measures by which the debt will return to a sustainable level. In the event that the debt is above 55%, the Government, as part of the Fiscal Strategy and according to the procedure for the adoption of the fiscal strategy, proposes a Debt Reduction Program with concrete measures to reduce the debt below the set limit (Vlada Republike Srbije, 2022, 69). Accordingly, the Government presented the basic scenario of the fiscal framework, which envisages a gradual reduction of the fiscal deficit to 1.4% of GDP by the end of 2025, as well as a reduction of the level of public debt to around 45% of GDP in 2030.

Table 5. Simulation of the level of total debt in the base scenario until 2030, % of GDP

Basic scenario	2023	2024	2025	2026	2027	2028	2029	2030
Income	40.8	40.3	39.6	39.3	39.1	38.9	38.7	38.5
Expenses	44.1	42.5	41.0	40.5	40.1	39.7	39.2	39.0
Decrease in expenditure share	-2.7	-1.6	-1.5	-0.4	-0.4	-0.4	-0.5	-0.2
Fiscal result	-3.3	-2.2	-1.4	-1.2	-1.0	-0.8	-0.5	-0.2
Primary fiscal result	-1.5	-0.1	0.5	0.7	0.8	0.9	1.2	0.6
Public debt/GDP	56.1	55.1	54.0	52.2	50.4	48.4	46.3	44.2
GDP real growth, in %	2.5	3.5	4.0	4.0	4.0	4.0	4.0	4.0

Source: Vlada Republike Srbije (2022). Revidirana Fiskalna strategija za 2023. godinu sa projekcijama za 2024. i 2025. godinu, str. 71]

Based on the simulation of the movement and variation of the factors affecting the debt dynamics, the assumptions in the basic scenario are (Vlada Republike Srbije, 2022, 71):

1. After achieving a high level of fiscal deficit in 2020, in the period from 2021 to 2025, the level of the general and primary fiscal result enables a gradual reduction of the share of public debt in GDP. After that, the fiscal deficit is reduced from 1.2% of GDP in 2026 to the level of 0.5% of GDP;
2. Slower growth of fiscal revenues compared to nominal GDP growth due to changes in the structure of the economy, strengthening of investment activity and export growth. No significant changes in tax policy are foreseen, while maintaining a high level of capital expenditures;
3. Absence of net increase in issued guarantees after 2025;
4. Average real GDP growth rate of 4% in the long term;

5. Slowing inflation and then keeping it at the level of 3% on average in the long term;

6. Absence of significant inflows from privatization in the observed period. Possible higher privatization revenues reduce the need for financing and further reduce the share of public debt.

However, as stated in the Fiscal Strategy, the uncertainty in the projections given in it is much higher than usual due to the nature and intensity of the shocks at the international level. Global risks associated with the development of the situation in Ukraine, the movement of energy prices, the restriction of world trade flows and in general with the state of international economic and political relations may very well have a great impact on the domestic economy. For this reason, the Government's measures are aimed at mitigating the negative impact of the international environment on the country's economy and preserving energy stability. Such an orientation will remain the focus of economic policy makers in the future, and keeping the public debt below 60% will continue to be the main goal of fiscal policy (Vlada Republike Srbije, 2022, 7).

These forecasts should be taken with a grain of salt. Namely, the biggest challenge in the current year when it comes to public finances is the repayment of old debts. According to the

forecast of the Fiscal Council, our country needs to borrow between three and four billion euros in order to service the loans taken in the previous period that are due for payment this year. A special problem is high interest rates, because we have come out of the time when they were at a historical minimum during 2019 and 2020. With the rise in interest rates due to curbing inflation, borrowing costs also rise. This implies higher fiscal expenditure and more difficult financing of public debt. At the same time, if worse economic forecasts are realized, we will have an increase in borrowing costs on the one hand, and a slowdown in economic growth on the other hand, which will have a negative effect on both the volume of public debt and its share in the gross domestic product.

6. Conclusion

Public debt and budget deficit represent one of the biggest problems of the Republic of Serbia. Financing the deficit in the budget is a priority task of the Government's economic policy. In addition to reducing expenditures, the deficit is largely covered by borrowing from international financial institutions, government borrowing from the central bank, as well as the issue and sale of bonds. In the early years of the new millennium in the Republic of Serbia, the budget deficit and public

debt were covered primarily with revenues from the privatization of social enterprises, and after their exhaustion, they switched to borrowing on the international financial market.

Based on the analysis carried out in the paper, the following conclusions were reached. After the political changes in 2000, the public debt tended to fall both in absolute and relative amounts. Namely, the public debt was reduced from 14.2 billion euros at the beginning of the new millennium to 8.8 billion euros in 2008. As a consequence, the public debt/GDP ratio also tended to fall from 201.2% in 2000, that is, from 97.7% in 2001 to 28.3% in 2008. This is the historical minimum of the share of public debt in GDP in the observed period and is a consequence not only of institutional reforms, but also of the relatively favorable situation on the international capital market at that time.

However, the public debt increased to 9.9 billion euros in 2009 and continued to grow in the following years as a result of the global economic and financial crisis. By 2016, it had grown to 24.8 billion euros. At the same time, its share in GDP increased from 32.8% in 2009 to 70% in 2015. Since 2016, there has been a change in the dynamics of the public debt of the Republic of Serbia in terms of its moderate decline

in the following years. Thus, the public debt in 2019 amounted to 23.9 billion euros, and its share in GDP was 51.9%. The key reason for the reversal in the trend of public debt in those years was the implemented fiscal consolidation, which contributed to the reduction of the high fiscal deficit.

The outbreak of the health and then the economic crisis at the global level led to the fact that the public debt of the Republic of Serbia reached the amount of 26.7 billion euros at the end of 2020, and the share of public debt in the same year was 57% of GDP. This is a direct consequence of the financing of measures to support the economy and the population with the aim of reducing the impact of the crisis caused by the corona virus pandemic. The public debt continued to grow even in the post-corona crisis years, so that as of December 31, 2022, amounted to 33.3 billion euros with a share of 55.2% in GDP. Mitigation of the pandemic in 2022 had the effect of creating fiscal space, which is much needed in the newly emerging unfavorable situation. The outbreak of the war in Ukraine, the energy crisis and the changed international relations due to this have a strong effect on the economic trends in the world, which are very quickly reflected on the domestic market as well. That is why in the same year, the

implementation of measures to cushion the shocks of the latest crisis began.

In order for public finances to be sustainable, it is necessary for the public debt to be consolidated at a level of less than 50% of GDP for a long period of time, which has not been the case in the Republic of Serbia for many years. The forecasts of macroeconomic and fiscal policy holders are optimistic, but they should be taken with a grain of salt. Statistical figures on the reduction of public debt in GDP can be misleading, especially in a situation where the total debt is growing in absolute terms. For a realistic reduction of the public debt, concrete measures are needed, primarily in terms of spending restrictions, in order for the public debt to be sustainable at an optimal level and to maintain macroeconomic stability. Care should be taken in doing so, because overly strict restrictive spending measures can lead to recession. Taking loans from foreign institutions is not a long-term solution, because it threatens a debt crisis that our country can easily enter. Therefore, the Republic of Serbia should continuously create conditions that will be attractive for foreign investors and gradually build a healthy macroeconomic environment, all with the aim of strengthening their confidence in the Serbian economic system. Only in such circumstances will there

be a reduction of the total public debt and bringing its relative values within the legal framework.

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JAVNI DUG REPUBLIKE SRBIJE U NOVOM MILENIJUMU: ANALIZA STANJA I TENDENCIJE KRETANJA U BUDUĆNOSTI

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Rezime: Predmet istraživanja u radu usmeren je na analizu javnog duga u Republici Srbiji u vremenskom intervalu od 2000. do kraja 2022. godine. Posmatranjem podataka o kretanju javnog duga u novom milenijumu primetno je da postoji trend njegovog porasta nakon svetske ekonomske krize 2008. godine. Osnovni uzrok takvih kretanja je prekomerna potrošnja državnih organa i snižavanje poreskih prihoda, što je posledica, pre svega, smanjene ekonomske aktivnosti usled globalnih negativnih tendencija u pojedinim godinama. Visok nivo javnog duga predstavlja glavnu barijeru za privredni razvoj Republike Srbije. Analiza podataka u posmatranom periodu ukazuje da se problem rasta javnog duga može rešiti povećanjem bruto domaćeg proizvoda i smanjenjem javne potrošnje.

Ključne reči: javni dug, bruto domaći proizvod, Republika Srbija, budžetski deficit, izvori finansiranja.

SERBIA BETWEEN WESTERN INDIVIDUALISM AND ORTHODOX COLLECTIVISM

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Abstract: The paper discusses the problems that come with the contradictions between individualism and collectivism. Discussions about these contradictions are still present in academic circles today. In Eastern European countries, individualism became relevant after the fall of the Berlin Wall. Up to then, the collectivist spirit prevailed. By accepting neoliberalism, post-socialist Eastern European countries began economic reform, including further educational reform, health reform, cultural reform, etc. This reform also meant the transition from collectivism to individualism because modern neoliberal capitalism belongs to individualism, in which the main focus is on the individual as the largest consumer. The transition to neoliberal capitalism led to a considerable number of workers losing their jobs after the liberalization, deregulation, and privatization of the Serbian economy, resulting in the lifeless demographic image of Serbia, which worsens significantly yearly. Today, Serbia remains without a working-age population, which, in addition to young and highly educated workers, also consists of artisans of various occupations. For the Serbian political elites, the path to the EU does not lead to the question. We've been on that road for twenty years, and it doesn't seem like we've moved much since the beginning. According to the principle, "one step forward, two steps back."

Keywords: individualism, collectivism, neoliberalism, Serbia

1. Introduction

Over the last 100 years and more, the constructs of individualism and collectivism have exerted a significant influence on the social sciences. Some authors emphasize that this influence has been growing over the years and that these constructs remain popular (Gelfand, Bhawuk, Nishii & Bechtold, 2004). Historically, one could say that human society has been divided between two poles: individualistic and collectivistic. In collectivistic societies, the spirit of rural communities and cooperatives, mutual aid, workplace democracy, and local self-governance prevail, whereas individualism is characterized by the desire to pursue personal ambitions, freedom of choice, and so on. (Mamontov, Kozhevnikova, & Radyukova, 2014).

In his work "The Fate of Man in the Modern World", Nikolai Berdyaev emphasizes that "collectivism and collective consciousness are not new phenomena in history," stating that collectivism has always existed, and history itself began with collectivism. He argues that "throughout the entirety of human history, individuals have belonged to various collectives: family, tribal, religious, professional." On the other hand, Berdyaev believed that individualism

"did not signify personal originality, personal thought, personal creativity," but rather "signified egoism, selfishness, isolation, asocial behavior, a wolfish attitude towards one's neighbor" (Berdyaev, 2006, pp. 51-52).

Today, in the 21st century, when we've become captives of neoliberal dogma or the catastrophes of capitalist imperialism, which, with its greedy imperialistic ambitions, has managed to create enormous inequalities in the world, we are left to ask ourselves: Have we preserved collective consciousness, or is it, as Berdyaev (2006, p. 52) would say, "the impersonal and inhuman power of money that has determined people's thinking"?

Namely, post-socialist Eastern European countries leaped into the "embrace of the neoliberal octopus" (J. Dušanić) by transitioning to a neoliberal economic model. The transition to a neoliberal model entailed a complete overhaul of the economic system, achieved through the implementation of shock therapy. Guided by the principles of the neoliberal "holy scripture," the Washington Consensus, post-socialist Eastern European countries accepted to implement economic reforms devised by the International Monetary Fund (IMF) and

the World Bank. This led to the rise of what Naomi Klein explains as "disaster capitalism," which she describes as follows: "the planned looting of the public sphere post-disaster, combined with the treatment of crises as exciting market opportunities, I call 'disaster capitalism'" (Klein, 2008, p. 14).

The acceptance of the neoliberal doctrine didn't just entail a change in the economic system; it also extended to other sectors like education, healthcare, and so on. However, the most complex task was the imposition of the Protestant work ethic and the ideas of individualism on Eastern European countries, especially Orthodox ones like Russia and Serbia, which traditionally held a more collectivist view of life.

2. The importance of protestant ethics for the development of capitalism

One of Max Weber's most significant works, "The Protestant Ethic and the Spirit of Capitalism," was first published in 1904/05. From that time until the present day, this work continues to occupy the thoughts of many authors engaged in social sciences, especially in the fields of economics and sociology. Max Weber, as one of the founding figures of modern social science

alongside Karl Marx and Emile Durkheim, has had a substantial influence on many authors in the fields of economics and sociology. His impact extends to scholars like Joseph Schumpeter, as well as representatives of the Austrian School of Economics such as Ludwig von Mises and Friedrich von Hayek (considered the fathers of neoliberalism), and sociologist Talcott Parsons, among many others.

Protestantism first emerged in history in the 16th century when the reform movement opposed the pope's authority. The proponents of this movement believed that one form of governance should replace another, rejecting the traditionalism that was considered the greatest adversary of the "spirit of capitalism," as emphasized by Max Weber (2018, p. 39). Weber's primary thesis in the Protestant ethic was that in the modern capitalism of his time, the "economic order is a vast cosmos," and that "modern capitalism nurtures and creates itself through economic selection of the business entities it requires" (2018, p. 36). It should be noted that the focus of the Protestant ethic is more oriented toward the "spirit of capitalism" rather than its outward form (Kirby, 2019), as for Weber, the "spirit of capitalism" was present

long before "capitalistic development" (Weber, 2018, p. 37).

The spirit of modern capitalism is best defined through the work ethic. An ethic that regards labor as something to be done for oneself rather than solely for consumption, according to Weber. He noticed the best formulation of the work ethic in "ascetic" Protestantism, especially in Calvinism. In fact, Weber believed that religion could have both positive and negative effects on economic development. If a religion has a positive view of the accumulation of material wealth, he thought that economic growth would also be positive. He found the solution in Calvinism, which emerged during the Reformation in Western Europe (McCleary & Barro, 2006).

Weber argued that Protestantism is responsible for the rise of the "spirit of capitalism" if not Capitalism itself. (Nelson, 2010). In this context, Weber's primary analysis of the Protestant ethic considered religiosity as an independent variable capable of exerting a significant influence on economic dynamics. Weber believed that the cultivation of virtues rooted in religious beliefs, such as work ethic, honesty, frugality, philanthropy, and hospitality to strangers, had a direct impact on the economy. However, Weber also

believed that the relationship between economics and religion would weaken over time as the capitalist mode of work and production became established and that with the introduction of the Protestant ethic into social and legal institutions, the influence of religious practices and customs would diminish (McCleary & Barro, 2006).

Based on research developed by Max Weber in the early 20th century, the concept of the work ethic arose, which had a significant impact on the development of capitalism in Western countries. Weber did not dismiss other social and economic factors that influenced the development of capitalism, but he regarded Protestants as the "chosen." Apologists of the Protestant work ethic believed that hard work was the foundation of success, as without diligent effort and ascetic living, it could have negative consequences. The essence of this understanding of work is that strenuous labor leads to a desire for even greater labor. Today's work ethic is closer to ideological beliefs than moral life values because work has become a duty and a sign of personal satisfaction for individuals in modern society (Rusu, 2018).

Contrary to Protestantism, in Orthodox Christianity, work is

directed towards the "inner person," meaning it is "work on one's spiritual health and balance through inner spiritual activities" (Bulgakov in Vratuša-Žunjić, 1995: p. 66). Vladimir Solovyov, a Russian philosopher and theologian, believed that thanks to Protestantism, Western civilization liberated the individual's personality, a person's "self," in comparison to the medieval era (Solovjov, 2010, p. 22). In such a world where the individual "self" became more important than the collective "we," egoism has taken hold of humanity. As highlighted by Anđelković: "The person of our time, who has entrenched themselves in the shell of egoism, takes 'having and being' as their ideal, while humanity is engaged in an unceasing struggle for capital, which determines all ideologies, politics, state behaviors, and the conduct of nations" (2017, p. 176).

3. Modern capitalism

The reason Protestantism is significant for modern society is that Protestantism has a deep inclination toward individualism (Nelson, 2010), as "Western-style capitalism nurtures individualism, which develops in market competition, primarily focused on material values, dominated by personal gain"

(Anđelković, 2016, p. 83). When discussing social structures and their cultural determinants, it's important to emphasize that culturally, the West is more oriented toward individualism, while the East is more oriented toward collectivism. Debates in academic circles about individualism and collectivism can occur in various contexts, such as social systems, cultural patterns, religion, morality, economic development, and modernity. Culturally, we can define individualism and collectivism as follows: in an individualistic society, the personal interests of individuals are emphasized, while in a collectivistic society, loyalty to the group is emphasized (Darwish & Huber, 2003). This suggests that for an individualist, personal interests and personal benefits are more important than the interests and benefits of the group to which they belong (Gajda & Oie, 2017).

Many authors who have explored the differences between Western individualism and Eastern collectivism view these phenomena as "key oppositions that mutually exclude each other" (Mamontov et al., 2014). Accordingly, Anđelković regards the West as the "representative of vulgar materialism, which places the

profit principle above humans." According to the same author, the East is a "proponent and defender of state, national, religious, and cultural identity, as well as traditional values on which people and nations have relied and persisted" (Anđelković, 2017, p. 197). The Western way of life, where profit predominates, has turned individuals into lonely beings, spiritually destroyed, detached from nature, and solely focused on satisfying their material needs.

The difference between a collectivist Eastern society and an individualist Western society lies in the fact that moral virtues are objective social laws defining a collectivist society. On the other hand, Western society criticizes collectivism as an obstacle to the development of a free individual living by the fundamental concepts of liberalism, which are equality and freedom (Mamontov et al., 2014, pp. 200-201). However, as even Nikolai Berdyaev pointed out in his work "Philosophy of Inequality," the word "liberalism" has long lost its charm despite its origin in the beautiful word "freedom" (Berđajev, 2001, p. 119).

Namely, Berdyaev believed that political and economic freedoms were on the decline and that liberalism and democracy as ideologies no longer interested the youth. When

he spoke of freedom, Berdyaev considered it to be distorted, with its formal understanding concealing human bondage and leading to unfreedom (Berđajev, 2006, pp. 27-28). If we draw a parallel and compare the present time with the era described in Berdyaev's works, we can see many similarities, which means that Marx was correct when, to Hegel's observation, "history always repeats itself twice," added, "the first time as tragedy, the second time as farce." When we talk about modern society, we can say that it is far from democratic because without "economic freedom," which has "turned out to be a mockery" (Berđajev, 2006, p. 28), there are only "dependent societies on the periphery of the world capitalist system" (Lj. Mitrović).

Today's form of capitalism, characterized by neoliberalism, is based precisely on individualism, i.e., individual freedoms and criticism of collectivism. The most significant theorists of neoliberalism, like Friedrich Hayek and Milton Friedman believed that the free market is the only correct model in economics, which all states should follow. By embracing the neoliberal economic doctrine and entering the "free" market, countries have capitulated to multinational corporations.

"Free markets don't exist" (Ha-Joon Chang), there are only markets that play by the rules of multinational corporations, and countries that have consciously embraced such an economic model have surrendered to the interests of big capital, in which "profit has become more significant than people" (Noam Chomsky). Working in large corporations is not the same as the work we understand. Work is a noble thing that gives a person a sense of satisfaction because it contributes equally, both to the community in which one lives and to oneself on a personal level. However, working in large corporations is something entirely different because it evokes feelings of competition and aggression in people. In large corporations, a person loses their identity and becomes a bloodthirsty beast, like in the scariest movie. They don't see a friend in another person but an enemy because "in the struggle for self-preservation, the Machiavellian principle reigns, where all means are allowed. European culture has, through the mouth of its sciences, proclaimed the main principle of life as a fight for self-preservation. What is that if not a call for cannibalism? Life becomes a slaughter, 'man is a wolf to man'... A person without a soul is a thing among things, a beast among beasts, and in

the animal world and the struggle for survival, everything is permitted" (Anđelković, 2017, pp. 199-200). Working in large corporations is a battle for survival.

Multinational corporations have fostered such an environment for a straightforward reason: it's far more convenient to maintain control over people. Be it the laborers on the production floors or the executives in leadership positions, both groups are compelled to earn their permanent job security and, ultimately, their wages. This brings us to the significance of the Protestant work ethic in modern society. Nowadays, it has become a prevailing narrative among governmental leaders, emphasizing that there's no room for relaxation if we aspire for societal advancement. While disparities have emerged in this society, where workers often bear the label of cheap labor, most tend to overlook this issue, persuading us that our current standard of living stands as the most prosperous in recent history.

With the help of the mass media, which they mainly control, multinational corporations have succeeded in determining and shaping life trends. In the study "Pink Transition in Serbia," S. Antičić analyzes the messages sent to us by large companies (such as Coca-Cola)

through their advertisements. These messages generally contain ideas like "follow your instincts," "take care of yourself," "you deserve this," "let all your senses enjoy," "seize and go," and so on. Thus, the message is primarily directed toward individuals rather than the collective, which implies that "we should primarily focus on ourselves, not thinking about others, but also not considering our long-term interests" (Antonić, 2013, p. 276).

Modern society is a consumer society where the primary goal of each individual is to "produce more and consume more" because the "market-driven and acquisitive character" has come to the fore during the era from which it emerged and selfishness triumphed. For modern individuals with consumer-oriented attitudes, personal wealth is more important than spiritual and cultural wealth. Due to the grueling workplace conditions, people fall into the trap of consumer society, where they find solace. Modern individuals address their dissatisfaction and frustrations on personal and business levels by spending their free time in shopping centers, satisfying their needs through shopping. Naomi Klein, in her work "No Logo," emphasizes that "branded multinational companies may talk

about diversity, but the visible result of their actions is a legion of teenage clones marching through the global shopping center" (Klein, 2002, p. 101).

Jovan Dušanić, in his work "Economics of Postmodernity," reexamines the "idea of modern civilization based on individual freedoms." He points out that the era of "so-called metanarratives (grand narratives) that explain the origin of the universe, life, and purpose" has come to an end. Dušanić also criticizes the material world where everything revolves around money and consumerism, in which people have detached themselves from family, friends, work colleagues, religion, nationality, and state, and have become "egocentric and self-centered beings" (Dušanić, 2014, pp. 10-11). Anđelković takes his criticism of modern individuals further. For him, people have become "slaves of matter, slaves of things," and their "tendency to idolize is particularly noticeable in their relationship with nature." He argues that nature has reduced and confined humans to mere material beings, instead of humans elevating and humanizing nature (Anđelković, 2017, p. 199). In the work "Development, Religion, War" by Vera Vratuša-Žunjić, the analysis focuses

on the writings of Sergei Bulgakov, who is considered one of the most significant theorists of Eastern Orthodoxy. He emphasizes that the "distinctiveness of the Christian relationship to the world is expressed in religiously motivated free ascetic work, which combines previously opposed principles of accepting separation from the world." Furthermore, he highlights that in Christianity, "human labor is rehabilitated as part of the divine logos" and that its purpose is not only "satisfying basic needs but also involving humans in God's work, in the transformation of the world" (Vratuša-Žunjić, 1995, p. 65).

The relentless march of technological progress, undeniably one of the most remarkable feats of humanity, has paradoxically entrapped individuals in the clutches of technology. Initially, there was hope that the evolution of digital technologies heralded as the third industrial revolution, would streamline labor, supplanting traditional analog and electronic methods. Nonetheless, these emerging technologies have boosted productivity while concurrently diminishing the demand for human labor.

"In addition to its rejection of tradition and the relativization of moral principles, postmodernism is built

upon the concept of surplus people. Instead of technological progress and increased productivity leading to reduced working hours and more leisure time for individuals to cultivate their personalities, foster personal relationships, and return to true values, working hours have increased, leaving employees with little to no free time. Simultaneously, a vast number of people have become surplus, exerting pressure on those employed and offering their labor force for virtually nothing" (Dušanić, 2014, p. 18).

Technologies have so thoroughly permeated our lives that they have created a form of dependence, diverting people's attention from everyday issues and occurrences and leading them into the virtual realm of a fantasy, a "networked society" (M. Castells). This sensation can make it seem as though we are living in a reality show where privacy no longer exists.

4. The case of Serbia

From a historical perspective, Serbia has always found itself at a crossroads due to its geographical location, situated between various empires coming from the East or the West. This has significantly shaped the destiny of the Serbian people, who, throughout their history, have

endured numerous injustices but have proudly fought and rebelled against those who oppressed them. Serbs are a patriarchal nation, inclined toward tradition and possess a collectivist spirit, persistently striving to preserve their national identity until today.

Upon adopting the neoliberal economic model, significant changes unfolded. Serbia committed to market liberalization, deregulation, and privatization, anticipating that, over fifteen years, it would foster "increased competition, rational resource accumulation, and improved economic efficiency. However, reality diverged from these expectations" (Drašković, 2015, str. 23). As Drašković underscores, "A misguided economic policy doctrine has proven to be ineffective" (Drašković, 2015, str. 23). This stems from the intrinsic proclivity of Serbia and other Slavic nations towards a collectivist economic outlook, spiritual unity, and a strong sense of solidarity. This collective spirit is exemplified by one of the primary Orthodox commandments - love for one's neighbor (Mamontov et al., 2014, p. 200).

Orthodoxy lacks an elaborate theory around which to organize its economy, as well as its politics. Nevertheless, it endeavors to strike a balance between poverty and we-

alth. Hence, one could say that "certain Orthodox societies have, throughout history, embraced positions akin to socialist economies" (Dobrijević, 2006). In his work "Serbia in the East," Svetozar Marković provides a fascinating study of patriarchal societies, elucidating the significance of families and communes in economics. Marković highlights that "From an economic perspective, the commune is a primitive association for production and consumption simultaneously," distinct from other societies as it "generates all its needs independently" (Marković, 2021, p. 57). Therefore, the spirit of freedom within a nation is reflected in its self-reliant economy, safeguarding the liberty and sovereignty of a state.

Serbia is anything but a free country following the opening of its markets and acceptance of the neoliberal economic model. With the arrival of foreign "investors" who receive subsidies from the Government of the Republic of Serbia to establish their manufacturing facilities, Serbia has fallen into a neo-colonial status and become a nation of cheap labor. It is essential to keep in mind that "owners and managers of multinational companies choose to open their branches only in countries that are rich in raw materials,

have inexpensive labor, the ability to finance a portion of investments, and a sufficiently broad domestic market" (Vratuša-Žunjić, 1995: p. 108). In this manner, they "secure a continuous flow of strategic resources, enhance competitiveness in the global market, avoid customs barriers, and establish a monopoly on the protected local market" (Ibid, p. 108). Turning to foreign "investors," Serbia has dealt a severe blow to its domestic entrepreneurs, resulting in a significant challenge not only for the present generation but also for future generations, who now primarily seek to leave their country in pursuit of a better life. In the words of Bishop Grigorije, "In the past, people sought their livelihood, but today they seek dignity" (Danas, 04.10.2019).

The Serbian people saw their dignity erode when rapid privatization dismantled domestic production, leaving workers unemployed, insulted, and degraded. This process led to a pronounced societal inequality between the rich and the poor, a divide that continues to widen until today. Labor laws, which have undergone substantial changes, bear a considerable share of the responsibility for the current state, characterized by a quasi-slavery status.

The Labor Law stands as one of the first legislations enacted after the democratic changes, bringing significant alterations to workers' rights. As Dušanić emphasizes, "Workers who lose their jobs, especially those in their mature years, practically have no chance of finding new employment." On the other hand, "young women often must commit to postponing having children for several upcoming years, and so forth" (Dušanić, 2013b, p. 25). Whether consciously or not, such a labor law has stripped workers of their rights, leaving them at the mercy of capital owners. Furthermore, this labor law has directly influenced Serbia's demographic landscape, which worsens year by year.

The issue of Serbia's poor demographic outlook has been a longstanding concern. However, in recent years, there has been a notable increase in the disparity between mortality and natality. It is estimated that around 15,000 people emigrate from Serbia each year. When combined with the negative natural population growth, which is estimated at 30,000 to 35,000 inhabitants (as in 2005, 2007, and 2010), the total reaches figures of 45,000 to 50,000 inhabitants. Based on these statistics, it becomes evident that almost an entire town leaves Serbia

each year. The primary challenges contributing to Serbia's poor demographic outlook include emigration, declining fertility rates, an increase in the average age at first marriage for both men and women, a rise in the average age of women at the birth of their first child, and a significant number of abortions (Geotesla, 02.02.2020).

Serbia's challenge extends beyond the emigration of young and highly educated individuals. The country faces a broader labor drain as people of varying skill levels are leaving Serbia, resulting in a significant labor shortage. Skilled workers have departed for Western European countries in pursuit of better opportunities. The Chamber of Construction Industry of Serbia has calculated that Serbia has a deficit of 30,000 craftsmen of various profiles, creating a substantial deficiency, with electricians, welders, and plumbers in high demand (Noizz, 03.01.2021).

To address this pressing demographic issue, a fundamental shift in the nation's economic policies is imperative. Many citizens leave the country due to their inability to secure employment within their respective fields or due to inadequate compensation and working conditions. "Serbia's inherent character and spi-

rit are better suited to smaller enterprises with fewer employees, family-owned businesses, and family farming" (Anđelković, 2016, p. 33). Hence, for sustained viability and economic recovery, our focus must shift towards increased support for domestic entrepreneurs and farmers, along with safeguarding local production and consumer interests. Subsidizing foreign investors is an economic practice that warrants reevaluation if we aspire to break free from the constraints imposed by neoliberal ideology.

5. Towards the conclusion

Serbian society, since it has "built its house on the crossroads" (Cvijić), has always found itself at the "watershed of cultures" (Anđelković), stretched between the East and the West. Since the October 5th changes, Serbia's "long journey to Europe" has accelerated. However, it seems that even after twenty years of negotiations (based on the principle of "carrots and sticks" by the EU) and various concessions to the EU, the dream remains unfulfilled. Despite its historical, cultural, and geographical ties, Serbia's path to European integration appears to be an elusive goal.

Europe has undergone a substantial transformation since its inception.

In the past, Europe upheld the ideals of social democracy, where the essence of its culture was deeply rooted in the "dignity of the human being" and the "strength of its values" (Bodson, 1994, p. 17). However, in the present day, it has evolved into a domain dominated by technocrats headquartered in Brussels (Bodson, 1994, p. 93). It appears that Europe has relinquished both its vigor and its sense of honor, as "bankers, traders, and the pursuit of wealth have taken precedence in the value system of European societies" (Bodson, 1994, p. 17). Fundamental values such as freedom, equality, and fraternity, which emanated from the ideals of the French Revolution, have been overshadowed by newer principles. This transformation has engendered a crisis in democratic ideals with the rise of populism, an exacerbation of social inequalities, and a growing sense of alienation among people.

In seeking inspiration from Western European nations, Serbia endeavored to shift its identity from a traditional collectivist perspective towards individualism, with hopes of achieving societal, political, and economic development. However, Serbia inherently carries a cultural legacy of collectivism. Therefore,

Serbia should consider emulating countries like Japan, which successfully reconciled two seemingly incompatible aspects-tradition and modernization. Japan notably emphasizes the practices of socialization, cooperation, and compromise (Gajda & Oie, 2017). These principles did not hinder Japan from becoming one of the most developed nations in the world.

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SRBIJA IZMEĐU ZAPADNOG INDIVIDUALIZMA I PRAVOSLAVNOG KOLEKTIVIZMA

Rezime: U radu se govori o problemima koje sa sobom nose suprotnosti između individualizma i kolektivizma. Rasprave o ovim suprotnostima su i danas prisutne u akademskim krugovima. U Istočnim evropskim zemljama individualizam je postao aktuelan nakon pada Berlinskog zida, do tada je preovladavao kolektivistički duh. Postsocijalističke istočnoevropske zemlje su prihvatanjem neoliberalizma započele, ne samo ekonomsku reformu, već i obrazovnu, zdravstvenu, kulturnu itd. Ta reforma je značila i prelazak iz kolektivizma u individualizam, jer savremeni neoliberalni kapitalizam pripada individualizmu u kojem je glavni fokus usmeren ka pojedincu kao najvećem potrošaču. Prelazak na neoliberalni kapitalizam doveo je do toga da je značajan broj radnika ostao bez posla nakon liberalizacije, deregulacije i privatizacije srpske privrede, što je rezultiralo anemičnom demografskom slikom Srbije, koja se iz godine u godinu značajno pogoršava. Srbija danas ostaje bez radno sposobnog stanovništva koje, pored mladih i visokoobrazovanih radnika, čine i zanatlije različitih zanimanja. Za Srpske političke elite put u EU se ne dovodi u pitanje. Na tom putu smo već dvadeset godina i čini se da se nismo mnogo pomakli od početka. Po principu, „korak napred nazad dva“.

Ključne reči: individualizam, kolektivizam, neoliberalizam, Srbija

SYNERGY BETWEEN THE CIRCULAR ECONOMY AND 3D PRINTING

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Abstract: The circular economy is the antithesis of the linear economy. Circular products are designed so that they can be easily reused, disassembled, repaired, or recycled. In the 3D printing sector, there are numerous initiatives to develop manufacturing processes where waste is reused and repurposed, thus reducing the environmental impact of additive manufacturing. It is necessary that all actors participating in the design and production process respect the principles of the sustainable production model and the maximization of the efficiency of processes and materials. 3D printing can facilitate circularity at various stages: production, maintenance, reuse, remanufacturing, and recycling. The aim of the paper is to point out the synergy between the circular economy and 3D printing, with a focus on the contributions of 3D printing to the circular economy.

Keywords: circular economy, 3D printing, additive manufacturing, sustainable development

1. Introduction

The circular economy is the antithesis of the linear economy. The main paradigm in the linear economy is take – make/use – dispose. In this way, natural resources are consumed uncontrollably, but huge amounts of hazardous waste are produced. The circular economy model emphasizes the importance of thinking about products, instead of waste, bearing in mind that waste from one industry/enterprise can be considered a valuable raw material for another industry/enterprise. Circular products are designed so that they can be easily reused, disassembled, repaired, or recycled. 3D printing is known as additive manufacturing which involves applying a certain material layer by layer to form a 3D shape or structure. In the first two decades of the 2000s, 3D printing experienced its full bloom, and the growth of the global additive manufacturing market is expected. 3D printing offers great potential for 3D objects production of in various sectors, such as: medicine and dentistry, aerospace, automotive, architecture, art, fashion, etc. 3D printing processes allow customization and personalization of products according to individual customer preferences. 3D printing can contribute to cost savings and

reduce the inventory, but also minimize waste. The aim of the paper is to point out the synergy between the circular economy and 3D printing, with a focus on the contributions of 3D printing to the circular economy.

2. Transition from linear to circular economy

The linear model of production is based on the transformation of resources into products and their conversion into waste after use. The main paradigm in "linear economy" is take - make/use – dispose. This means that we don't only consume natural resources uncontrollably, but also, we produce huge amounts of hazardous waste, which nature cannot decompose and absorb (Kowczyk, Maher, 2018). The consequence of such action is the reduction of natural resources, large amounts of waste and environmental pollution. The situation is getting exponentially worse. This is why the linear economy must change (GIZ, 2016). The current policies of many countries, including the European Union, speak in favor of the fact that this model is ecologically, socially, and economically unsustainable in the long term. We are consuming more and much faster than the Earth can regenerate. According to estimates of the Global Footprint

Network, the current model of economic growth, based on the use of natural resources, has put humanity in a position to use as many resources in just seven months as all ecological systems on the planet can renew in a year. In other words, our generation uses the "Earth capital" of future generations. Linearity implies that by 2060 we will need at least two planets to meet all our needs (GIZ, 2016, World Bank, 2022, Stanković et al., 2023).

The circular economy is the antithesis of the previous linear model of the economy. The main goal of the circular economy (CE) is sustainable use of resources and elimination of waste (World Bank, 2022). The circular economy changes business models, habits, and way of thinking, both of producers and consumers, because the new eco-design of the product extends its life through repair, modification, and recycling. All processes take place with the use of renewable energy sources (Ministarstvo zaštite životne sredine Republike Srbije, 2020). The message that this model promotes is: Don't think about the waste, but about the product. The main source of economic growth is the greatest possible reuse of materials from products that have completed their "life cycle" and the least possible use of

new resources. Products are designed so that they can be easily reused, disassembled, repaired, or recycled. In the concept of circular economy, waste does not exist, but only raw material that can be reused for the same or other production processes. In the circular economy, the waste of one industry is the raw material of another. According to the Circularity Gap Report, the world is only 9% circular, and that trend is negative (Kowszyk, Maher, 2018).

There is still no single definition of circular economy. According to the European Commission (2015), the circular economy is an economy in which the value of products, materials and resources is maintained in the economy as long as possible by returning them to the production cycle at the end of their use, thereby minimizing the generation of waste. The Ellen MacArthur Foundation (2018) defines the circular economy as a regenerative economy, which relies on systemic innovation and aims to redefine products and services while minimizing negative impacts. The circular economy is an alternative to the traditional linear economy (Figure 1.).

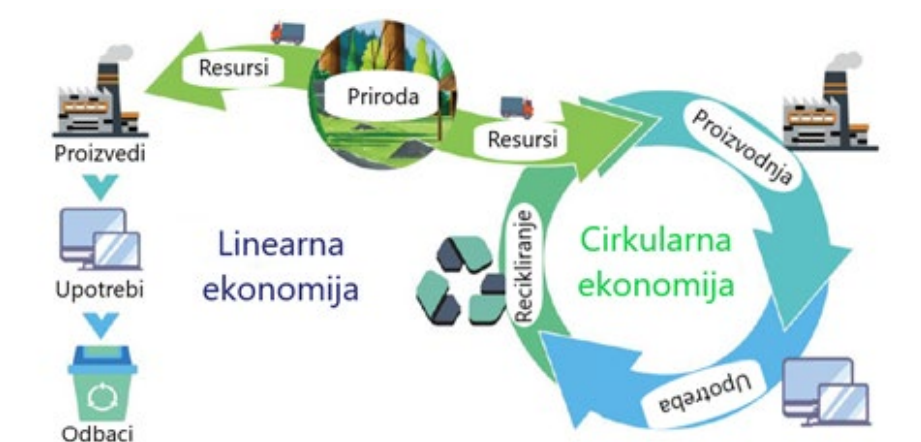


Figure 1: Linear economy and circular economy (Chen, 2022)

The circular economy mainly follows the 3R principle (Reduce, Reuse, Recycle), and its core is maintaining the permanent use of material resources and sustainable development (Dyer et al., 2021). "Reduce" is the first principle of the circular economy. It requires that the production process uses as little raw materials and energy as possible to meet predetermined production goals, reduce resource and energy consumption, and prevent the generation of waste and pollutants. "Reuse" is the second principle of the circular economy. Manufacturers are required to think about durable products during the design and production phase. Reuse can effectively extend product life and encourage the development of a

recycling industry for disassembling, repairing, and assembling used and damaged products. "Recycle" is the third principle of the circular economy. It requires that products after disposal can be converted into usable resources and re-enter the production process, to reduce the generation of waste and the consumption of natural resources (Luo and Gao, 2015, Chen, 2022, Garrido et al., 2020, Potting et al., 2017, Ekins et al., 2019). Kirchherr, Reike, and Hekkert (2017) extended 3R framework to more extensive frameworks such as the 9Rs hierarchy adopted by the Ellen MacArthur's Foundation: Refuse, Rethink, Reduce, Reuse, Repair, Refurbish, Remanufacture, Repurpose, Recycle and Recovery.

In 2015, the United Nations adopted Agenda for Sustainable Development (Agenda 2030) as a universal call to action to end poverty, increase well-being and preserve the planet, ensure peace and prosperity, and solve the problem of climate change in the world by 2030. In 2019, the European Commission presented the "European Green Deal" as the most ambitious package of measures to make Europe the first climate-neutral continent in the world and a world leader in circular economy and clean technologies by 2050. With the Green Agreement, the EU committed itself to meet the goals of the 2030 Agenda and the Paris Agreement from 2015. For Europe by 2030, the potential economic gain from the transition to a circular economy is estimated at 1.8 billion euros (Ministarstvo zaštite životne sredine Republike Srbije, 2020).

There are three major trends which together are the drivers of the circular economy (PWC, 2018):

1. Changing consumer needs

According to Nielsen's 2016 global survey, 39% of respondents were prepared to pay more for products made from environmentally friendly or sustainable materials. Unilever's survey of 2017 reached a similar conclusion: one third of consumers

take the brand's environmental and social impact into consideration when making purchasing decisions. Sustainability is especially important for generations Y (20-35 years old) and Z (15-20 years old). They pay closer attention to the environmental performance of companies, both when purchasing products and when choosing an employer.

2. Limited resources

The Earth's resources are only available in limited quantities, and because of the current linear economic model, most of them are used only once. In 2030, according to some forecasts, we will require 35% more food, 40% more water and 50% more energy than we do now. According to the World Economic Forum's survey, more than 20% of companies worry about the shortage of raw materials.

3. Technological drivers

We are currently witnessing the fourth industrial revolution, which is being driven by digitalisation. The fourth industrial revolution supports the circular business models that use renewable energy, in which there is no waste, and where the products of today are also the raw materials of tomorrow.

3. 3D printing tehnology

3D technologies have experienced a great expansion in recent years. The term "3D printing" refers to a wide range of processes and tools that provide opportunities to create components and products from various materials. Fundamentally, the commonality among all these processes and technologies is the way manufacturing takes place in an additive process, layer by layer, as opposed to conventional manufacturing methods, which include material removal methods or molding/casting processes. 3D printing can be defined as structuring of a three-dimensional object in its physical configuration from its digital form, which turns the virtual model into a physical object by successively applying layers of

printing starts with the process of designing the product in digital form using CAD software (Autodesk Inventor, SolidWorks, CATia...) or scanning with a 3D scanner. After approval of the 3D design, the file is translated into STL format. After translating the digital file into STL file format, 3D Slicer starts to configure the whole process, layer by layer and thus forms the G-code that represents the movement of the 3d printer tool. That file is fed into the printer and then printing can begin. Each layer is applied to the other according to 3D printing technology. The process then continues until all layers are formed and the three-dimensional object is complete (Figure 2) (The Engineering Projects, 2021).

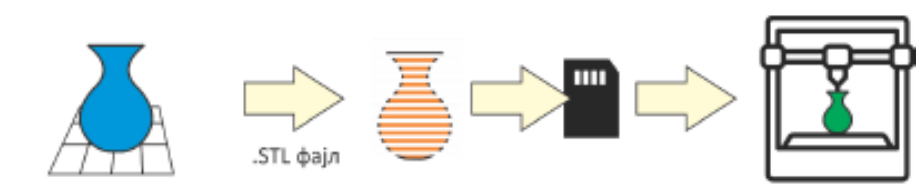


Figure 2.: 3D printing process (The Engineering Projects, 2021)

material (The Engineering Projects, 2021, Firtkiadis, 2022, Shahrubudin, 2019, EU, 2021). 3D printing is also known as additive manufacturing which involves applying a specific material layer by layer to form a 3D shape or structure. 3D *Ekonomski signali* 54

In the first two decades of the 2000s, 3D printing experienced its full boom and evolution, the process became cost-effective and efficient all thanks to the innovations and materials introduced in the 3D printing industry (The Engineering Projects,

2021). The global additive manufacturing market could reach \$34.8 billion by 2026 (Markets and Markets, 2023). According to the EU Digital Education Action Plan (DEAP) 2021-2027, rapid digitization over the past decade has transformed many aspects of work and everyday life. Driven by innovation and technological evolution, digital transformation is reshaping society, the labor market, and the future of work. The use of digital technologies is also key for achieving the goals of the European Green Deal and achieving climate neutrality by 2050. Digital technologies are powerful drivers of the green economic transition, including the transition to a circular economy (EU, 2021).

In the past, 3D printing was used exclusively by large multinational corporations, but now, due to affordability, 3D printers can also be purchased by small and medium-sized businesses. There is a wide range of 3D printers available on the market, with wide variations in price; The Quintessential Universal Building Device is available for less than \$200, while MakerBot's Replicator Z18 costs \$6,500 (EU, 2021). In this way, 3D printing has become available to many small and medium-sized businesses and indivi-

duals. 3D printing has the potential to bring manufacturing closer to the end user/consumer, thereby reducing current supply chain constraints. The flexibility of 3D printing and the possibility of producing small production series at the request of the consumer is a sure way to reduce the accumulation of stocks and produce the number of products that are needed to satisfy the needs of the consumer (3D printing industry, 2023).

3D printing has a lot of advantages over traditional manufacturing methods. Comparing production time, cost and quantity, conventional manufacturing requires longer time in prototyping, but is much faster in producing final products compared to additive manufacturing. Conventional manufacturing requires high initial tool and die costs, but the average cost per product decreases as production volume increases, while additive manufacturing requires low initial setup costs, but the average cost per item remains the same regardless of quantity. As a result, conventional manufacturing is suitable for the mass production of homogeneous products, while additive manufacturing is more suitable for unique, complex, low-volume designs. Moreover, additive manufacturing can produce

different components individually and repair small components in a very short time, without having to remake the entire item from scratch. This enables the reduction of material and energy consumption, reducing production time and costs (Wu et al., 2022).

3D printing is very often used for prototyping in the earliest stages of product development to quickly and efficiently reach an optimal solution for production. This saves time and money at the beginning of the whole product development process. 3D printing processes allow customization, personalization of products according to individual needs and requirements. In addition, complex parts and products are easily available through 3D printing technology, while traditional manufacturing methods had many limitations in case of complex and complex designs. A small modification or a major change in the design can be easily done, without disturbing the whole design. Assembly parts produced with the help of 3D printing are lightweight and durable because 3D printing can work with different materials that are more suitable for the manufacturer (The Engineering Projects, 2021). The 3D printing process is extremely cost-effective, cost savings can be achieved

by purchasing less material. There is no need to hold large inventories, as as many products as needed can easily be printed according to supply and demand. 3D manufacturing is an additive process, and therefore less waste is produced, as material is added layer by layer successively (3D printing industry, 2023).

3D printers have found their application in many sectors, from building human hearts to building houses. Even NASA has a 3D printer on the International Space Station (EU, 2021). Apart from prototyping, 3D printers offer great potential to produce various 3D objects in different sectors, such as (Shahrubudin, 2019, The Engineering Projects, 2021, 3D printing industry, 2023, EU, 2021, Wu et al., 2022): medicine and dentistry, aviation industry, automotive industry, architecture, art, fashion, etc.

- **Medicine.** In medicine, 3D printing was adopted relatively early. Medicine represents a sector with enormous potential for growth in the use of 3D technology, due to the ability to customize and personalize technologies and the ability to improve people's lives as processes and materials are improved. In medicine, 3D printing can be

used to create prototypes and to support the development of new products. Also, 3D printing finds its application in the production of dental crowns, hip and knee implants, hearing aids, orthotic insoles for shoes, personalized prosthetics and disposable implants for patients suffering from diseases such as osteoarthritis, osteoporosis, and cancer. 3D printed anatomical models allow surgeons to properly understand the internal structure of organs. In addition, 3D anatomical models allow better visualization and help surgeons plan detailed surgical procedures. As a result, clinical efficiency is increased, the risk of surgical errors is reduced, and patient outcomes are improved.

- **Aerospace industry.** Like the medical sector, the aerospace industry is an early adopter of 3D printing technologies for product development and prototyping. One of the key advantages of 3D printing in the aerospace industry is the production and repair of spare parts. The ability to design and manufacture components directly using CAD greatly benefits the aerospace industry. The possibility of using recycled material as raw material addi-

tionally solves the issue of material supply and waste.

- **Automotive industry.** Many automotive companies are using 3D technologies for prototyping, but they also see the potential of 3D printing to produce spare/replacement parts, on demand, instead of holding huge inventories. For example, the Urbee (Urban Electric with Ethanol) is the first car in the world that was made using 3D printing.
- **Architecture.** In architecture, 3D printing has been used for a long time as a relatively fast, easy and economically viable method of producing demonstration models of an architect's vision. More recently, some visionary architects are using 3D printing as a direct construction method. In architecture, 3D models of buildings and bridges are also printed for assessment and construction approval.
- **Art.** There are numerous artists who have now made a name for themselves working specifically with 3D modeling, 3D scanning and 3D printing technologies: Joshua Harker, Jessica Rosenkrantz, Pia Hinze, Nick Ervink, Lionel Dean, and many others. 3D scanning combined with 3D printing brings a new dimension to the art world, considering that

artists now have a proven methodology to reproduce the works of great artists of the past.

- **Fashion.** Fashion accessories created with 3D printing, including footwear, clothing, and accessories, have hit global catwalks. Some even more visionary fashion designers have demonstrated the possibilities of 3D technology in high fashion. Iris van Herpen deserves a special mention as a leading pioneer in this field, as she has produced a lot of collections that include 3D printed fashion items. Many have followed, and continue to follow, in her footsteps, often with completely original results.

4. Intersection of Circular Economy and 3D Printing

3D printing, also known as additive manufacturing, has become the primary cost-effective method of mass production, rewarding businesses with shortened product development times, reduced start-up costs and profitable returns on investment. Additive manufacturing eliminates material waste by "printing" parts in successive layers, achieving high levels of design complexity that are difficult - and in some cases impossible - with traditional manufacturing proce-

ses. The costs of transportation and storage of raw materials and energy consumption have been drastically reduced. The integration of 3D printing with the circular economy, therefore, further contributes to the elimination of the material waste problems that it can cause and reintegrates used products into use. Biomaterials would allow manufactured products to be safely broken down into natural elements and remanufactured without much reduction in physical properties or quality (Rayside et al., 2020).

In the 3D printing sector, various initiatives are currently underway to develop closed manufacturing processes that reuse and repurpose waste materials. Although the development of new environmentally friendly materials and the initiation of various projects that aim to reduce the impact of additive manufacturing on the environment are positive steps, there is still a long way to go before 3D printing becomes a fully circular manufacturing technology. For this to become a reality, it will be necessary for all parties active in the design and manufacturing process and the supply chain to play their part in achieving a model of sustainable production that goes beyond simply maximizing the efficiency of pro-

cesses and materials (Everett, 2021). Despeisse et al. (2017) points out that the characteristics of 3D printing are well aligned with the principles of sustainability and circularity and hold significant promise for moving society in a more sustainable direction. 3D printing can facilitate circularity at various stages: production, maintenance, reuse, remanufacturing, and recycling. Each stage provides a unique but essential opportunity to reduce waste in terms of materials, energy, and costs. Various approaches are used to maximize the utility of materials, including reuse, repair, renovation, capacity sharing (Kunz et al., 2018).

The choice of materials is the key to achieving circular products. The possibilities for new materials in 3D printing are great and it should be remembered that through the recycling of materials used in 3D printing and reuse, many complex materials can be put back into use (Circular 3D, 2020). Manufacturing errors also occur with additive technologies. All the material that is discarded as scrap can be reused by being crushed, melted, and re-shaped into the shape required for the operation of a particular 3D printer. A comparison between the original filament material and the

recycled material showed that both filaments are very similar in mechanical properties of the 3D printed samples. This fact promotes further progress in the recycling of 3D printed filament (Mikula et al., 2021; Lanzotti et al., 2019), mainly by obtaining recycled filament from waste and using it to make samples and prototypes. By using recycled materials for 3D printing, material costs, CO₂ emissions and energy consumption are reduced (Firtkiadis, 2022).

Additive manufacturing enables the reduction of waste, energy consumption and CO₂ emissions, and the time and costs of product production. In addition, additive manufacturing empowers individual start-up companies and contributes to the creation of new jobs, reducing the unemployment rate. 3D printing machines typically cost around \$300 to \$1,000, and some websites such as "Repetier.com" provide free CAD software. Considering that additive manufacturing requires a minimum level of skills and capital for production, anyone can start a home business and become a manufacturer. Additive manufacturing can create complex geometric patterns, empowering designers to improvise with unique creations (Wu, 2022). By enabling

every user to become a potential manufacturer, 3D technology creates a close link between design, production, and marketing. Goods can reach local customers directly, without sophisticated logistics and transport. Additive manufacturing bypasses the limitations of the traditional supply chain by printing small quantities of products tailored to customers. Its flexibility and agile adaptation to demands creates many advantages that the traditional supply chain does not see, such as customized production, localized production and distribution, short delivery time, low transportation costs and low carbon footprint (Wu, 2022).

3D printing can fit well into the concept of circular economy. The 3D printing production process itself can lead to significant material savings. But 3D printing can also contribute to the maintenance, reuse, remanufacturing, and recycling of products. The aim of the paper is to point out the connection between 3D printing and the circular economy and the significant contributions that 3D printing has to the realization of the principles of the circular economy. A detailed analysis of the available literature was conducted to determine the connection between 3D printing and the

circular economy and to identify opportunities for further integration. (Rayside et al., 2020). In Table 1, we indicated how 3D printing could contribute to these elements in the circular economy (van Wijk. & van Wijk., 2015).

Table 1. Contribution of 3D Printing to Circular Economy

Manufacturing	<p>No or less waste in manufacturing processes. Less material used in products designed for 3D printing. Production on customers' demand. Production is local, requiring less transport and logistics. Personalized products that fit your size, preference, or style. Flexible production processes with reduced packaging material and costs. Manufacture of customized and multifunctional products. Bettered response to customer needs. Improved customer-manufacturer relationship through co-creation. Reliance on local materials and bettered control of its quantity and quality. Use of environmental-friendly biomaterials. Reduce material use and improved efficiency of printed products.</p>
Maintenance	<p>Print broken parts on demand, no spare parts necessary. Print broken parts in situ, problem is solved immediately. Print broken parts of any (old) product, lifetime of products is extended. The repair can be done by yourself, any time you want, faster and cheaper. Flexible production processes with reduced packaging material and costs. Reduced packaging costs and value chain autonomous production processes.</p>
Reuse and remanufacture	<p>Products can have a second, third, etc. life by upgrading parts, replacement of old parts and/or re-design or re-styling. Clothes can be adjusted to personal changes like size, shapes, preferences. Furniture can be adjusted to personal circumstances, shapes, preferences. Special elements could be added to the product afterwards. Repurposing of printed parts to extend the use of the product.</p>
Recycle	<p>Recycled materials can be easily used as a resource for 3D printing. Recycling can be done locally and be used locally, with less transport and logistics. Plastics can be remelted at home and directly used again in a 3D printer, without transport and logistics. Re-extrusion of new filament from plastic waste or 3D printing waste.</p>

Source: Van Wijk, Van Wijk., 2015, Dinka, Nyika, 2023, Rayside et al., 2020

For manufacturing companies to remain competitive and profitable, they must demonstrate a commitment to environmental responsibility and sustainability as part of their operations. Products should be designed to last, to be repairable, and at the end of their life cycle, each of their parts can find another use (García-Muiña et al., 2019). This process must start in the product design phase. Rapid prototyping using 3D printing is a design practice that accelerates the design process while reducing product launch times. Additive manufacturing therefore allows designers to carry out rapid design iterations to reduce the waste that occurs in traditional manufacturing. Manufacturing strategies must also be developed to implement the technical features of modularity, disassembly, and repair into products (Despeisse, 2016). To comprehensively mitigate waste problems, circular economy strategies must be applied in all economic sectors, including the manufacturing sector, to extend the life cycle of used raw materials and their waste from production processes. 3D printing technology enables localized and decentralized production and reduces costs associated with inventory. Additive manufacturing can lead to savings in time and money

through the production of spare parts by 3D printing (Dinka, Nyika, 2023).

The concept of circular economy pushes the boundaries of ecological sustainability. However, there are challenges in integrating 3D printing and the circular economy. The challenges can be classified into six main categories: technical, organizational, economic, social, legislative, and academic challenges. There is a high level of inter-dependence between these categories, which affects the complexity of the challenges themselves and the complexity of the responses to them. Technical challenges include designing products that can be used for a long period of time, where it is important to ensure that the technologies used in the present are not obsolete soon, and that the importance of recycling is not neglected, that void considers the functional quality of raw materials for 3D printing and by-product toxicities (Hopkinson et al., 2018). Organizational issues such as supply chain restructuring and trade secrets and confidentiality are multisectoral, and it is possible for conflicts to arise due to poorly defined roles and responsibilities and the perception that 3D printing is only for small-batch production rather than mass

production (Rayside et al., 2020). The identified economic challenges are closely related to organizational issues, as they were focused on the analysis of production costs, initial investments and maintaining a consistent recycling system. Regarding the social impact of integration, numerous articles have confirmed that it is the most neglected aspect. Legislative challenges vary by country, but those identified relate to the need for laws and standardization in the circular economy, as well as well-defined policies and procedures. Academic challenges include a lack of studies examining the extent to which circular economy implementation strategies are feasible and the contribution that 3D printing has to the circular economy (Nascimento et al., 2018). Lack of education and awareness are also key factors that prevent the improvement of sustainability in production, and therefore it is important to initiate future research on the contribution of 3D printing to the circular economy, at the individual level, at the company level and at the macroeconomic level. It would be beneficial to continue further research on this topic as the world's economies are slowly shifting towards more sustainable practices. To achieve the global goal of environmental sustainability, it

is important to integrate the circular economy into individual sectors, including the additive manufacturing industry (Rayside et al., 2020).

5. Conclusion

The integration of 3D printing and the circular economy contributes to the elimination of excessive waste and influences the reuse of recycled materials. Due to its specificity that excess material that is not used during printing can be recycled or reused, 3D printing is a technology that is often associated with the circular economy. In the 3D printing sector, there are numerous initiatives to develop closed manufacturing processes where waste is reused and repurposed, thus reducing the environmental impact of additive manufacturing. For the synergy of 3D printing and the circular economy to be complete, it is necessary that all actors participating in the design and production process respect the principles of the sustainable production model and the maximization of the efficiency of processes and materials. 3D printing can facilitate circularity at various stages: production, maintenance, reuse, remanufacturing, and recycling. In this paper, we pointed out the connection between

3D printing and the circular economy and the significant contributions that 3D printing has to the realization of the principles of the circular economy. For manufacturing companies to remain competitive and profitable, they must demonstrate a commitment to environmental responsibility and sustainability and must think about their products already at the product design stage. Additive manufacturing enables the creation of product prototypes, to think about the implementation of the technical features of modularity, disassembly, and repair in time. Additive manufacturing technology contributes to the principles of the circular economy and offers numerous opportunities: enables the use of locally sourced materials, supports on-site recycling through material recovery, remanufacturing, and redesign, thereby reducing the amount of waste generated and their resulting impact on the environment. It is extremely important to further explore the topic of synergy of 3D printing and the circular economy and continue research, bearing in mind the aspiration towards the global goal of environmental sustainability.

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SINERGIJA CIRKULARNE EKONOMIJE I 3D ŠTAMPE

Sažetak: Cirkularna ekonomija je antiteza linearnoj ekonomiji. Cirkularni proizvodi su dizajnirani tako da se mogu lako ponovo koristiti, rastavljati, popravljati ili reciklirati. U sektoru 3D štampanja, postoje brojne inicijative za razvoj proizvodnih procesa u kojima se otpad ponovo koristi i prenamenjuje, čime se smanjuje uticaj aditivne proizvodnje na životnu sredinu. Da bi sinergija 3D štampe i cirkularne ekonomije bila potpuna neophodno je da svi akteri koji učestvuju u procesu projektovanja i proizvodnje poštuju principe modela održive proizvodnje i maksimizacije efikasnosti procesa i materijala. 3D štampa može olakšati cirkularnost u različitim fazama; proizvodnja, održavanje, ponovna upotreba, ponovna proizvodnja i recikliranje. Cilj rada je da ukaže na sinergiju između cirkularne ekonomije i 3D štampe, sa fokusom na doprinose 3D štampe cirkularnoj ekonomiji.

Ključne reči: cirkularna ekonomija, 3D štampa, aditivna proizvodnja, održivi razvoj

THE FUTURE OF THE DOLLAR AS A WORLD RESERVE CURRENCY IN NEW INTERNATIONAL CIRCUMSTANCES

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Abstract: The US dollar is the world's reserve currency, and it is also the currency most often used for trade and other international transactions. Due to the current geopolitical, economic and monetary developments, it is evident that a large number of countries are looking for ways to move away from the dominance of the dollar, as the leading world currency. The risk of de-dollarization has increased recently, partly due to the current Russian-Ukrainian crisis, as well as American economic sanctions against certain countries, and partly due to the growing role of the BRICS countries in the world economy. This paper argues and proves the hypothesis that the dollar as the world's reserve currency and the international monetary system are two sides of the same coin, that a complete loss of confidence in the dollar leads to the collapse of the global monetary system and vice versa, as well as that the destruction of the monetary system would lead to the disappearance of the dollar. The paper elaborates on dollar as a reserve world currency, theories of money, the dollar as a debt, deficits and monetary equivalents, the dollar and free markets, the IMF as a world bank and the SDR as a world money, the demand for gold as an indicator of distrust in the dollar, new global players and the world reserve currency, BRICS expansion and de-dollarization, and it is finalised with concluding remarks.

Keywords: international monetary system, dollar, deficit, de-dollarization, free markets, BRICS

1. Introduction

The relationship between the dollar as the world's reserve currency and the IMS (International Monetary System) rests on the premise - a complete loss of confidence in the dollar leads to the collapse of the IMS and vice versa, the destruction of the IMS leads to the disappearance of the dollar. "The dollar is like a peg. If that peg falls out, the whole system will fall apart, and the dollar and the system are one and the same" (Rickards, 2017:7). The more recent history of the US dollar as the world's reserve currency and guardian of value testifies to the periods of declining confidence in the dollar and the dollar panic at the end of the 70s of the last century with the abolition of the gold standard. Without the monetary intervention of the FED, the IMF and the US administration, the dollar would have had a hard time surviving the economic crisis. Rickards believes that the dollar crisis today testifies to the fact that the world economy has not reached a new normal after the financial crisis, and that old tools such as general equilibrium models cannot help us explain the situation. Indicators of the state of the IMS crisis and the dollar are internal and external, debts and deficits lead to pressures on the

dollar by many countries around the world, then, gold rush, cyber financial attacks, risks of a financial world war, loss of confidence of people and central banks in the purchasing power of the dollar (Rickards, 2017:13). The dangers are real and visible in monetary theory as (targeted) inflation and the illusion of money. Inflation is partly a monetary phenomenon that manifests itself as money printing, but it is also the result of behavior in the form of lending and spending. Inflation is a rise in prices that is influenced by the Federal Reserve System on a global level. On the other side is deflation, that is, a general decline in consumer prices and property values, which leads to liquidity traps. Deflation slows the growth of nominal GDP, and increases the real value of government and private debt and makes it more difficult to repay and represents the risk of market collapse (Rickards, 2017:18). The problem of deflation is related to the stability of the banking system and systemic risk. A special aspect of deflation is its impact on tax collection.

Deflation is a natural phenomenon in a recession. Corporations are faced with declining returns, individuals with unemployment and the sale of assets to repay debts. As

consumption declines, asset sales continue, with a direct consequence of deflation being a drop in prices. In addition to endogenous threats to the dollar such as the Fed's uncontrolled money printing and galloping inflation, there are also exogenous factors such as pressure from the BRICS countries, oil producers and developing countries to change the monetary rules of the game and abolish the American monetary hegemony and create a new monetary standard (gold, special drawing rights, network of regional reserve currencies). It is difficult to accept Rickards' thesis that the system has gotten out of control and that these are the last days of the dollar and the existing world monetary system, but it is also harder not to accept the new reality, economic and monetary, about the changed state of the world economy, new global players on the world economic stage, new technologies and different loyalties. We can agree with Walker, if people have confidence in the dollar, they will overcome any problem.

However, the signals coming from the global economic system testify that confidence in the dollar is disappearing. After the Russian invasion of Ukraine, as well as the American economic sanctions against certain countries, it is shown

how much dependence on the dollar can threaten the economies of the countries that are under attack. Therefore, many countries are looking for alternatives to the US dollar in order to reduce dependence, and some are even thinking about introducing their own currencies. China plays a significant role in the de-dollarization process. It has taken important steps to modernize and liberalize its financial system. This led to increased investment in Chinese bonds and a rise in official yuan reserves, indicating a strengthening of the yuan as a competitor to the dollar (<https://www.visualcapitalist.com/de-dollarization-countries-eeing-alternatives-to-the-u-s-dollar/>). The causes of the decline in confidence in the dollar are of a monetary nature, the dual spectrum of inflation and deflation, as well as the failure of monetary policy holders to understand the essence and seriousness of the problem. The decline in confidence in the dollar as a reserve global currency is also shown by the strengthening of virtual currencies in the digital economy, such as bitcoin, as well as the world of transactions without any currencies, the electronic market for barter transactions (Rickards, 2017:327). Therefore, non-monetary exchange or barter economy belongs to the

future. True, no regional currency is quite close to becoming the world's reserve currency, but all are relatively strong enough to carry out significant trade transactions and thus depreciate the dollar.

2. The dollar as a world reserve currency – theories of money

"I think that this current global civilization has exceeded its limits, because it has created such a cult of money. Today and here there is no consensual position on the concept of money, its economic functions and legal nature" (Rikards 2017:212). According to Aristotle, everything must be expressed in money, because it always enables us to exchange services and makes life in the community possible. Money is value, for an individual it is part of wealth, assets less liabilities, net worth. All monetary economies are money economies. Money is a liquid asset, it is easily exchanged for other values with certainty regarding the nominal value. All obligations of a property legal nature can be reduced to money. Fulfillment of both monetary and non-monetary obligations is done by payment. Global currency, as well as national currencies, has three important functions, calculation, as a unit of measure-

ment of the value of goods and services, exchange and value custodian function. For the international role, it is important to highlight the anchor currency in the fixed exchange rate regime (Goldberg, 2011). Rickards believes that money, the dollar, is something that people "make, spend or save, as a means of exchange, a keeper of value and a unit of measure" (Rickards, 2017:213).

The essential properties of money as a commodity *sui generis* (in the political economic sense) are; portability, durability, divisibility, standardization, recognition. Monetary economies know commodity and fiduciary money. Commodity money consists of goods in the physical sense, leather, axe, wool, gold, silver. The mentioned goods had a monetary and non-monetary value. Later, commodity standards were established, using a monetary token linked to the value of a physical commodity, gold or silver as a base. Paper money is a representative of money, whose transaction costs have been significantly reduced. Fiduciary money (*fiducia*, trust) has little value (money value). It is issued by the state, central banks and depository financial institutions. The value of payment rests on the belief that people can

exchange money for goods and services. Current accounts and currency are money because they are accepted in the exchange of goods and services. The value of money, purchasing power follows price movements. Fiduciary money was preceded by the gold standard, where the national currency was defined in units of a fixed amount of gold. The government guarantees the convertibility of currency into gold at the official price, as requested.

2.1. Legal properties of money

In the legal sense, money as an equivalent of value and a legal means of payment requires state regulation and coercion. Monetary obligations are fulfilled in a monetary unit that is legal tender in the country of payment. Determining the currency as a legal means of payment belongs to the monetary sovereignty of the state as an important part of its sovereignty. Execution of monetary obligations is made possible by imperative norms prescribed by the state. Payment is made in money as legal tender. Therefore, in addition to the economic value of money, it is necessary for the state government to declare a certain monetary unit as a

legal tender, as well as the willingness (trust) of people to accept certain money in legal circulation.

The legal properties of money are, a movable thing, a consumable thing, the owner of a certain money can use it only once in legal transactions, a generic thing, determined by gender, banknotes are not securities. Banknotes are issued by issuing banks and, unlike securities, are legal tender. By issuing banknotes, the issuing bank does not assume any property legal obligation, nor does it receive any consideration for issuing them. Banknotes are valid until they are withdrawn from circulation and replaced by other banknotes due to changes in regulations. Securities are private legal documents whose turnover depends on the trust of customers. Unlike banknotes, which are denominated in round sums, securities can be denominated in any amount, which depends on the obligation of the issuer of the bond (Jankovec, 2013:17). With the digital economy, money, as an electronic record, becomes a sign, information, bitcoin, a new currency, attention. According to Rickards, the dollar is money, money is value. Value is the idea of metrics, the way of measuring the existence or degree of value of debt is the idea of trust consistent

behavior in terms of reciprocal or altruistic acts (Rikards, 2017:215).

Some relevant monetary theories of money are:

1. The contractual theory of money (contractualism) is a monetary theory that replaces the word money, which has intrinsic value, with the word debt. The Federal Reserve System issues the dollar, following the model of a written contract. Dollar contracts are signed by an agent (minister) on behalf of the people. A dollar bill is an obligation of the Fed, a form of debt, that bears no interest and has no maturity date. During the time of the gold standard, the dollar was a paper debt instrument backed by gold as an unparalleled solid asset. A dollar contract is assigned value both now and in the future. If the economy is functional, the dollar is useful and the implementation of the contract is satisfactory (Rickards, 2017:218). The gold standard as collateral reinforces the money contract and represents the link between real gold and paper money (notes, shares, certificates). The exchange rate between paper money and gold should be fixed and maintained. The monetary price of gold is a measure of the performance of the FED and the Ministry of Finance in the

implementation of contracts (Rickards, 2017:219).

2. Monetarism is the most influential quantitative theory of money (Irving Fisher and Milton Friedman). A variant of the quantitative theory of money is the quantitative theory of credit (Richard Duncan, creditism), the idea of money is reduced to the idea of credit, the creation and expansion of credit is the focus of monetary theory and policy.

3. State theory of money (chartalism) John Maynard Keynes, money has value, because the state can claim "that money in the form of taxes." This relationship between money and the state means that the extrinsic value of paper money is greater than its intrinsic (internal) value. values, because money is the medium through which the state manifests its power. Adopting Chartalism, Keynes called for the abolition of the gold standard. The common denominator of the aforementioned dependent" theories is the belief in paper (fiat) money, money without cover, the state dictates that it be so.

3. Dollar as debt, deficits and cash equivalents

In the American monetary system, in which the largest debtors are the Ministry of Finance (Treasury) and then the Federal Reserve, treasury bills play an important role, although they are not classic money, they are the most liquid in company balance sheets and figure as cash equivalents. Unlike Federal Reserve notes, which can be printed indefinitely and remain outstanding, Treasury bills are subject to bond market discipline, bear interest, and have a maturity date. If the Treasury guarantees to pay the remaining debts, the market gladly accepts treasury bills with favorable interest rates (Rickards, 2017:221). In the history of government debt instruments, it was shown that the bond market was between a state of security and panic, especially the European markets were vulnerable until 2012, until the ECB's guarantee came, that it would buy all government debt instruments and thus preserve the euro as a political project. In recent years, the purchase of government securities with money issued by the Federal Reserve accounts for a large percentage of new debt instruments issued by the Treasury, thus loosening monetary conditions and monetizing

debt by reducing the value of the dollar (Rickards, 2017:222). Debt is also a political category, in itself it is neither positive nor negative, everything depends on the economic results of investment, it hurts if it serves to finance the deficit and additional borrowing. Debt levels are not automatically too high or too low, what matters to creditors is the trend of those levels in relation to sustainability.

There are three conditions for the debt to be useful for financing state spending, greater benefit than costs, state spending serves to realize exclusively public projects that the private sector cannot realize on its own, and the overall level of debt is sustainable (Rickards, 2017:224). The question of the sustainability of the debt level is also relevant, so the Federal Reserve can monetize every amount of debt that the Treasury issues until the point of collapse of confidence in the dollar (Rickards, 2017:227). The gold standard was a way of limiting the discretion of monetary policy, if it was loose it had to be tightened with a new inflow of gold. During the period of the strong dollar standard, it maintained its purchasing power as measured by price indices and served as an anchor for countries looking for a monetary reference point. Today

there is no reference point, no gold standard, no dollar standard, no Taylor rule. As the bearer of the global dollar contract between the American people and creditors, the Federal Reserve must safeguard the trust of its noteholders. The world monetary system consists of the trinity, debt, deficits and the dollar, this hub must be handled carefully.

In the American system of government finances, monetary policy (FED) and fiscal policy, taxes and consumption (White House and Congress) operate. The skill of monetary policy is to increase inflation without increasing borrowing costs, and to ensure the sustainability of the primary deficit and, if necessary, quantitative easing. The Federal Reserve uses a stick and carrot technique. The stick is an inflationary shock to scare consumers and induce them to spend before the price jump, the carrot represents a negative real interest rate to encourage borrowing money to buy risky assets (stocks and bonds). At stake are unemployment rates, target inflation rates, borrowing costs and quantitative easing. The Federal Reserve is faced with the illusion of money, uncontrolled emission does not lead to real growth, but leads to the illusion of growth due to the increase in

nominal prices and nominal GDP growth. According to Stein, the policy of low interest rates can realistically lead to an increase in the prices of risky assets, shares and real estate. Namely, the invisible risk network increases systemic risk and leads to crises. According to Stein, the Federal Reserve should stop the policy of quantitative easing and thus prevent the accumulation of hidden risks in financial institutions (Rickards, 2017:243).

The instruments of the Federal Reserve in bank control are not negligible and ineffective, reserves for losses, dividend policy, stress tests, acquisitions, capital adequacy, market discipline. The Federal Reserve, caught between the role of the owner of the money contract and the savior of the national debt, must succeed or fail in both roles, he believes (Rickards, 2017:244).

4. The dollar and free markets

The concept of market includes prehistoric commodity exchange, medieval market, modern capital markets, up to modern digital markets. Markets are more than just places where buyers and sellers, speculators, dealers and bankers meet to sell goods and services. The digital economy has affirmed the place as an

abstract location, a digital space, and the encounter is reduced to a passing contact. Modern markets involve the exchange of information about the prices of goods and services. Information about returns on sales and returns on investment have more value than the transactions they refer to (the wealth of the modern Internet company Blomberg) because they are the fuel for increasing sales and investment. Central banks control the value of money and thus indirectly influence every market, trying to dominate and subjugate it to their own will. Today, the priority problems of central banking are deflation and low nominal growth.

Since 2008, instead of being a place for creating wealth, the markets have become a place for expropriating (extracting) wealth (Rikards, 2017:96). The money injected into financial flows, then withdrawn in the recent banking and financial crisis in the USA, and that by monetary policy measures, further accelerated the disintegration. Joseph Stiglitz points out that inflation is not so much an evil as when financial markets become fragile, the losses are enormous (Stiglitz, 2013:327). According to A. Smith, free markets are the antithesis of central planning, because no planner can manage a system of ordered components.

Hayek focused on information, namely that no individual, commission or computer program" will possess all the information in order to construct an economic system. Knowledge is not concentrated in one mind, it is in parts of often incompetent and contradictory knowledge (Hajek, 1945).

Therefore, central planning is undesirable, suboptimal and theoretically cognitively impossible. An argument in support of this position is the theory of computational complexity in the digital economy in recent times, which testifies to the diversity and adaptability of human actions that exceed the power of human or machine optimization. Financial bubbles appear in the financial and real estate markets that harm the economy and the rich bankers and brokers. Printing money without cover is the most visible malignancy, the second type is the export of inflation from the US through the exchange rate mechanism. The trade partners of the US, in order to protect themselves from the import of inflation, must increase their own money supply to defend against the flood of dollars in the form of surpluses or investments. Deflation, which is becoming a natural monetary condition, was imported by the US from China by

importing cheap goods, produced by a large labor force with an undervalued currency (yuan). The Federal Reserve successfully lowered interest rates in response to deflation. However, as a result, low interest rates created bubbles in real estate prices. The real sector felt the ugly consequences of the real estate bottom in the fact that construction jobs disappeared and the unemployment rate increased, which further fueled deflation. Monetary policy at the global level is in a clinch, between inflation and deflation. Deflation is endogenous derived from the productivity of emerging markets, demographic changes and lowering the level of financial indebtedness, i.e. optimizing the balance sheet by reducing leverage (Rikards, 2017:105). Inflation is exogenous, it arises from the interest rate policy of the central bank through the emission of money.

The FED's zero interest rate policy is transferring \$400 billion worth of wealth from American citizens to big banks, and it has also hurt lending to small and medium-sized businesses. Financial institutions prefer derivatives strategy, use swaps and options to achieve planned returns. Derivatives are off-balance sheet, they do not require as much capital as loans do. Too low interest rates lead to

inflation and a negative real interest rate, which harms capital formation and leads to poor returns on shares (dividends). If potential growth is overestimated, monetary policy is rigid, stocks fall, and the economy enters recession. Deflation strengthens the dollar, then weakens the dollar value of gold and other goods. The modern market is asymmetric, information is asymmetric and imperfect. The problem of the modern economy is the risk of uncertainty, regime uncertainty caused by budget changes, tax policy, health and environmental regulations. Investors are faced with the dilemma of investing or waiting. Rickards notes that free markets are a matter of efficiency, they are imperfect, but they are a better alternative, because free market information is more reliable. Capital hopes for the return of real markets. If the usefulness of the market disappears, the real economy and the dollar will slowly disappear (Rickards, 2017:118).

5. The IMF as the central bank of the world and the SDR as the world's money

The motto of globalization, which is here to stay, is, the world is one. The central bank of the world corresponds to the world as an optimal currency zone. Some thinkers beli-

ever that globalization has been a tailwind for the American economy. They see technology as the culprit for the state of the American economy. Stiglitz thinks that the global rules of the game are rigged in favor of America and other developed countries of the world (Stiglitz, 2021:87). The IMF is a key institution of the world monetary system, founded at the Bretton Woods Conference in 1944. Since its establishment, the IMF had the mission of taking care of the fixed exchange rate of the gold standard, being a creditor, taking care of fluctuating exchange rates, being an advisor to developing economies (wrong advice), then it became the secretariat and an extended arm of the G20, to become the global creditor of last resort the central bank of the world (Rickards, 2017:247). There are three pillars from which the IMF monitors the world monetary system, clusters, spillovers and financial transmission (the key role of banks as hedge funds, and the deregulation of the banking sector). The role of the IMF as the central bank of the world is manifested in the concern for the world monetary system due to the mass printing of money in 2008 in the USA and its financial institutions, and in the issuance of SDR as world money. The debt crisis indi-

cates the need for more direct regulation of banks and new sources of liquidity, the need for one central bank and one world currency. If we test the IMF based on the purpose and function of a central bank to use leverage, give loans and create money, we see that this global monetary institution meets the requirements of a world central bank and operates through national central banks. The IMF has a highly sophisticated asset and liability management program, financing is through quotas and credit arrangements. Its financial activities are predominantly off-balance sheet. The IMF uses leverage to maintain an international monetary system in which public debt has replaced private debt (Rickards, 2017:260). It is interesting that the IMF has become the last creditor and the last port of salvation. At the G20 summit in 2009, funds were agreed upon, the credit capacity of the IMF in the amount of 750 billion dollars, the largest amounts were provided by the EU, Japan, BRICS members, and the most disputed commitment was the USA. SDR are non-dollar money whose exchange value is calculated partly in relation to the dollar and partly to a basket of currencies (euro, yen and British pound). The IMF used additional funds to save the eurozone mem-

bers, Ireland, Portugal, Greece and Cyprus. SDR as the world settlement transaction money are perceived as invisible inflationary money. SPVs are money because they have three characteristics of money, a store of value, a unit of account and a medium of exchange. This money serves to settle the balance of payments, to form oil prices, for the financial accounts of the largest global companies (Toyota, Shell, Exom Mobil,...). However, from the very beginning SDRs were the world's fiat money, created out of nothing. without basis, they are not convertible into some other asset such as gold. The fact that the value of the SDR is calculated against a basket of reserve currencies does not mean that they are backed by those hard reserve currencies. Namely, their accounting value is expressed in transactions (the total value of the SDR is 300 billion dollars). However, although SDRs are a powerful instrument for creating liquidity, the dollar is still the world's leading reserve currency. The SDR market is microscopic compared to the dollar-denominated US government bond market, which is large enough to absorb the influx of investment from the surpluses of China, Korea, Taiwan. The IMF has the ambition to create SPVs as world money, as *Ekonomski signali* 80

well as SDR bond markets. However, in addition to economic and financial power, the choice of world currency also depends on political power and political will to create one central bank, one monetary system and one money.

6. Demand for gold as an indicator of distrust in the dollar

Albert Gallatin, American Minister of Finance (1801-1814), expressed the undisputed opinion that regarding gold and silver as universal currency, there is a consensus of states and peoples different in language, religion, culture and habits that is at least 4000 years old (Rickards, 2017:277). Therefore, gold is the universal world money that does not need collateral, because trust in it is unquestionable. Gold in Mendeleev's system is an element with atomic number 79, pure gold is of the same composition and quality, always and everywhere.

Gold has an intrinsic (internal) value, it does not carry the risk of maturity, settlement or settlement, or term. The property of the gold owner is no one's liability. If gold is a numerator or unit of account as part of the standard definition of money, it means that dollars and

other currencies are viewed as fluctuating assets (their prices jump, not gold). The problem of gold is not in insufficient quantity, but in price, which means that quantity is not an obstacle for the gold standard.

Gold did not cause the Great Recession, as some economists claimed, but rather the adoption of the gold-exchange standard that preceded the crisis. The crisis was caused by the discretionary policies of central

banks (Rickards, 2017:288). Gold neither prevents nor causes financial panics. The panics are the result of the liquidity scramble of excessive credit expansion and the loss of confidence in the dollar and other currencies. Since 2002, central bankers have been intensively supplied with gold as a reserve asset, there is a noticeable craze for gold, which significantly affects the future of every currency, especially the dollar.

Figure 1: Top 10 countries of buyers and sellers of gold 1999-2021.

Top 10 Buyers and Sellers of Gold in the Official Sector from end-1999 to end-2021

	million troy ounces	percent of all buying/selling	change in gold share in official reserves
Largest buyers			
Russia	60.7	28%	-10%
China	49.9	23%	1%
Türkiye	17.4	8%	31%
India	12.7	6%	-2%
Kazakhstan	11.1	5%	42%
Uzbekistan	10.0	5%	21%
Saudi Arabia	5.8	3%	-3%
Thailand	5.4	2%	4%
Poland	4.1	2%	5%
Mexico	3.7	2%	3%
Largest sellers:			
Switzerland	-49.8	34%	-34%
France	-18.9	13%	17%
IMF	-13.0	9%	---
Netherlands	-11.9	8%	7%
United Kingdom	-10.6	7%	-4%
ECB	-7.8	5%	19%
Spain	-7.8	5%	5%
Portugal	-7.2	5%	29%
Austria	-4.1	3%	28%
Germany	-3.5	2%	32%
Memo items:			
Euro Area	-56.4	38%	21%

Source: IMF, International Financial Statistics.

Source: International Monetary Fund,,IMF, Working Paper No. 2023/014, Arslanalp, Serkan and Eichengreen, Barry and Simpson-Bell, Chima, Gold as International Reserves: A Barbarous Relic No More?. Available at <https://www.imf.org/en/Publications/WP/Issues/2023/01/27/Gold-as-International-Reserves-A-Barbarous-Relic-No-More-528089>

The direction of movement of gold purchases is shifting from the West to the East. China intensively buys gold through a network of agents around the world, then from mines in China, South Africa and Australia. Chinese citizens are passionate lovers of gold, in which wealth is stored. The biggest buyers of gold are Russia, China, Turkey and India, while the biggest sellers were Switzerland, France, the Netherlands and Great Britain (Figure 1).

In monetary theory, there are also ideas about the return of the gold standard, of course if there is political will and non-inflationary discipline and if wealth is created on the basis of innovation, entrepreneurship and dedicated work. Against the introduction of the gold standard are speculators, those who want to get rich from debt by means of inflation, market manipulation and insider information. A possible scenario, the Gold Standard of the 21st century would be global, covering the leading economic countries and their currencies. In the new constellation of economic and political power, if the US dollar backed by gold, given its large reserves, remained the world's reserve currency, it would eliminate other relevant currencies and lead to deflation (Rickards, 2017:305).

A new candidate for global money is the SDR, which would be backed by gold and convertible into gold and the currencies of the participating countries. This world money would be tied to a certain weight of gold, as well as to the dollar, yen, pound, yuan, which would be defined as a certain SDR and a certain weight of gold. Member States would have an open capital account for conversion. SDR would also be the accounting unit. The largest companies would report economic indicators in the SDR, along with the bond market denominated in the SDRs would be issued by states, global corporations, regional banks, and buyers would be state, pension and other funds with the mediation of the world's largest banks under the supervision of the IMF as the world's central bank (Rickards, 2017:307). At the same time, it is necessary to find benchmarks for determining the appropriate fixed exchange rates by which currencies are converted. There is also the issue of the value of the SDR measured by the weight of gold and fractional reserves in order for the new monetary system to function. Today, a non-deflationary price of gold is sought in the world monetary system that rests on gold.

It is necessary to define the issues of the quantity of gold SDR, the money supply as a reference point for determining the adequate price of gold. According to Rickards, in the new international monetary system, the discretionary policy of national banks would be preserved while preserving the fixed price of gold. In this scenario, the IMF should step in by increasing the supply in the event of a liquidity crisis, with the consultation of the majority of members. The rule of thumb on converting SDRs and national currencies into gold would be an axiom. According to Richards, the new monetary standard would solve the problem of the weakening of the dollar, the unsustainable debt burden and the gold rush (Richards, 2017:311).

Of course, we are talking about a possible, if not certain, scenario of a new international monetary system that would satisfy both the West and the East, the world's leading economies. For the establishment of a new global monetary system, global peace, willingness to agree and consensus are necessary. There is no doubt that the new international monetary system is largely the result of economics, but also of political will, power and agreement. However, we should not forget that the world is ruled by modern

weapons, information and digital money of the most powerful countries. In this environment, the global economic and political world order is established.

7. New global players and world money

On the world stage, there was a new overcomposition of power and the creation of economic, political and military alliances of states, with a gradual but permanent loss of American hegemony and the dollar as the world's reserve currency.

7.1. China and the international monetary system

China is a powerful global mutant that conquers new technologies, geopolitics and economy and strengthens the military sector. According to some wishful thinking of Western economists (Krugman), China is vulnerable, ethnically and culturally complex, prone to slip from the path of sudden accelerated economic growth. The wise Lao Tzu defined the Chinese historical path in the Book of Paths and Virtues with the words things grow and grow, but each thing returns to its root. With the reformer, Deng Xiaoping, the capitalist economic philosophy of growth in priority over stability was defined. In China, the market and

the state function under the leadership of the Chinese Communist Party. Thanks to fantastic growth rates, since 1980 China's total economic output is now equal to half of the US economy and is called the Chinese miracle. It is a direct process of expansion of work and productivity (Krugman). China owes its growth to, among other things, increased labor force participation and productivity, demography and education, while capital and technology are the main drivers of productivity (Rickards, 2017:124). According to Xiao Geng, China has been lucky in the last 25 years. The reason for this is three institutional moments: under the rule of the Communist Party, China preserved political and social stability, the fundamental economic opening of China to the world, China used the leading international capital market in Hong Kong (Geng, 2015:12).

If we look at the structure of the GDP of the USA and China (it consists of autonomous consumption, investments, state consumption and net export), we notice that in the USA consumption makes up 71 percent of GDP, while in China its share is 35 percent. Investments make up 13 percent of the US GDP, while in China they make up 48 percent of the total amount (Ric-

kards, 2017:128). Investments are a healthy way of economic development because they are doubly profitable, provided that the trap of wrong and failed investments financed by unrealistic borrowing is avoided. China's strained healthy economic growth is accompanied by a dense network of state communist officials and private company managers who enrich themselves as an elite and parasitic class. Profits are extracted from expensive infrastructure investments, while growth in the services and consumption sectors is insufficient. IMF research shows that investment in China is about 10 percent of GDP higher than necessary, and that it is to the detriment of household income and consumption (Rickards, 2017:142). China's banking sector has a stable balance sheet. China's financial reserves in the amount of over three trillion dollars provide, in case of need, the rescue of the banking sector, then recapitalization of banks, mitigation of losses and additional borrowing at the state level.

In the modern economy, the financial sector is important for financing and risk sharing. The financial sector is facing the problems of a high degree of non-payment of loans, speculation and the effect of bubbles on the stock markets. Direct finan-

cing refers to financing through stock exchanges, and indirect financing through banks and other financial intermediaries (Jifu Lin, 2016:189). However, in China there is a parallel invisible shadow banking system with bad assets and hidden liabilities as a serious threat to a healthy official banking system. This hidden, potentially malignant sector consists of local government liabilities, investment fund products and wealth management funds (they are outside formal channels and regulatory control). China's high rate of savings in real estate and structural financial instruments is motivated, among other things, by the lack of an adequate network, social insurance, health care, disability and pensions. China is very susceptible to capital outflow, citizens and businessmen use various techniques and scams to withdraw money. This phenomenon testifies to distrust in the system and pronounced income inequalities, a high disparity between the richest and the average in urban areas. There are numerous paradoxes in the modern economy, and even China cannot avoid that trap, especially when it comes to the fate of the dollar as the world's reserve currency. With the collapse of the dollar, China loses the most, because it is the world's largest owner of

debt securities denominated in the US dollar (Rickards, 2017:255). However, the truth is that China will be happy to exchange dollars for SPV as world money, as this is how it diversifies its reserves. China has the problem of inflation and efforts to absorb US dollar printing and to maintain the stability of the yuan. Modern China wants additional votes in the IMF as a hidden world bank, as well as to ensure the purchase of gold to prevent a sudden spike in prices.

7.2. Germany in the European Union and the world monetary system

The official motto of the European Union is "United in diversity", and there is also the principle of subsidiarity. The European Union is a political, peace, and then trade and economic project, just like the common currency – the euro. New Europe owes its intellectuals, professionals and politicians, leftists and rightists (Churchill, Adenauer, Mitterrand, Schumann, Monet, De Gasperi) who believed that economic and monetary integration would lead to political integration and pacification of Europe. At the center of the monetary union is the ECB, which issues the euro and, if necessary, trades on foreign exchan-

ge markets and takes care of price stability in the eurozone. The ECB takes care of the foreign exchange reserves of the national banks of the Eurozone and manages the payment platform between these banks (TARGET2). The euro is the most recognizable and visible symbol of Europe, a regional currency and the basis for transactions, held, exchanged, earned, and saved by hundreds of millions of people. The euro project is part of a wider global monetary system that went through the Bretton Woods, Washington Consensus, and Beijing Consensus phases without establishing the rules of the game. The Washington Consensus (1980 and 1983) created a strong dollar policy through a combination of higher interest rates, lower taxes and deregulation. Countries commit to fiscal discipline, elimination of bad subsidies, lower tax rates, positive real interest rates, openness to foreign investments, deregulation and protection of property rights (Rickards, 2017:157).

The Beijing Consensus testifies to the success of Asian economies and is so flexible that it lacks a grounded doctrine (Joshua Cooper Ramo). A new economic geopolitical paradigm is at work. The pillars of the Beijing Consensus are gradual reforms,

innovation, export-led growth, state capitalism and authoritarianism. China's reading of the Beijing Consensus is, protection of domestic industry, growth on exports and huge accumulation of reserves. The Berlin Consensus (2012) is specific to EU and Eurozone institutions after the economic and financial crisis. It is the German model of economic growth (savings and trade and innovation) which, with the mediation of Brussels and the ECB, imposed itself on the periphery of the EU.

The postulates of the Berlin consensus read:

- 1) export through innovations and technologies,
- 2) low rates of profit tax,
- 3) low inflation,
- 4) investing in productive infrastructure,
- 5) mitbestimmung,
- 6) globally competitive unit labor costs and labor mobility,
- 7) positive business climate (Rickards, 2017:159).

Germany controls the ECB in terms of price stability and inflation growth, so it is logical that unemployment on the periphery of the EU is increasing. The goal is price stability, a solid euro, fiscal responsibility, and consensus on important issues. The positive business cli-

mate has opened up space for the penetration of Chinese capital into Europe. China's penetration into the EU gives China a chance to get rid of its huge assets denominated in the US dollar, denominated in the euro. A strong and stable euro attracts Chinese capital because it reduces foreign exchange risk. American companies are also investing in the Eurozone, and more recently in Serbia. The Berlin consensus is supported by German technology, young energy and Chinese capital. It is interesting to emphasize that during the crisis, the euro was more stable compared to the dollar, and it also increased its share in global reserves from the moment of issue. Federal Reserve policy has been a cheap dollar and a strong euro in dollar terms. In the crisis of Greek government bonds and Irish banks, the euro has shown stability and persistence, because its stability and strength is linked to ECB policy and global capital movements.

Capital flows from the FED to the euro in the form of central bank swaps with the ECB and from China in the form of reserve allocations and direct investment have ensured solid ground for the euro. Therefore, the euro is additionally supported by the central banks of the USA and

China. Also, the population of the periphery of the EU strongly supports the euro and does not want to leave the eurozone and the EU, despite the crisis and weaknesses that the European common project is going through. The future of the euro as a political project and regional currency is not in doubt, due to the very fact that the EU is the largest economic power in the world, with Germany as the largest Union power that directly controls the ECB and the euro and dominates trade and finance. Some American Nobel laureates, such as Stiglitz and Krugman, and Eurosceptics have predicted the imminent death of the euro and the collapse of the European Union. Others like Rickards are optimistic and see a secure future for the euro as a significant regional currency if there is more Europe, uniform fiscal policy, bank regulation, bank deposit insurance and labor mobility within the eurozone. The certainty of the euro lies in the safe and large markets of liquid Eurobonds and in the existing gold reserves of the eurozone member countries, which gives it a chance to replace the dollar as the world's reserve currency in the foreseeable future (Rickards, 2017:178).

7.3. BRICS expansion and de-dollarization

Sixty-five percent of the global economy is made up of the European Union, the USA, China and Japan. The BRICS countries consist of Brazil, Russia, India, China and the Republic of South Africa and are committed to the search for new models in the process of reshaping the global economy (Declaration of the countries of the BRICS group, March 2013). All BRICS countries have problems, they differ economically, socially and politically, but they also have enormous potential in a world where economics has become political for economic growth and social development. BRICS countries with over forty percent of the world's population, twenty percent of global output and forty percent of the world's foreign exchange reserves, have problematized the dollar as the world's reserve currency and the existing monetary system. The G20 members, together with the BRICS countries, have become the de facto governing board of the international monetary system (Rickards, 2017: 181). South Africa (Johannesburg) hosted the 15th BRICS summit, which was reflected in the period from 22-24. August 2023. At the summit, 43 countries expressed interest in joining BRICS, and 23 coun-

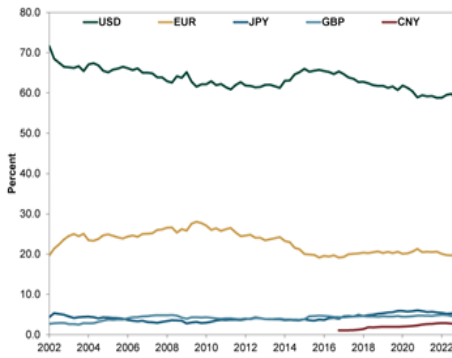
tries requested formal membership (Egypt, Algeria, Argentina, Bahrain, Bangladesh, Belarus, Bolivia, Cuba, Ethiopia, Honduras, Indonesia, Iran, Kazakhstan, Kuwait, Morocco, Nigeria, Palestine, Saudi Arabia, Senegal, Thailand, UAE, Venezuela and Vietnam). The members of the summit could not agree on the individual requirements of each country for membership, and due to the lack of consensus, they invited only six countries, namely Argentina, Egypt, Ethiopia, Iran, the United Arab Emirates and Saudi Arabia, to join. Their membership will start from January 2024.

One of the topics of the summit was related to the future of the US dollar. The task of BRICS is to create a new world (monetary) order, which relies on local currencies far from transactions in US dollars, and there is a real trend of members of the BRICS group to make some decisions in order to reduce the share of dollars in global transactions and to thus causing serious damage to the most powerful currency in the world (<https://www.ifimes.org/ba/istrazivanja/svijet-2023-brics-samit-de-dolari-zacije/5197>).

However, the US dollar is still the dominant global currency and the leading currency both in trade and in leading financial institutions, the dollar dominates global stock mar-

kets, commodity markets, bank deposits, financing development projects and borrowing. In the new situation, China and India are using three local currencies, the yuan, the rupee and the ruble, in their trade with Russia in order to somewhat reduce their dependence on the US dollar. If we look at China as the largest exporting country, which has a large trade surplus with the world, the yuan cannot compete with the dollar, because it is not available on global markets. According to SWIFT data, the yuan accounts for less than 2.5% of global transactions, while the dollar's share is 40% and the euro's 36% (<https://www.ifimes.org/ba/istrazivanja/svijet-2023-brics-samit-de-dollarizacije/> 5197).

Figure 2: Smaller share of USD in global reserves



Source: IMF, as of 5/10/2023. Percent of allocated reserves in dollars, euros, yen, pounds and yuan, 2002 – 2022.

According to available data from the fourth quarter of 2022 (Figure 2), the dollar accounted for 54.1% of all global foreign exchange reserves. The second most popular foreign exchange reserve is the euro, with 18.9%. The Japanese yen is third with 5.1%. The dollar's share of global reserves has fallen from 71.5% over the past 20 years. According to the Bank for International Settlements (BIS), as the global reserve currency, the dollar is used in over 80% of the world's foreign exchange transactions and more than 50% of global trade despite America accounting for 10% of global trade. It is evident that the dollar is dominant in relation to the competition

The intention of BRICS is to reduce the international role of the dollar and the hegemony of the USA to be the leader in the world. BRICS itself faces numerous challenges of creating some common "BRICS currency", there are doubts within the group itself, especially between India and China, two great economic and historical rivals. India as a BRICS member has the strongest relations with the US, is strategically hostile towards China, with other parties Russia needs allies and partners now more than ever as it faces Western economic sanctions It is evident that de-dollarization is not a process that

can be carried out quickly, due to the deep connection of world economies with the dollar that has been created for decades. In the changed distribution of economic power and the new geopolitical configuration of the world, the discussion about the stability of the system and the monetary economy of the world is no longer possible without the presence of not only the USA, but also new global players from the BRICS countries.

8. Concluding remarks

The global economic crisis showed the complexity, risk, uncertainty and criticality of the global financial system. There is no one way and one outcome of one accepted and acceptable scenario of the emergence of MMS and one reserve world currency. The US dollar, the British pound and the Japanese yen together make up seventy percent of the globally allocated reserves and sixty five percent of the SDR currency basket. However, the Central Banks of the USA, Britain and Japan prefer not real growth but inflation and nominal growth in order to pay off their debts. That experiment leading to the reduction and expropriation of wealth is the subject of serious criticism by the BRICS countries and the legitimate aspiration for its destruction and the establishment of a fairer global monetary system. However, the

US dollar is still the dominant global currency and the leading currency both in trade and in leading financial institutions, the dollar dominates global stock markets, commodity markets, bank deposits, financing development projects as well as borrowing. The task of BRICS is to create a new world (monetary) order, which relies on local currencies far from transactions in US dollars, and there is a real trend of the members of the BRICS group to make some decisions, in order to reduce the share of the dollar in global transactions, thus causing serious damage to the most powerful currency. The new international monetary system will be created on the destruction of the old dollar system. The essence of the problem in the existing global financial system is not money but debt, the creation of money as a function of debt repayment. In the American financial crisis, the losses were not borne by the banks and bondholders, but the losses were passed on to the public through the federal finances. Private debts have been replaced by public debt. The restoration of trust implies a new international monetary system. Rickards believes that the dollar will disappear in three ways, the SPV world currency, the gold standard, or unrest, which is the result of a financial war or systemic collapse. The impossibility of predicting economic events (black swan phe-

nomenon), the increase in uncertainty and complexity make participants in economic life, especially investors, cautious. There is a probability, indications that by reading the seven signals that warn of the trajectory of the modern economy, a collapse can be prevented. These are the price of gold, the hunt for gold by central banks, IMF reforms, legal regulations, the collapse of the system, the end of quantitative easing and the Chinese collapse (Rikards, 2017:384). The most optimal and reliable method to preserve and increase wealth (portfolio) is investments in gold, land, art, alternative funds and cash. Such a portfolio must be actively managed and thus increase wealth.

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BUDUĆNOST DOLARA KAO SVETSKE REZERVNE VALUTE U NOVIM MEĐUNARODNIM OKOLNOSTIMA

Sažetak: Američki dolar je svetska rezervna valuta, a takođe je i valuta koja se najčešće koristi za trgovinske i druge međunarodne transakcije. Zbog aktuelnih geopolitičkih, ekonomskih i monetarnih kretanja, evidentno je da veliki broj zemalja traži načine da se udalji od dominacije dolara, kao vodeće svetske valute. Rizik od de-dolarizacije porastao je u poslednje vreme, delimično zbog trenutne rusko-ukrajinske krize, kao i američkih ekonomskih sankcija protiv određenih zemalja, a delom zbog sve veće uloge zemalja BRICS-a u svetskoj ekonomiji. Ovaj rad tvrdi i dokazuje hipotezu da su dolar kao svetska rezervna valuta i međunarodni monetarni sistem dve strane istog novčića, da potpuni gubitak poverenja u dolar dovodi do kolapsa globalnog monetarnog sistema i obrnuto, kao i da bi uništenje monetarnog sistema dovelo do nestanka dolara. Rad obrazlaže dolar kao rezervnu svet-sku valutu, teorije o novcu, dolar kao dug, deficite i monetarne ekvivalente, dolar i slobodna tržišta, MMF kao svetsku banku i SDR kao svetski novac, potražnja za zlatom kao pokazatelj nepoverenja u dolar, nove globalne igrače i svetsku rezervnu valutu, proširenje BRICS-a i de-dolarizaciju, a finalizovan je zaključnim primedbama.

Ključne reči: Međunarodni Monetarni Sistem, dolar, deficit, de-dolarizacija, slobodna tržišta, BRICS

LEGAL AND ECONOMIC ASPECTS OF VIOLATIONS OF INTERNATIONAL AGREEMENTS ON THE SALE OF GOODS AND SERVICES

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Abstracts: Sales have achieved huge dimensions worldwide under the current business environment brought about by the processes of globalization, deregulation, and liberalization. Sales contracts are crucial in today's global trade because of these factors. The spectrum of commodities that are the subject of commercial transactions and, by extension, agreements has greatly expanded as a result of the growth of industry, the economy, and multinational and transnational corporations. Sales contracts have distinct collision standards, quandaries, and treatments in addition to their consequences on the economy and law. Given the importance of pricing in all economic domains and the vast scope of international trade, sales contracts hold great relevance in today's international commerce. The range of goods subject to commercial transactions has expanded significantly with the growth of industry, the economy, and multinational and transnational corporations. The sales contract has implications for the economy and law, and its fundamental components have been treated differently in legal science. The growth and development of all company activities have been facilitated by the existence of international legal regulation.

Keywords: sales contract, legal and economic aspects, ethics, Serbia

1. Introduction

Broadly observed, there is no unity in international legal doctrine regarding the emergence of international law. Since international law is a result of the development of international relations, and international relations are conditioned by a complex system of interactions among various social factors, some scholars associate the origin of international law with the period before the creation of the first states, while others link it to the period that followed (Đorđević, Dimitrijević, 2011).

In contemporary business conditions, due to the processes of globalization, deregulation, and liberalization of markets, foreign trade has reached enormous proportions worldwide (Dašić, et al., 2022). For these reasons, sales contracts in international trade are of great importance today. The development of industry and the economy, as well as the growth of multinational and transnational companies, has led to a vast expansion of the range of goods that become subjects of commercial transactions and, consequently, agreements, given that sales contracts have both economic and legal effects (Kovinić, 2018).

From an economic perspective, sales represent an exchange process, i.e., a business transaction of goods in exchange for money. From a legal standpoint, the sales transaction encompasses the entire legal regulation of the economic relationship between both parties involved in the exchange. In economic life, the sales contract results from the agreement of the parties, followed by numerous other business transactions and contracts, forming a unique system in the exchange of goods. Different types of goods necessitate different methods of contract conclusion. The purchase and sale agreement is the most illustrative example, and its characteristics are shaped by specific conditions in each case. These conditions influence the varying regulation of relationships between contracting parties. Seller and buyer obligations, the manner of contract conclusion and execution show greater or lesser deviations from the rules applicable in the case of the basic, classical form of the sales contract (Šipovac, Bojić, 2010).

The purchase and sale agreement has always been the subject of interest and study in our legal science. Therefore, there was a need to thoroughly and deeply address the most important legal issues related to sales contracts in accordance with

the current state of legal science, legal practice, and legislation. All of this is intended to be of great benefit to our everyday economic and legal practice, both domestically and internationally (Pavlović, 2021).

Globalization of the economy and society increasingly inaugurates openness, freedom, and liberalization of all flows, thus producing a global process leading to closer connections between society and its economic entities, implying a high level of trust among them (Dašić, 2014). The entire process of creating a global economic system, whose subjects are connected in a multidimensional network of economic, social, and political ties, today, despite all the dilemmas it faces, raises the question of the relationship between economics and ethics (Pricartz, Staudinger, 2019). In such an environment, business systems must align their operations and mission with the rules governing the horizon of modern economics for survival and further development. They can only acquire their business positions through a strong international orientation, rather than relying on traditional forms of business and the support of the nation-state.

The coronavirus has significantly impacted the global economy, espe-

cially the execution of contracts in international sales of goods. Based on judicial practice related to the application of the Vienna Convention on Contracts for the International Sale of Goods, we can determine whether the recent epidemic is considered force majeure, automatically releasing parties from liability in international sales contracts under Article 79 of the Convention.

The question arises whether the coronavirus can be considered force majeure under the Vienna Convention on Contracts for the International Sale of Goods, allowing one of the parties to an international sales contract to be relieved of liability if it fails to fulfill its contractual obligation. The United Nations Convention on Contracts for the International Sale of Goods from 1980, ratified by Serbia in 1984 and in force since 1988 (ratified by over 100 countries, including all major ones), commonly known as the Vienna Convention, does not recognize the term "force majeure." This is because the Convention aims to establish an international source of law and to avoid confusion of terms, as different countries use the term "force majeure" in their national legislations for various situations, which may not be identical (Cvjetičanin, 2023).

The adoption of the Vienna Convention achieved the goal of unifying international sales, unifying at least the contractual law for contracting states. The Convention provides a relatively uniform legal framework for the business relationships of contracting parties from different countries. The Convention's dispositive provisions are adapted to the contracting parties, allowing them to freely regulate their contractual relationship beyond what is provided in the Convention.

However, it is advisable to include essential elements of the sales contract in accordance with the rules of the Vienna Convention to ensure clarity, security, and predictability in fulfilling contractual obligations and to avoid the invalidity of the sale. Judicial and arbitral practice provides essential support in defining essential elements, eliminating uncertainties, and defining terms not covered by the Vienna Convention. The advisory council of the Vienna Convention also provides crucial support with its expert scientific analysis of the Convention and its provisions.

The Vienna Convention is a key international instrument for regulating sales contracts. Although its application has shown shortcomings

over time, it certainly facilitates international sales of goods and is essential to understand its provisions and familiarize oneself with judgments that constitute significant judicial practice. Its application expedites the conclusion and execution of sales contracts, making it crucial for the present and future world where international sales are constantly expanding economically.

2. Concept and Importance of Sales Contracts

In the modern society of the 21st century, where globalization has taken hold and interconnected almost the entire world, there is a need for legal regulation in international trade that will be universal. The ideal scenario is a world in which legal entities entering into sales contracts for goods apply the same rules, whether they are located in China or Italy. The demand is for legal certainty and predictability that can only be provided by a standardized legal framework for the conclusion and execution of contracts worldwide.

The purchase and sale agreement is the most illustrative example, the features of which are shaped by specific conditions in each particular case. These conditions influence the different regulation of relationships

between contractual parties. Seller and buyer obligations, the manner of contract conclusion and execution, show greater or lesser deviations from the rules applicable in the case of the basic, classical form of the sales contract (Guzman, 2005). The purchase and sale agreement has always been more or less the subject of interest and study in our legal science. Hence, there was a need to thoroughly and deeply address the most important legal issues related to sales contracts according to the current state of legal science, legal practice, and legislation (Šipovac, Bojić, 2010). All of this is intended to be of great benefit to our everyday economic and legal practice, both domestically and internationally.

The acceptance of international standards, conventions, customs, and other international norms, along with domestic conflict-of-law norms regarding the interpretation and demarcation of essential elements of sales contracts, necessitates the inevitability of collaboration and interdisciplinarity among various legal disciplines (Coetzee, 2015). This is particularly true when it comes to price, as the treatment of price in this context varies across business law, contractual law, civil law, comparative

law, property law, international private law, international public law, judicial law, international conventions, agreements, and customs.

International contracts for the sale of goods and services form the foundation of global economic cooperation, enabling traders from different countries to establish business relationships and exchange goods or services (Bijl, 2009). However, in such transactions, various legal and economic challenges may arise, including the violation of international agreements. The legal and economic aspects of these violations are complex and require careful consideration.

Legal Aspects of Violating International Contracts for the Sale of Goods and Services involve issues related to legal liability, sanctions, and dispute resolution. Legal norms applied in this context are often established by relevant international conventions, such as the UN Convention on Contracts for the International Sale of Goods and the UN Convention on the International Carriage of Goods. Violating these norms can lead to various legal consequences, including damage claims, contract termination, or the imposition of sanctions.

The economic aspects of violating international contracts can have

significant consequences for trade relations between parties. Non-compliance with contractual obligations can result in both material and reputational losses. Costs related to returning goods, loss of profits, penalties, and legal proceedings are just some of the economic challenges parties face in case of contract breaches. These consequences are particularly pronounced in international trade, where distance, different legal systems, and cultural differences are additional complicating factors in problem resolution.

Preventing violations of international contracts can be achieved through careful drafting of contracts, clearly defining the parties' obligations, thorough study and understanding of applicable legal norms, and using dispute resolution mechanisms such as mediation or arbitration. It is also important for parties to regularly monitor changes in legislation and rules that affect their transactions.

3. International Agreements and Their Implementation in Serbia

International agreements represent agreements between two or more states, which can regulate various areas, including trade, diplomatic relations, human rights protection,

and many others. When a state signs an international agreement, it commits to respecting its provisions.

Domestic law in its legal acts contains provisions on international agreements. Provisions of domestic law dedicated to international agreements (Constitution of the Republic of Serbia) contain solutions regarding:

- the procedure for concluding international agreements,
- parliamentary confirmation and publication of international agreements,
- the place of international agreements in the hierarchy of norms of domestic legal order, etc.

The application of provisions of domestic law relating to:

- international agreements,
- the procedure for their conclusion, and
- their execution.

In the legal system of the Republic of Serbia, apart from Article 18, paragraph 3 of the Constitution and certain articles of the law that are relevant for the interpretation of international agreements and which will be presented at the appropriate place, there are no explicit provisions on the interpretation of international agreements. Therefore, the issue of interpreting an international agree-

ment in the domestic law of the Republic of Serbia must encompass questions of jurisdiction for interpreting international agreements. Finding the true meaning of norms of an international agreement is an integral part of its application and execution. In this sense, in the Republic of Serbia, as well as in comparative law, the interpretation of an international agreement is carried out by the authorities applying it, or executing it, so that any state body that comes into contact with an international agreement within its scope of work may appear in the capacity of an interpreter.

In the case of Serbia, international agreements are applied in accordance with the Constitution. According to Article 10 of the Constitution of the Republic of Serbia, international agreements that have been signed and ratified and have entered into force are part of the domestic legal order and prevail over laws. Therefore, if there is a conflict between the provisions of an international agreement and domestic law, the international agreement is applied.

The procedure for ratification of an international agreement in Serbia involves signing by the state representatives, followed by adoption by the assembly (National Assembly of

the Republic of Serbia). After that, the president of the state carries out the ratification procedure, formally confirming the state's readiness to commit to the provisions of the agreement.

The competent authorities in Serbia monitor the implementation of international agreements, and citizens can use legal remedies before domestic courts if they believe that their rights have been violated in accordance with the provisions of the international agreement.

It is important to note that international agreements are part of a complex legal system, and their implementation may depend on the specificities of each individual agreement and domestic legislation. For accurate information on specific agreements and their implementation in Serbia, I recommend consulting experts in the field of international law or relevant legal authorities in the country.

4. Ethical Aspects of International Business

Globalization, characteristic of our era, extends beyond business or economic aspects; it encompasses other significant dimensions as well. Primarily, the enormous advancement in technology has led to a tremendous increase in interdependence,

not only in the unprecedented expansion of opportunities that international collaboration brings but also in terms of risks and dangers that transcend national borders.

It is to be expected that business in such a complex context will be fraught with moral dilemmas and issues (Schwenzer, Leisinger, 2007). The subject of business ethics in this context encompasses all actions and practices that uniquely and typically appear in making business decisions and their execution concerning international business (Babić, 2020).

Business ethics can be national, international, or global, just like business itself, which does not confine to arbitrary geographical boundaries. Business ethics dictate that business is conducted in an appropriate manner and that responsibility is taken for the success or failure of that business endeavor. Violating business ethics can lead even the largest, most reputable, and successful business systems to act recklessly and unlawfully, thereby exposing themselves to significant material and other liabilities (Vuković, et al., 2023). Consequences of this include increased operating costs, loss of reputation in a particular industry or territory, as well as questioning further business

operations. Work is a generic feature of business ethics since labor-based business is the cornerstone of the entire social life (Radovanović, et al., 2016).

It's important to distinguish legal norms from moral norms as they differ in nature and application of sanctions. The application of sanctions in the case of violating moral norms is not organized and predetermined. Conscience, for example, also serves as a form of sanction. Morality can serve as a corrective in the interpretation and application of law and as a basis for creating missing legal norms.

International business poses complex challenges for companies, both in terms of market competition and in terms of the various cultural, legal, and economic norms prevailing worldwide (Stanković, 2023). In this context, ethical aspects play a crucial role in shaping a company's reputation, maintaining relationships with stakeholders, and achieving sustainable business growth (Dašić, Jeličić, 2016). Here are several key ethical aspects of international business:

- Respect for human rights: Companies operating on a global scale face different value systems and standards regarding human rights. An ethical app-

- roach entails actively advocating for respect for human rights in all aspects of business, including working conditions, fair wages, and the elimination of any forms of discrimination.
- Environmental responsibility: International companies often operate in different ecosystems with various environmental challenges. An ethical approach involves responsible behavior towards the environment, reducing greenhouse gas emissions, preserving natural resources, and developing environmental innovations.
 - Combatting corruption: Corruption is a serious ethical problem that can seriously undermine the integrity of business. Companies operating internationally must adhere to high ethical standards and actively work to prevent corruption at all stages of business.
 - Social responsibility: An ethical approach involves recognizing social challenges and contributing to the communities in which companies operate (Dašić, 2014). Corporate Social Responsibility (CSR) programs may include supporting local communities, education, healthcare initiatives, and other activities that con-

tribute to social welfare (Jelenković, et al., 2014).

- Fair competition: Companies should operate in accordance with principles of fair competition, suppressing unethical practices such as cartels, monopolies, or abuse of market dominance.

Cultural and linguistic respect: Operating on a global scale often involves working with different cultures and languages. An ethical approach involves respecting and understanding cultural differences, avoiding stereotypes, and actively investing in inclusive work environments (Dašić, 2018).

5. Conclusion

Today's economy operates in a new environment and a new geoculture, which increasingly, alongside knowledge and standards in economic terms, respects and develops knowledge for new ethical norms and forms of corporate culture that significantly change business policies, organizational behavior of employees, and the life of the modern business person, influencing them. One of the oldest human activities is the trade of goods, services, money and other property values both within a country and abroad. Foreign trade business has an exceptional importance for socio-economic

relations between countries. Each state independently regulates the trade of goods and services. However, no state economy is self-sufficient, so its need to join the international markets is quite justified (Praštalo, Đurđev, 2020).

The legal and economic aspects of international contracts for the sale of goods and services require careful management to avoid negative consequences for all parties involved. Willingness to cooperate, while respecting legal norms and economic discipline, are key factors for successfully managing international business relationships. Adhering to high ethical standards in international business not only contributes to social responsibility but can also contribute to the long-term success of companies by creating a favorable business environment and building trust among all stakeholders. Ethically oriented companies often achieve sustainable growth and build long-term relationships with their clients, partners, and the communities in which they operate. Possible examples of violations of international agreements may include situations where a state fails to implement provisions of an international agreement in accordance with its obligations, where human rights are violated, or

where provisions on trade, the environment, or any other area.

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PRAVNI I EKONOMSKI ASPEKTI KRŠENJA MEĐUNARODNIH SPORAZUMA O PRODAJI ROBE I USLUGA

Sažetak: Prodaja je dostigla ogromne dimenzije širom sveta pod trenutnim poslovnim okruženjem koje su doneli procesi globalizacije, deregulacije i liberalizacije. Ugovori o prodaji su ključni u današnjoj globalnoj trgovini zbog ovih faktora. Spektar robnih razmena koje su predmet komercijalnih transakcija i, produženjem, sporazumi su se u velikoj meri proširili kao rezultat rasta industrije, ekonomije i multinacionalnih i transnacionalnih korporacija. Ugovori o prodaji imaju različite standarde kolizije, nedoumice i tretmane pored njihovih posledica po ekonomiju i zakon. S obzirom na značaj cena u svim ekonomskim domenima i ogroman obim međunarodne trgovine, ugovori o prodaji imaju veliki značaj u današnjoj međunarodnoj trgovini. Raspon robe koja podleže komercijalnim transakcijama značajno se proširio rastom industrije, ekonomije i multinacionalnih i transnacionalnih korporacija. Ugovor o prodaji ima implikacije na ekonomiju i zakon, a njegove osnovne komponente tretirane su drugačije u pravnoj nauci. Rast i razvoj svih aktivnosti kompanija olakšani su postojanjem međunarodne pravne regulative.

Ključne reči: ugovor o prodaji, pravni i ekonomski aspekti, etika, Srbija

Kostadinović, I., Krsić, D., Nešović, D., Legal and economic aspects of violations of international agreements on the sale of goods and services

IMPACT OF DIGITAL MARKETING ON CUSTOMERS

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Abstracts: Digital marketing is a marketing term for the marketing of products and services using digital technologies. The goal of this research is to explore the magnitude and impact of online marketing on customers, to explore social media methods, and introduce the best way to reach out to customers. The aim is to show if marketing methods used by companies are appealing to customers as well as to find out which marketing strategy is most successful for a target market by organizing a survey that is focused on social media and email marketing, and to predict where the customers want to see business marketing.

Keywords: digital marketing, customers, marketing strategy, social media

1. Introduction

Digital marketing is a marketing term for the marketing of products and services using digital technologies. Digital marketing is marketing that operates mainly through the internet. This also includes mobile phones, display advertising, and

other digital medium. In other words, digital marketing represents the promotion of products and Brands to all kinds of forms of electronic media. This type of marketing is very different from conventional ones, in view that involves the use of channels and methods that had one thing in golf allowing businesses to

analyse marketing campaigns. It also gave the opportunity to measure what is effective and what is not in a quicker and better way. Overall getting the information of what is mostly being viewed, for how long is viewed is the job that is done by the digital marketers. The most used channels in digital marketing are the internet, digital marketing covers all platforms, control of marketing strategies, and of course the plans for customer satisfaction. Tasks like boosting website traffic, maintaining social media accounts, SEO (search engine optimization) are considered as a very important part of marketing strategy.

A huge impact on digital marketing can be seen in people's interactions lifestyles and habits. All of these started with increasing Internet accessibility. People are online every day and the number of those people is increasing from day-to-day. Approximately 3.03 billion people are interacting with their presence in various types of social media. This information can be a huge advantage for small businesses to operate more efficiently and globally.

2. Literature review

While researching digital marketing the author realized that one of the most significant changes in the

last decade and the business environment has been caused by development of Internet. The main point is that organization of companies has changed to evolve mostly into the digital environment influenced by the internet business model and digital marketing techniques. (Jose Ramon, 2019).

Digital marketing strategy shows how to integrate digital marketing techniques into overall business strategy and how to present that strategy to obtain approval from decision-makers. It contains practical models covering vision-based and real-time planning, content making, planning presentation strategies and more. (Simon Kingsnorth, 2016).

The huge growth of social media rapidly transformed the interaction between people and organizations in sharing a common interest in many kinds of things such as music, movies, education, friendship, Etc. (Edosomwan et al. 2011).

There is a difference between social media and social networking social media is primarily used to share information with social media users. Social networking is used for engaging people with common interests and to build relationships in such a community. (Edosomwan, 2011).

Though the term digital marketing is relatively new yet its impact is big, intimidating, and sophisticated. Being one of the important tools in businesses is looking for an explicit thanks to start and accommodate digital marketing but they have lack of understanding and implementing it (Dašić, et al., 2023). Nowadays, Social Media like Facebook, Google Plus, Twitter, and other social media have effectively transformed the attitudes and perceptions of targeted consumers. This Digital marketing was done through an assessable wide network of shoppers with reliable data with real-time feedback on customer experiences. Generally, digital marketing is the use of modern technologies to assist marketing activities to improve customer knowledge by matching their needs and wants (Chaffey and Smith 2013; Vljaković, et al., 2023).

With the growth of Internet use of smart phones in 2010 companies started to understand the true importance of digital marketing in the world. It is considered that both online and traditional marketing are needed to be done simultaneously. (Parsons, Zeisser, Waitman 1996).

Moreover, word-of-mouth is linked with creating new members and increasing traffic on the website, pages

or online events which in return increases the visibility in terms of marketing communication. Facebook, the most popular tool for social communications, has opened the door for marketers to communicate with millions of people about products and services and has opened new marketing opportunities. Ensuring this to be successful it is required for the business to set up effective communication strategies to engage the customers and enhancing their experience on specific product or service (Mangold and Faulds, 2009).

It is important to notice that customers are more aware about things they want and things they don't want. In this sense they're capable of informing other customers about situations of over and under delivery. It is not only that they are matching what the business is doing, but they're also comparing your business with every other businesses that they are dealing with (Raketić, 2022). In this way customers are building their own experiences and expectations for business that they have been following for some time. The social business stands for equipping the organization to listen, engage, and make efforts to respond to customers directly through conversation. This encourages customers to share their positive experi-

ences with others. What scares every marketer is exactly the opposite, customers sharing their bad experiences. Having in mind social customers are the most useful tool for brand promotion they can also be the marketers' worst nightmare. Posting negative experiences means that the popularity of certain businesses can fall rapidly by creating customers' distrust. (Dave Evans with Jake McKee, 2010).

3. Research findings

The survey has been created and conducted. Authors managed to receive 100 responses. The survey was active for a week and it was shared to people online. The information gathered from the survey has as a goal to show which type of platform is most effective to reach customers. The trends that are determined based on the age demographics are showing which social media platform stands above others.

The person's age range was the first question of the survey. Out of the total respondents, 27 respondents were between 18 and 22 years old, 45 of them were between 23 and 35, 28 of them were 36 to 50 and 4 of them were over 50 years old.

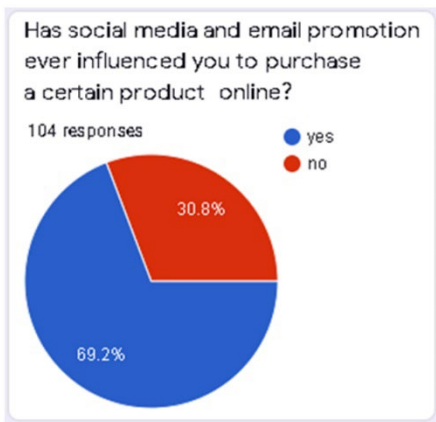
The second question of the survey was, do you have an Instagram account? Out of 125 respondents,

17.5% don't have an Instagram account and 82.5% have. The goal for this question was to see the relationship between people who don't have an Instagram account and their age and of course, people who have an Instagram account. People who don't have an Instagram account are usually people over 50 years old.

The fourth question of the survey was what is your primary email account? This question has a goal to determine who has an email account and who doesn't have more than comparing their primary email accounts. Almost every respondent has an active email account. As we can see 67 responders are using the Gmail account, 13 of them are using Yahoo, 10 responders prefer Hot-mail, 7 responders have business organization mail, and six of them don't have email.

The next question has as a goal to determine how respondents (customers) tend to follow the business they are interested in. From 102 responses 34 of them said that they prefer to follow business through email. For these 34 customers, it's assumed that they either don't have Instagram accounts or they prefer email to follow the brands that they like. Yet 68 responses to this question were that social media accounts are used to be updated with business promotions.

The next question was have you ever participated in business promotion due to online social media marketing? From this chart, we can see that most of the responses have never participated in online brand promotion precisely 60 people. Still, 41.7% that is 43 people who have experience in this kind of promotion.

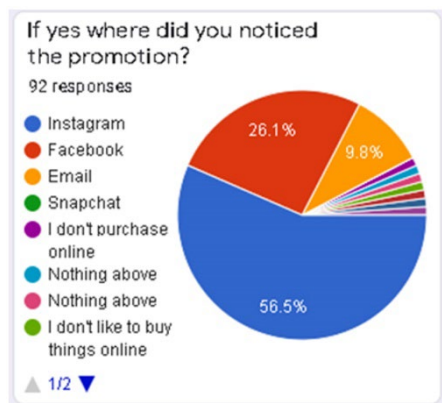


Source: Authors' figure derives from the research

For the next question, the author has asked people if social media and email promotion have ever influenced them to purchase a product. From the responses, we can see the 72 people have been influenced by online promotion to buy a certain product and 31 of them have answered no. The responses to this question were different and that is showing that social media adverti-

sing is a pretty much effective way to sell products.

The last question was where the customers have notice the promotion. There were multiple-choice for answering this question and it was referred to people who previously answered with yes. There was also an option for a different answer to those offered. From 91 responses the biggest number was for Instagram, the second one was Facebook, only nine were email, and just one is Snapchat. There were more answers like "I have not noticed the promotion on any platform that's was good enough to make me purchase the item", "I don't purchase online" etc.



Source: Authors' figure derives from the research

4. Conclusion

As a main conclusion, social media marketing (Facebook, Instagram, and Snapchat) requires more attention from small businesses in order to attract more customers. In general, when this kind of marketing is used effectively online marketing campaigns have more potential to reach customers in a much faster and low-cost way. Developing social media marketing is considered as one of the most important and influential trends in the field of business. In the past 10 years this kind of marketing has become a revolutionary.

It has become the most represented way of advertising in which businesses and customers interact with each other. Online marketing empowers dissatisfied customers to post bad reviews that have as a goal to waken a certain marketing promotion and in that way destabilize a business. However aside from bad effect, online marketing has it is considered as the most positive and revolutionary thing that ever happened to both big and small businesses.

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UTICAJ DIGITALNOG MARKETINGA NA KUPCE

Sažetak: Digitalni marketing je marketinški termin za marketing proizvoda i usluga korišćenjem digitalnih tehnologija. Cilj ovog istraživanja je da se istraži značaj i uticaj onlajn marketinga na kupce, da se istraže metode društvenih medija i predstavi najbolji način da se dođe do kupaca. Cilj je da se pokaže da li su marketinške metode koje koriste kompanije privlačne kupcima, kao i da se otkrije koja je marketinška strategija najuspešnija za ciljno tržište organizovanjem ankete koja je fokusirana na društvene mreže i email marketing, kao i da se predvidi gde će se kupci žele da vide poslovni marketing.

Ključne reči: digitalni marketing, kupci, marketing strategija, društveni mediji

RISK OF PLAN MANAGEMENT OF THE CHINESE ECONOMY

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Abstract: Based on official PRC statistics and analytical data obtained from modern scientific and public research, it follows that the so-called Chinese economic miracle has ended. The rapid development of China was driven using cheap labor and the open-door policy for Western investment under the rules of basic market laws after Deng Xiaoping's 1977 reforms. All three factors have exhausted their resources. Further growth in living standards and education began to pose a danger to the communist regime. Ignoring the laws of the free market economy, creating artificial plans for stimulating growth, repressing the entrepreneurs, sanctions pressure, an arms race, aggressive plans in the region and demographic changes inevitably lead to dangerous consequences - a slowdown in economic growth, debt load and capital outflow.

Keywords: Chinese economic miracle; cheap labor; communist planned economy; Chinese economic slowdown; trade war; repression of the entrepreneurs; media control in China; Chinese debt crisis; real estate bubbles; declining Chinese birth rate; Asian tigers; capital outflow from China; militarization of China

1. Introduction.

Historical aspects and reasons for economic success.

1. Great experiments as traditional history of China.

From the 20th century to the present day, all of China's economic activity can be seen as endless grand experiments. The attempts of PRC Chairman Mao Zedong to quickly industrialize the economy of a poor agrarian country and cleanse it of enemies (the Great Leap Forward Policy and the Cultural Revolution) led to a humanitarian catastrophe, the death of tens of millions of Chinese from starvation and the destruction of the intelligentsia. Modern economic decisions are also based on the ideas of communism. Moreover, if in the 60s Mao Zedong forced the peasants to smelt iron, then the Chinese communists of the 21st century build ghost towns to move people from villages to cities, forbid having children or fight against wealthy Chinese.

2. Decades of unexpected success.

In 1977, Deng Xiaoping initiated political and legal reforms, allowed private property and market relations, and restored diplomatic rela-

tions with the United States. The new legislation guaranteed the protection of foreign investment. American capital began to open China to the whole world. In 2001, China joined the World Trade Organization and soon Chinese goods were being sold around the world at reduced rates. China has moved to an export-oriented economic model based on global consumption. From 1979 until 2010, China's average annual GDP growth was 9.91%, reaching a historical high of 15.2% in 1984 and a record low of 3.0% in 2022. Attractive investment climate, market competition, cheap labor in large numbers, ready to work irregular hours in hazardous industries, peaceful international policy, government refusal to interfere in the work of private capital, played the role of catalyst and fuel in the Chinese economic miracle.

3. Has Chinese communist's miracle' been able to overcome the laws of a market economy?

In four decades, the Chinese economy has become the second largest in the world in terms of GDP. It turns out that a planned communist economy can develop in defiance of all the laws of the market, in defiance of a free business climate,

democracy and independent courts. In the book "Why nations fail: The origins of power, prosperity, and poverty" [2] 2012 Daron Acemoglu, James A Robinson write that "There have been speculations that China has its own, alternative path, in which it will be possible to maintain economic growth in conditions of authoritarianism, rather than inclusive economic and political institutions. Actually, it is not. The resurgence of China meant the drift of one of the most extractive systems of economic institutions in the world towards much more inclusive institutions." [2]

It should be noted here that Communist China generates 70% of its GDP from private enterprises with Western investment. The gateway for the communist regime to receive Western investment is the province of Hong Kong, which was leased from Britain for 100 years and was returned to China under Deng Xiaoping. Communist China allowed Hong Kong to keep its independent political and financial systems, courts, and democratic freedoms. More than 70% of foreign direct investment came to China through the financial institutions of Hong Kong. Through capitalist Hong Kong, the communists carry out 60% of the world's investments,

which allows them to expand Chinese influence in the world.

The Chinese Communist dictatorship uses a free Hong Kong for trade and investment because it recognizes that market relations and openness provide better security for money, competition, and protection from arbitrariness than the politburo or the people's court of China. Michael Schuman [3] writes in The Atlantic, "China's economic 'miracle' wasn't that miraculous. The country's high-octane ascent over the past 40 years is, in reality, a triumph of basic economic principles: As the state gave way to the market, private enterprise and trade flourished, growth quickened, and incomes soared." [3]

Causes and consequences of Planned Communist Management.

In 2011, the world first began to discuss the risks of a slowdown in the Chinese economy. Can China continue to develop as quickly? Russian economist, Алексей Михайлов [4] writes that "The new leader of China, Xi Jinping ... deliberately plans to reduce economic growth from 10 to 7.5% in order to ... use the released funds to increase the living standards of peasants and the mili-

tary budget. However, this is a thesis for internal use. China speaks to the world about the transition from an export orientation to a reliance on domestic consumption and about the growth of this very consumption.” [4] But this is not entirely accurate either. In fact, the Chinese communist dictatorship in the person of the new leader Xi Jinping is facing a fatal choice. If China continues to adhere to Deng Xiaoping's reforms, this will lead not only to economic growth, but also to the growth of the class of educated and wealthy people. This, in turn, will lead to the demand for freedom and democracy, and hence to the change of the communist regime. China's poor and illiterate population was easier to manage. So, China's new leadership began manipulatively talking about raising the standard of living for peasants, while thousands of businesses, elite and cultural figures were repressed and accused of trying to copy the Western way of life.

1. Economic plans and regular congresses of the Chinese Communist Party.

For a healthy economy, three basic laws must be fulfilled: the law of value, the law of supply and de-

mand, and the law of competition. Market functions: Pricing (demand, supply, and competition), mediation, promotion of efficiency, quality, and new technologies. Purification of unnecessary activities, the weak and encourages the development of promising ones (bankruptcies and crises). The heavy hand of the state of John Keynes can only exert a general influence on the market, for example, through monetary policy. Any direct intervention in business has a destructive effect. Communist management is the dictate of planning. At the initial stage forty years ago, the communist command system became the engine of a powerful start, but in the future, it began to have a negative impact on the economy. For example. No bank will give a loan to an insolvent person or enterprise, and the owner of the enterprise will refuse to take a loan if the enterprise is unable to repay. However, this rule does not apply to China at least on the start of reforms. The Chinese Communist Party forced banks to lend and entrepreneurs to take out loans. Chinese cooperatives that received unsecured loans bought equipment and started building houses, making cheap knock-offs of plumbing, auto parts, perfumes, and children's toys. The

whole world bought a huge amount of low-quality Chinese goods. A positive trade balance was formed and new markets for raw materials opened. Unfortunately, the command-administrative system has also become a source of negative impact on the economy. At each congress, the communists adopt a plan that specifies how much and where to build housing, power plants or high-speed railways. This has a destructive effect on the functions of the market economy. **Plans made in Beijing are sent down to provincial implementers on a regular basis.** For non-fulfillment of plans, cruel punishments follow. Therefore, local managers are not interested in the profitability or rationality of the facility. Often, new highways and residential areas are built next to an already built high-way or not yet inhabited residential area. Apart from the pompous construction of highways that no one travels on, loss-making high-speed railroads or empty infrastructure projects, about 3.5 billion square meters of housing is built in China every year on average. This is 2.5 square meters of housing per resident (about 1350 million) per year. For 40 years of building ghost towns, the population of the villages has grown old and there is no longer any need to relocate there. But more on that later.

2. Giant real estate bubbles as monuments to the planned economy.

The famous Russian orientalist, Alexei Maslov, Professor of East Asian Studies of Moscow State University with the focus on Chinese [5] writes on his personal website: "Ghost towns in China are a legacy of distortions and "overheating" in the Chinese economy and a by-product of rapid urbanization. 20% of the population lived in cities, and now about 60%. The Chinese economy is growing not only due to the development of production, but also due to investments from the central budget. Ghost towns are the consequences of investing huge amounts of money to stimulate the formal growth of GDP. In China, all simple means that bring quick profits have already been exhausted, and as a result, Chinese businesses are ready to invest "in the future." It is worth considering that local governments in China bear almost 85% of government spending but generate only 50% of revenues. Therefore, one of the main drivers financing the growth of cities in the country are urban development companies and investment companies. Moreover, there are a lot of such companies - about 11,566, that is, one for each city government, and these

development companies are actively lending to local banks.” [5]. Here the sinologist emphasizes that the Communist Party forces them to build, regardless of rationality. Ghost cities are built to achieve a short-term effect, show good statistics to investors, and receive loans. Further, Alexey Maslov writes: “The appearance of ghost towns in China relates to the dependence of local authorities on the sale of land for income. The high cost of urban land for redevelopment encourages municipal authorities to transfer rural land to "urban" land and sell it to developers. Developers are required to build multi-storey buildings according to the plan. Although the occupancy of such cities is increasing, they are still a sign of a huge "bubble" in the housing market, with the peak of the creation of such cities was in 2017-2018. One of the reasons was various operations with loans and debts, when companies took loans from banks for the construction of settlements, without even thinking about how they would sell apartments and offices. Local authorities turned a blind eye to this, so they tried to stimulate their economy (they were afraid of punishment for not fulfilling the plan. Author's note), creating additional infra-

structure and stimulating the real estate market. Due to the excessive borrowing for the development of new settlements, there is a lot of speculative housing construction, and the cities are full of empty apartment buildings and shopping centers.” [5].

3. The growth of the debt crisis in the provinces of China.

Economic columnist for China's Epoch Times, Alex Wu November 25, 2021 [6] writes that “The Chinese communist regime’s Ministry of Finance released the local governments’ bonds and debt balances for this year on its website on Nov. 23. As of the end of October, the local government debts balance was \$4.64 trillion. Mainland Chinese media Securities Times and Tencent Finance jointly released the “China Cities Debt Ratio Ranking,” showing that most major cities in China have debt ratios exceeding 200 percent, and the debt ratios of some cities in underdeveloped regions are particularly high. In 2020, 85 cities had debt ratios exceeding 100 percent. Beijing and Guangzhou have debt ratios exceeding 200 percent. The debt ratio of Guiyang is as high as 929 percent, making it the most indebted city in mainland China.

According to Wall Street, investment bank Goldman Sachs issued a report on Oct. 29 indicating the total debt of China's local government financing vehicles (LGFV) has surged from \$2.5 trillion in 2013 to \$8.3 trillion at the end of 2020. According to a Bloomberg report, this figure is equivalent to 52 percent of China's gross domestic product (GDP) and is higher than the official total amount of the Chinese regime's outstanding debt. The Goldman Sachs report also pointed out that about 60 percent of China's local government financing platforms that issued bonds to raise funds have used the money to repay debt due from 2020 to 2021, rather than for new investment." [6].

The New York Times By [Li Yuan](#) March 28, 2023 [7] She quotes Victor Shih, an associate professor of political science at the University of California, San Diego: "As part of the ruling Communist Party's all-in push for economic growth this year, local governments already in debt from borrowing to pay for massive infrastructure are taking on additional debt. They're building more roads, railways, and industrial parks even though the economic returns on that activity are increasingly meager. In their struggle to find the money to fund their new

projects, and the interest payments on their old ones, cities are cutting public services and benefits. Governments don't have money to spend on basic services if land sales do not recover dramatically. Local government, especially in third- and fourth-tier cities, will still find it difficult to meet many of its budgetary obligations." [7] Further, Li Yuan writes, "According to official data, **China's 31 provincial governments owed around \$5.1 trillion at the end of 2022, an increase of 66 percent from three years earlier. An International Monetary Fund report puts the number at \$9.5 trillion, equivalent to half the country's economy.** Two-thirds of the local government entities that borrow money exceeded unofficial debt thresholds set by Beijing, with their outstanding debt having surpassed 120 percent of their income by December, according to [S&P Global](#). The problem is that these governments don't have the money." [7]

4. Cutting spending on social needs, urban services, and pensions in China.

Next, Li Yuan talks about a typical situation in China using the example of one city. "In Shangqiu, the government didn't specify how it would fund its 701 projects (Ende-

avor Spring | Emerging Industry Project Shangqiu creates a development pattern of "one county and one characteristic" (dahe.cn) for 2023. [We are talking about projects according to the plans adopted by the communist party. Author's note]. Shangqiu is not planning to spend the money on public services. On the contrary, the city plans to cut spending on education, health care, employment protection, transportation, and many other public services, according to budget documents on its website. "We should protect and improve the public's livelihood based on our economic growth and financial health," the documents said. China is full of wasteful infrastructure that the government likes to brag about but that doesn't serve the most urgent needs of the public." [7] Li Yuan in the NYT article reports about the low level of wages and pensions in China. "It's nice to have green space for everyone. But like most inland Chinese cities, Shangqiu isn't wealthy. Its college graduates are complaining on social media that it's difficult to find a job that pays more than \$300 a month. Its basic pension provides its seniors with \$17.80 a month, after a \$1.50 raise this year according the Notice of Henan Province on Raising the Minimum

Standard of Basic Pension [8]. Many Chinese people who are at least 60 years old live on pensions like this. According to Official data of Government of China [9], in 2021, \$54 billion in basic pensions was distributed to more than 162 million people, or about \$28 a person each month on average." [7] This proves that it is not enough to simply move half a billion people from villages to cities. It is important that in new cities people can find work. It is also impossible to return these people to the villages. Li Yuan concludes that "Local leaders are interested in infrastructure projects because their economic payoff, while minimal, is immediate - people get construction jobs, and companies get building contracts. **Such a short-term approach dominates in China's political system**, in which cadres are deployed to run toward the goal set by their leader regardless of the financial or human cost." [7]

5. Financing obviously unprofitable global projects.

Zhao Jian, a professor at Beijing Jiaotong University in an article Beware of high-speed rail gray rhinos [10] noted that "high-speed railways could become the "gray rhino" that crushed the Chinese economy be-

cause many local governments had taken on a lot of debt to build them. But most of those railways move people, not freight. So, they would make sense only in densely populated areas where people were willing to pay more for speed. The Chinese government likes to say the country has the longest and fastest high-speed railways in the world. But except for a couple of lines that connect the megacities of Beijing, Shanghai, Guangzhou and Shenzhen, most lines operate below capacity and at a great loss. About 80 percent of China's high-speed railways constructed in the past decade were built in distant and poor regions, [China State Railway Group](#) said last year.”[10]

6. Great Problems with the demographics of China.

Professor Maslov [5] writes about this: “There are not enough people of working age in China and a rapid decline in the birth rate. The number of newborns in 2020 is 12 million, down from 14.65 million in 2019, a decrease of 18. Graph 1.

The fertility rate has fallen to 1.3, below the 2.1 required to sustain the population. And this is lower than in Japan (1.37). China will shrink by another 32 million between 2019 and 2050, while the US population will increase by 50 million, according to the People's Bank of China.” [5]

Further, Maslov cites statistics: “264 million people over 60 years old live in China, which is 18.7% of the population. This is a notable increase from 2019, when there were 254 million older people. For those over 65, this figure rose from 176 million in 2019 to 190 million in 2020, representing 13.5% of the population. By 2050, more than 500 million people over the age of 60 will live in China. That is, the number of elderly people in China will obviously be greater than the entire population of the United States.



And that puts a huge strain on pension funds.” [5]

Milton Ezrati, on Forbes, Jan 16, 2023, [11] writes, that “Because Beijing for decades imposed a one-child rule on families, China now has a paucity of young workers to support a disproportionately large, retired population, a matter that will only get worse in coming years. A summary of the Pew Research Center estimates that China’s population has already begun to decline and that soon the economy will have less than three people of working age for every retiree. Because these three workers cannot possibly produce the required surplus, Beijing will have to use debt to support its social security pension obligations.”[11]

The experiment of resettling peasants in the cities failed. For four decades, the task of the communists to resettle 500 million people from villages to cities has almost been completed, 40% of the population remains in the villages. But the cities are not populated, there are empty cities and blocks with apartment buildings for tens of millions of people. Time passed and it turned out that the able-bodied were already in the cities, and it makes no sense to relocate old people from villages to

ghost towns. For 40 years of development, the population of the villages has also grown old.

China's main resource has been exhausted - many poor and uneducated rural people. For 40 years, well-mannered and educated generations have grown up. Standard Chartered predicts that by 2030, about 27% of working Chinese will have a college degree, the figure for today's Germany. The new youth does not want to work in heavy or hazardous production. However, China's educated youth have nowhere to apply their knowledge, they often sit unemployed in the care of working parents. The soft power of European culture has established the desire for a comfortable life, quality food, and a career. Children have become expensive because I want to give them an education and a comfortable future. Many Chinese of childbearing age remember the poverty of large families from their childhood and fear a repetition. “The number of marriages in China in 2020 fell to 8.13 million, and in 2013 it was 13.47 million. Polls showed that 55% of young couples do not want children. This is practically the collapse of traditional values.” The Russian academician Maslov notes. [5]

Low standard of living and income in China. According to World Bank estimates, per capita income in China remains at the level of developing countries and is less than a quarter of those in developed economies. The median annual income in China is \$10,000, according to DBS. In the USA - 62 thousand dollars. [12]

John Mac Ghlionn [13] writes: "To get a clearer picture of the real China, you need to look at its GDP per capita. According to the World Bank, that figure is \$10500, meaning the country is somewhere between Grenada and Nauru, tiny island nations." [13] When we think about China, concepts like "wolf diplomacy" and technological progress pop into our minds. In fact, the sharp attacks and muscle flexing are an attempt to distract us from the real situation facing the Chinese regime. If China really wants to overtake the United States, it still has a lot to do. As Scottish-American historian Neil Ferguson recently noted, China's GDP adjusted for "purchasing power parity" tells us "That food in Chongqing is much cheaper than in Chicago." According to him, in current dollar terms, "China's GDP last year was still only 72% of US GDP, even with Hong Kong." [13] "China creates a

strong image, but the facts say otherwise. With or without a strong GDP, China is a country with many problems and no obvious means of solving them. Given the economic crisis of colossal proportions, the problems can be expected to become even more serious."

Statistics of irreversible consequences.

1. Situation of the Chinese economy.

On the International Statistics website [14] we find that "In 2022, the construction industry accounted for around 6.9 percent of China's gross domestic product. A significant share of the country's economy relies on real estate and infrastructure construction." However, surplus cement production capacity began to exceed the combined consumption in the US, Japan, India, and South Korea. The construction boom, based on the communist drive to relocate rural dwellers to the cities, spurred demand for anything used in construction. Therefore, the problems of the construction industry entail problems in the steel, mining, cement, oil refining, service, transport, engineering and even food industries. As a result, adding dependent industries, we get that in

reality 31% of the GDP of the Chinese economy is oriented and dependent on construction.

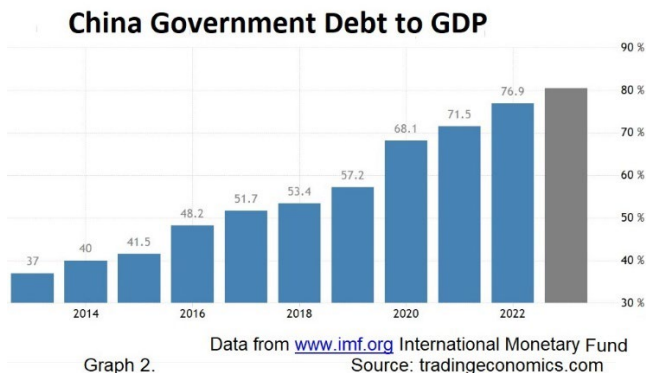
Milton Ezrati [11] writes that “Beijing has at last begun to acknowledge its deep financial problems. A few weeks ago, after dithering for more than a year, it took steps to re-liquify its troubled property sector. More recently, it announced a new financial stability law that according to Vice Chair of the People’s Bank of China (PBOC) Liu Guoqiang, aims to control risk. Such measures may offer temporary relief, but they cannot address China’s deeper economic troubles and their reflection in financial markets. China’s debt overhang far exceeds the burdens facing the United States. As recently as 2020, total debt in the United States relative to GDP exceeded China’s. But as of mid-2022, China’s relative debt burden stood 40 percent higher than America’s. If this comparison does not highlight China’s precarious situation, it is worth considering that more developed countries, such as the United States, tend, because of their greater relative wealth, to have higher relative debt burdens and can support them more easily than less developed economies, such as China’s.” [11]

In 2022, the Chinese economy grew by 3%, which is the lowest since 1978, not counting the covid 2020 with a growth of 2.2%, from 2014 to 2019, growth averaged 6.8% and 8.4% in 2021. Servicing the public debt costs China about 2.9% per annum (depending on the maturity of the bonds). While the economy was growing at 9% per year, it was possible to refinance at 2.5% per annum an amount of 100% of GDP and even 200%. But when the economy slows down to 3% per annum and gross debt exceeds 300% per annum, there are serious risks of a parade of domestic defaults and China's debt servicing problems.

An additional problem arises from the fact that China lives and works in Yuan, while external debts must be serviced in US dollars and Euros. In 2023, due to the crisis, the US Federal Reserve raised rates several times. With each rate hike, China finds it harder to service its debt. It can be argued that the economies of developed countries that use the levers of monetary policy also have a large public debt. However, China does not have a convertible currency and is dependent on Western investment, markets, credit, and Western technology.

China's gross debt, which includes obligations of the state, companies, and households, exceeded GDP by 3 times. Total National Debt of CPR USD \$22 397 190 071 167 on April 03. 2023. [27]. The main reason for this growth is the artificial stimulation of the growth of the Chinese economy. With China's GDP of \$17.7 trillion, loans to the non-financial sector amounted to \$51.87 trillion, or 295% of GDP. For comparison, in the US the volume of such debt is 263.5%, in the UK - 257%, in Germany - 195%.

Government debt to GDP ratio in China increased to 76.9 % in 2022. Graph 2. Approximately 60% of the country's borrowing funds are used to repay bond payments. This does not allow for a proper increase in direct investment in the economy. The debt pyramid is growing. The data are published annually by the IMF. The Chinese Communist Party cannot control this data.



Graph 2.

2. Attempts of communists to hide or correct real statistics.

According to the Chinese constitution, the Communist Party is the only guiding force in society that cannot be changed or criticized. There are no competition as other political parties are banned. The Communist Party cannot admit guilt that under its leadership there may be bankruptcy of enterprises, or a default declared. With the rise of Xi Jinping, the Communist Party began to strictly "control" or hide some statistics after 2013. [15] To prevent investors from seeing the real state of affairs, the Chinese leadership extracts important parts of the country's financial system from statistics or improves data. Ph.D Salvatore Babones writes about this. In the article "Yes China Is Lying About the Size of Its Economy" In the magazine "The National Interest" [16] "Not surprisin-gly, they found that China

has been over-reporting its growth rate by an average of 1.7 per-centage points every year. Shave off a little growth every year for the last do-zen years ago, and the cumulative effect is

that China is now overstating its true GDP by nearly 20 percent.” [16]

Below is Graph 3. You can see that China does not include the debts of state-owned enterprises into its accounts.

sector of the economy and banks lend to them in preference to private sector businesses. This credit availability makes state-owned enterprises potential cash cows for unscrupulous managers.

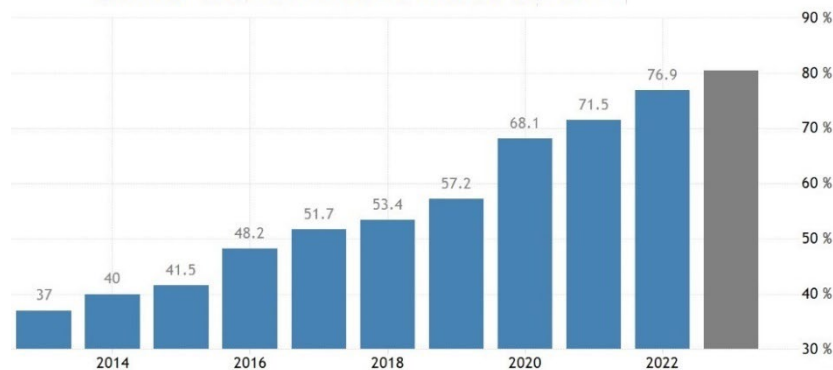
Chinese Government Obligation	Government Department	Included in National Debt?
Government-issued bonds	Ministry of Finance	Yes
Short-term debt instruments	Ministry of Finance	Yes
Local government debt	None	Yes
Public-Private Investment initiatives	None	No
Civil Service and army pension obligations	All	No
Debts of state enterprises	Various	No
Debts of state-owned banks	Ministry of Finance	No
Guarantees to the private banking sector	Ministry of Finance	No
Debts accumulated by the gov. of Macau and Hong Kong	None	No
Accounts Payable (unpaid bills)	All	No

Graph 3. Source: <https://commodity.com/data/china/debt-clock/>

These businesses, which are controlled either by the central government or by the local government, represent a very large

Accurate data of the Chinese economy on April 02, 2023: Interest Payments Per Year \$278,868,162,353; Debt as % of GDP 63.28%; GDP Of

China Government Debt to GDP



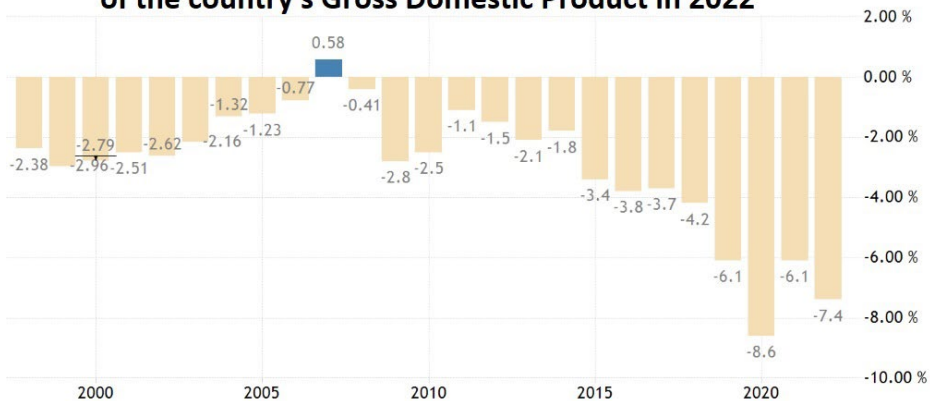
Graph 4. Data from www.imf.org International Monetary Fund
Source: tradingeconomics.com

China \$14,836,591,312,739; China Population 1,402,000,000; Read more at: <https://commodity.com/data/china/debt-clock/> According to official data, in 2022, China reduced its external debt to \$24,528 trillion. Graph 4. However, following from Graph 3., all debts are not included here.

The latest data on the state budget of China. It is important to pay

social security, financing of public transport and other local needs to economically unjustified global projects. Also, a huge share of the budget is eaten up by military spending. Government deficit in China decreased to 359 CNY 100 million (5.195 B USD) in March 2023. Data published Monthly by National Bureau of Statistics. Graph 5.

China's Government Budget deficit is reached 7.4 percent of the country's Gross Domestic Product in 2022



Graph 5.

Source: <https://tradingeconomics.com/> Ministry of Finance of PRC

attention to the growing problems with financing the state budget of China. The trend towards a deficit. I have already pointed out in this article that the local authorities in the provinces bear the brunt of the economic risks of fulfilling the plans adopted by the leadership of the Chinese Communist Party. This causes a reallocation of funds from

3. The invisible hand of Adam Smith hits the communists on the head.

Despite the "control" of official government statistics by the communists, the invisible hand of the market is destroying the planned economy. One of the largest companies in China, Evergrande Group [17], has debts of \$300 billion. The company has more than 200 thousand

employees, sales in 2020 amounted to more than \$110 billion, the company maintains 1,300 construction projects in 280 cities. In August 2022, Evergrande failed to fulfill its debt restructuring obligation and announced another default. Condo savers boycotted \$6 billion in mortgage payments when they saw construction on their homes halt. As a result, banks stopped lending to developers. Protests began throughout China, which had to be dispersed with the help of tanks and armored personnel carriers. Kaisa, Fantasia and Shimao Group, as well as several rural banks, have also applied for creditor protection. All this showed the mediocrity of managing the economy with the help of plans and exposed investors the true situation in the Chinese economy.

The problems are too big to hide. Therefore, even in China's government newspaper China Daily Feb 08, 2023, economist Linan Liu [18] admits that the threat of mass defaults remains: "In 2022, credit events by property developers, mortgage defaults and the spillover to the financial sector were the main threats to China's financial stability. China is also expected to continue prioritizing financial stability risk management to resolve debt risks in 2023. But property default risks will linger in 2023

considering the repayment of heavy debt. Developers that manage to secure funding may receive near term relief of liquidity, while those unable to take advantage of the latest financing support may default." [18]

Economist Milton Ezrati [11] "The size of China's debt problem is truly staggering. At last measure, debt of all sorts - public and private and in all sectors of the economy - amounted to the equivalent of \$51.9 trillion, almost three times the size of China's economy as measured by the country's gross domestic product. This is the highest level recorded in the 27 years since Beijing first began to track such statistics. Matters seem set only to get worse. According to the Beijing-backed National Institution for Finance and Development, local authorities are set to issue new debt next year of some 4 trillion yuan, the equivalent of \$570 billion." [11]

The Communist's experiments in global expansion and unsecured loans

1. Debts owed by 165 countries to China for "Belt and road initiative"

In 1992, Deng Xiaoping defined the concept of Chinese foreign policy as "opportunity hiding". Xi Jinping

changed it to "active action policy." PhD А.Д. Воскресенский. [19] In 2020, The Guardian newspaper published the results of an economic investigation. [20] Laboratory Aid Data finds 42 low-to-middle income countries with 'belt and road' exposure exceeding 10% of GDP. Researchers have identified debts of at least \$385bn (£286bn) owed by 165 countries to China for "Belt and road initiative" (BRI) projects, with loans systematically underreported to international bodies such as the World Bank. The BRI was launched in 2013 as Xi Jinping's signature international investment programme. "Many poor governments could not take on any more loans," AidData executive director Brad Parks told AFP. "So [China] got creative." Peter Cai, a research fellow at the Australia-based Lowy Institute, said it would be difficult to enforce the debt repayments, particularly where there was civil unrest or poor governance. "There's always a problem of enforceability," he said [20]. The report also found China had rapidly scaled up its provision of loans to resourcerich countries that have high levels of corruption, and 35% of BRI projects had faced issues of corruption, labor violations, environmental pollution, and public protests. [20] "Beijing is more willing to bankroll projects in risky

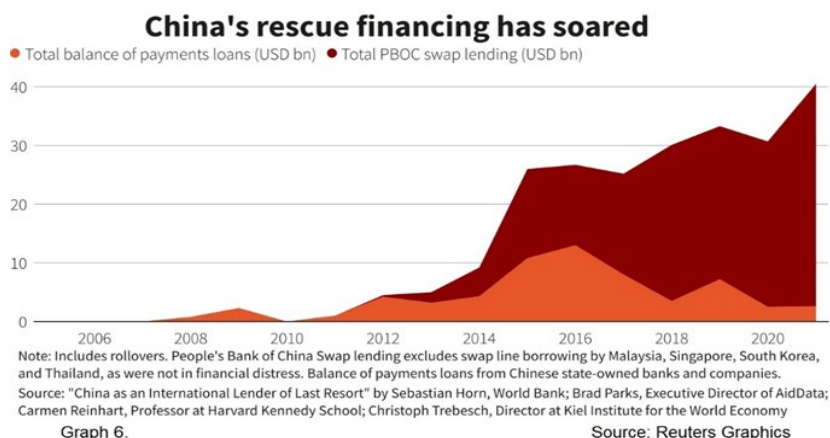
countries than other official creditors, but it is also more aggressive than its peers at positioning itself at the front of the repayment line," the report said, noting 40 of the 50 largest loans were collateralized, often against future commodity exports. Russia secured loans and export credits worth \$125bn, mostly contracted by Russian state-owned oil and gas enterprises, collateralized with the proceeds from oil and gas sales to China. Venezuela secured \$86bn in non-concessional and semi-concessional debt from China's state-owned policy and commercial banks, mostly through loans collateralized against future oil exports. [20]

2. China is secretly bailing out its own risky 'Belt and Road' loans.

Markets Correspondent at Reuters Rachel Savage provides new research data AidData. [21] China spent \$240 billion bailing out 22 developing countries ...as more have struggled to repay loans spent building "Belt and Road" infrastructure. Chinese loans to countries in debt distress soared from less than 5% of its overseas lending portfolio in 2010 to 60% in 2022, the study found. The study was critical of some central banks potentially using the PBOC swap lines to artificially pump up their foreign ex-

change reserve figures. China's rescue lending is "opaque and uncoordinated," said Brad Parks, one of the report's authors, and director of AidData, a research lab at The College of William & Mary in the United States. [21]. **Graph 6.**

lems are an opportunity to accelerate their development. Communist economic plans, mismanagement of funds, deteriorating investment climate, growing budget deficits, technology theft, an aging population and rising labor costs in China are



From this I conclude that China is repeating the mistakes of the USSR, spending money to buy corrupt governments, insecure assets, obtain lucrative contracts and seize new territories. The history of the USSR has shown that in the end these loans are “forgiven”, so China will get new holes in the budget.

Loss of investment attractiveness and capital outflow.

1. China's problems are chance for developing countries.

For many countries in Asia, Oceania and Latin America, China's prob-

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forcing Western companies and China itself to move their factories from China to countries that now have the same potential which China had 30 years ago. The most promising candidate to replace China is the ASEAN (Association of Southeast Asian Nations) countries, which are united by a common colonial history, language, culture, and population of 668 million people (2021). Under the influence of globalization, legislation in the ASEAN countries has been changed to guarantee the safety of capital. Asian Club countries: Indonesia, Malaysia, Thailand, Vietnam, Bangladesh, and the

Philippines. No less promising is India with a population of 1.36 billion people. Prof. Bill Conerly in a Forbes article Apr 14, 2023. writes about the growing trend of transferring production capacities from China to Mexico. [22] “China presents a less attractive location for manufacturing than it did a decade ago... The legal system often works against foreign companies, theft of intellectual property has been common and labor costs have risen in the last decade. Nonetheless, China has been a great location for many companies. Many business leaders wonder if they should reshore their production to the United States, or near-shore production to somewhere close, such as Mexico. Shifting production will certainly happen...” [22]

2. The process of exporting production from China is gaining momentum.

PhD Srivatsa Krishna in The Financial Express magazine in the article “Is China still the factory of the world?” [23] writes that “Trust and reputation are perhaps the only two things in the world that travel faster than light. From all accounts it appears as if China is losing the trust game and this global untrustworthy reputation is casting a long

dark shadow over its manufacturing muscle. The perfect heady cocktail of Covid-19, geopolitical tensions, unwanted aggression on neighbors and in the South China Sea, high tariffs, use of forced ethnic minority labour, misusing WTO (World Trade Organization) rules are all coming together to move the world’s factories away from the world’s factory! [23] China is losing factories at an astonishing pace. Yet *Samsung Electronics closed its last factory in China last year* but has opened new ones in Vietnam and India. They make about 300 million phones every year, more than half of which are today made in Vietnam, and the Noida plant has the capacity to make 120 million per annum. This Samsung India factory is its largest in the world, even bigger than those it had in China and almost as much as Vietnam’s entire Samsung capacity. Motorola’s iconic Razr, its first folding phone, was made in India, not China. Dongguan, the epicentre of China’s manufacturing, has many shutters down and ‘space available’ signs all across. Closer home, Foxconn, Wistron, Pegatron and Tata Electronics are the newest beneficiaries of Apple moving its manufacturing out of China and the government of India’s thoughtful PLI (Production-Linked Incentive) scheme.

China's share of global exports of consumer goods has fallen since 2016

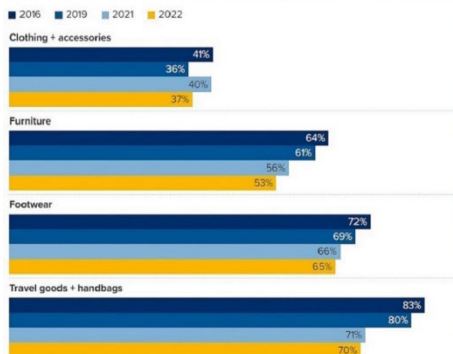


Chart: Gabriel Cortes / CNBC
Source: MDS Transmodal
Graph 7.

Vietnam's share of global exports of key consumer goods has increased since 2016

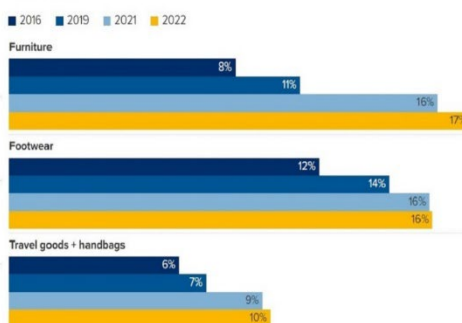


Chart: Gabriel Cortes / CNBC
Source: MDS Transmodal
Graph 8.

AT Kearney has an interesting China Diversification Index (CDI) that tracks the shift in US manufacturing imports away from China and to other countries. It concludes that while China remains the world's primary producer of manufactured goods, it has now lost share within the CDI steadily for the last seven years. All this is well known to the Chinese leadership who are doing everything in their power to slow it down, for it cannot be reversed.” [23]

In Figure 6 (CNBC) we see that China is rapidly losing the global market to new Asian players. At the same time, 100 millionth Vietnam (Figure 7) successfully ousts the giant from the world market. [24] Lori Ann LaRocco CNBC Oct. 2022, notes: “Since U.S. trade tariffs in 2018, there has been a hunt for alternative sourcing locations to China, initially limited to fashion

and footwear, according to Akhil Nair, senior vice president of products, Asia Pacific for SEKO Logistics. Ocean carrier MSC, along with the Vietnam Maritime Corporation, announced in July the creation of a new transshipment container terminal project near Ho Chi Minh City. Once completed, this terminal would become the largest in the nation. Both Maersk and CMA CGM are investing in their own facility expansions in that region. According to data shared with CNBC by transport economics firm MDS Transmodal, China has lost ground in key consumer categories, including clothing and accessories, footwear, furniture, and travel goods, while also seeing declines in its share of exports from minerals to office technology.” [24]

3. The trade tariffs war and sanctions.

The trade tariffs and sanctions imposed by the United States during the Trump presidency and sanctions on high-tech exports imposed by President Biden contribute to the increase in the risks of the outflow of capital and production from China. US sanctions have deprived Hong Kong of many market benefits for the communist regime. Known fact, as in 2019, President Trump announced that he was ordering U.S. companies to “immediately start looking for an alternative to China, including bringing your companies HOME and making your products in the USA.” Despite the criticism, according to many researchers, the result of the sanctions is growing. Finbarr Bermingham in the South China Morning Post [25] writes “Now, after four years of being pummelled by anti-dumping duties, tariffs and extreme political volatility, about 50 per cent is made in China, with the balance of production scattered around Vietnam, Malaysia and Eastern Europe. “We eventually came up with a solution, and the only real winner was my frequent flier programme,” said the American company’s president H. David Murray. “My eldest son and I travelled just about all over the

world to find resources.” [25] This suggests that international and even Chinese private business is intensively working to find safer countries to export their capital and production from China. Given the speed of scientific and technological progress, high tariffs, and sanctions on the supply of technology could make Chinese industry backward in one decade. China's claims about its own research and discoveries are not enough to provide the economy with new technologies and belong to the next pompous communist plan.

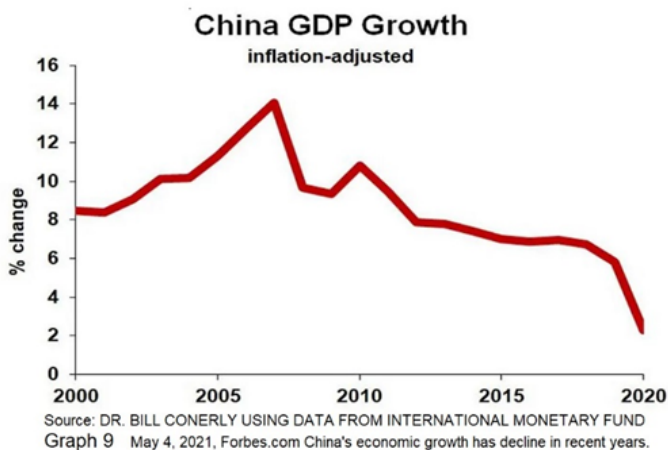
4. Changing the course of the country and the arms race.

“In 2017, at the Chinese Communist Party Congress, Xi Jinping said that China had completed the “enrichment stage” (which Deng Xiaoping announced) and was starting the “strengthening stage.” [19] PhD А.Д. Воскресенский. China is preparing to invade Taiwan and is trying to declare the South China Sea inland. Russia's bad experience in trying to annex Ukraine has forced China to reconsider its plans and increase military spending. In 2022, experts estimate the real military budget of China at \$229 billion, with a growth trend to \$400 billion by 2030. Military spending in China increased to 293352 USD million (293.352 billion

USD) in 2021. The data is published Yearly Stockholm International Peace Re-search Institute. [26] Famous economist and Senior Contributor of Forbes Ph.D. Prof. Bill Conerly predicts “The potential conflict over Taiwan presents an even greater risk to businesses with Chinese operations. A shooting war, similar to the Ukraine-Russia war, would be disastrous for businesses in China as well as for the people of Taiwan. More likely, though, is a Chinese squeeze on Taiwan to try to obtain voluntary unification. That squeeze could begin with searching ships entering Taiwanese ports and progress to an embargo. The U.S. would probably impose trade sanctions on China, and western companies would lose access to their manufacturing plants in both China and Taiwan.” [22]

5. Downgrading China's internal security and stability.

The growing problems in the economy are pushing the dictatorship to distract the people by promoting patriotism, developing aggression and filtering information. There has also been an increase in repressive tendencies against foreign investors, management, and capital. Such actions towards those who were the investor, and the source of the Chinese miracle are at least harmful to China itself.



Final conclusions.

The main conclusion is a growth of risks of contradictions between the plan management of the Chinese economy and the laws of the market. The whole essence of China's economic reforms success at the initial stage was the maximum removal of the Communist Party from interference in the economy. The return of the communists to rigid economic planning based on the teachings of Mao Zedong and the aggressive policy pursued by the new leadership of China are contrary to the laws of economic development and cause additional risks. The main risks of communist intervention in the economy are a planned economy, rising debts, a decrease in the quality of life in cities, an increase in protests and internal instability, falsification of statistics, interference in the internal affairs of private business, distrust of investors, repression of the rich, capital outflow, export of factories, sanctions burden, increased military spending and budget deficit, population aging and low birth rates.

Don't expect the collapse of Chinese economy because of the debt crisis. But the country and the Chinese people are waiting for new great upheavals. The Chinese economy is

highly integrated into world trade. However, the former sources of growth have been exhausted, and the planned economy will not allow development at the same pace. Of course, the authorities will try to stimulate the birth rate, raise the retirement age, transfer the economy to automated production, and take tough measures to fulfill the communist five-year plans. China's economy is heavily dependent on Western high technology, markets, factories, and investment. Therefore, Chinese leadership will be forced to improve relations with the US and Europe. It is for this reason that China refused to help Moscow during the unsuccessful war to return Ukraine to Russia.

The economic slowdown in China does not threaten the global economy, because it will be compensated by the acceleration of growth in the countries - the new Asian "tigers" and Latin America. China's economic miracle will be continued by other countries. It is no secret that the transformation of other overpopulated agrarian countries in Asia into the booming economies of the Asian Tigers was the work of entrepreneurs from the United States, Japan, Western Europe, and later from China. China's economic miracle is the result of a

market economy, not a communist dictatorship. The tightening of the dictatorship, along with depleted human resources and growing problems, will slow down China's development and require fundamental reforms.

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RIZICI PLANSKOG UPRAVLJANJA KINESKOM EKONOMIJOM

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Apstrakt: Na osnovu zvanične statistike NRK i analitičkih podataka dobijenih iz savremenih naučnih i javnih istraživanja, proizilazi da je završeno tzv. kinesko ekonomsko čudo. Brzi razvoj Kine bio je vođen upotrebom jeftine radne snage i politike otvorenih vrata za zapadne investicije prema pravilima osnovnih tržišnih zakona nakon reformi Deng Xiaopinga iz 1977. godine. Sva tri faktora su iscrpila svoje resurse. Dalji rast životnog standarda i obrazovanja počeo je predstavljati opasnost za komunistički režim. Ignorisanje zakona slobodne tržišne ekonomije, kreiranje vještačkih planova za podsticanje rasta, suzbijanje preduzetnika, pritisak sankcija, trka u naoružanju, agresivni planovi u regionu i demografske promene neminovno dovode do opasnih posljedica – usporavanja privrednog rasta, opterećenja duga i odliv kapitala.

Ključne riječi: kinesko ekonomsko čudo; jeftina radna snaga; komunistička planska ekonomija; kinesko ekonomsko usporavanje; trgovinski rat; represija nad preduzetnicima; kontrola medija u Kini; kineska dužnička kriza; baloni za nekretnine; pad kineske stope nataliteta; Azijski tigrovi; odliv kapitala iz Kine; militarizacija Kine.

Skoropad, V., Risk of plan magement of the Chinese

SIGNIFICANCE, CONTENT AND LIFE CYCLES OF INVESTMENT PROJECTS IN MODERN CONDITIONS

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Review

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Abstract: Investment is a very complex and complex process, which includes a number of sub-processes, phases and individual activities. It contains two very important and interconnected dimensions - time and uncertainty. The time period from the appearance of the idea of the need to invest to the realization of the investment is usually very long. The next step is the preparation for the realization of the investment, followed by the realization of the investment and finally the preparation of the production. A special group consisting of investment projects focused on the construction and equipping of facilities of various purposes are the subject of this paper.

Keywords: Investments, investing, risks, project, investment project, life cycle.

Introduction

Taking into account the needs of accelerated economic and social development, investment capital is often a limited resource, so part of the missing funds is provided from other sources, i.e. other sources. Investing is a condition of an existing company, the purpose of which is to achieve certain effects - growth and development of the company, better position in the socio-economic environment, maintenance or better competitive advantage.

Business systems must look at all the circumstances and conditions that affect the achievement of their strategic goals and find answers to changes in the environment, which will certainly initiate changes within the systems themselves, in order to survive on the market. In order to operate profitably in such an environment, the company/investor must analyze the environment, position itself in the selected market segment, define its strategy, assess its financial consequences and then implement it effectively through project selection, resource allocation and project implementation in accordance with the defined strategy. It is the only way to create conditions for further development and growth of a company's

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performance. It is no longer enough to just formulate a strategy, but to materialize it. The way of its materialization is precisely through projects as ways to solve the problems faced by the actors, that is, the bearers of economic activity on the market scene, and in the function of achieving business goals. A necessary condition for this is the investment of money or any other assets in the present moment in order not to realize the benefit in the future. Thus, the investment process itself is parallel to the process of renouncing a part of consumption.

As in the economic sense, investments represent an investment in goods that are used with the aim of creating wealth in the future (e.g. building a factory or investing in education) and whose financial meaning implies the use of monetary assets that will bring income in the future (e.g. buying bonds, shares and real estate), making a series of investment decisions, each of which practically represents a project, is the most complex and difficult task of the management of a business system. On the other hand, wrong investment decisions or the consequences of bad investment can slow down and set back the development of a company and imply numerous

negative consequences not only for the company and employees, but also for the wider social community. For this reason, in all complex, uncertain and risky business ventures, as they are today, there is a need for projects and the need for managing projects and investments as important segments on the way to realizing the development goals of business systems. The purpose of these processes is the rational harmonization of resources, the coordination of individual activities and the achievement of set goals within the planned time, costs and scope.

Every project is an indispensable element of investment, in addition to the investor as the entity that invests, market interest rates and discount rates as required rates of return. In this direction, in recent decades, a growth in the use of project management has been observed, which is a tool used to plan, organize, manage and control all elements of the project for the reason of the successful realization of the project and more efficient solution of current problems.

1. What is the specificity of the investment project?

The general definition is that a project represents a process that has its own time frame, has concrete goals, that is, it is implemented for the purpose of previously defined goals, has various resources for realization, has a defined budget and criteria for evaluating validity and implementation. It is a complex, unique and unrepeatable business venture aimed at final goals in the future, and is carried out with limited human and material resources in a limited time.

Each project is unique and therefore its outcome cannot be predicted with complete certainty. Projects are ventures that contain risk.¹

"A project means any undertaking that needs to be completed in a certain time, with a certain goal within the given resources and with certain validity evaluation criteria."²

From the time dimension, the project represents a continuous process of realization, which consists of four phases:

1. project identification,
2. project preparation

¹ Lock, D.: (1977), Project management, Gower Press, London.

² Губеринић, С. и други: (1970), Управљање системима, системске дисциплине, технике и методе, Институт "М. Пупин", Београд

3. project assessment,
4. implementation and supervision of project implementation.

"The project is a one-time and complete process, special and unique (due to different goals, scope, deadlines, costs, required personnel, etc.), goal-oriented, with certain at the beginning and requires the organization of the performance during its duration until the final and set goal is achieved."³

"The project represents a goal-directed and final process of the development of some activities, which are directed towards the achievement of the final goal."⁴

"The project is a logical and physical category. It is logical because it means a logical whole (project) and physical because it means a technical and shaped whole (design)."⁵

All the above definitions of the project essentially come down to the formulation that it presents a detailed and clearly explained idea in a way that gives the investor a clear picture of why he should invest his money in a certain project.

"Thus, the company's activities are viewed as the sum of all projects that strive for profitability and sustainable growth."⁶

As a project is a job that has its own beginning and end, a predefined result with a given level of quality and budget, the conclusion is that the basic phases of every project are planning and implementation, and that it would take place through the mentioned phases with limited resources and with limited time, taking into account the risks and uncertainty arising from the decision-making process of embarking on a specific project, as well as the time factor, it is necessary to manage the project, i.e. undertake certain activities, coordinate them and control them with the aim of constantly adapting the project to its users and the changing environment, in order to it led to its final realization.

The bottom line is that every project must be financially profitable in order to cover the incurred expenses and all incurred obligations and so

³ Chatfield, C & Johnson, T.. (2016), „Microsoft Office Project 2016 Step by Step“, Microsoft Press

⁴ Нанс А. и остали, (1989), *Upravljanje projektima*, KIZ kultura, Beograd

⁵ Матасовић Љ. (1983), *Примјена електронских рачунара у изведби инвестиционих пројеката*, Информатор, Загреб., стр. 146.

⁶ Драшковић, В. и др. (2006), *Основи пројект менаџмента са примјерима*, Котор: Факултет за поморство

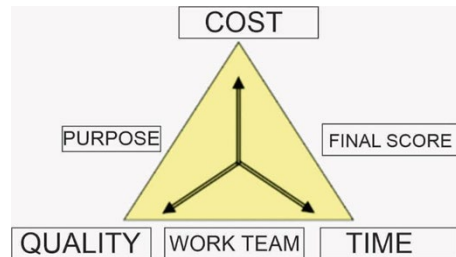
that the owners or investors of the project who have directly invested capital will realize the appropriate benefit.

2. Characteristics and content of the investment project

An investment project has its own specific features that distinguish it from other types of projects. The basic characteristics of investment projects are:

- If they are long-lasting,
- Very complex,
- For implementation, they require a large amount of resources and knowledge - from the basic elements
 - means of work and objects of work until the engagement of several companies as contractors and subcontractors,
- spend large financial resources,
- Realization is long and takes longer than preparation
- Application of standard software is mandatory, project management is performed by the project team and implementation by someone else, which means that management and implementation functions are separated,
- Requires long-term monitoring and control, and
- It consists of a large number of interconnected activities that require

coordination, which means that the implementation is staged.



Picture 1. Project characteristics

When it comes to the long-term nature of investment projects, it is a common feature of all investments, regardless of the subject of the project - the purchase or replacement of existing equipment or the construction or reconstruction of an object or other fixed asset, which require time. Second, from the idea of the need to invest to the final realization of the investment project, a number of years may pass. For this reason, there is a gap in time from the investment period to the realization of the financial effects of the investment. The goal is to shorten the investment period as much as possible because the investment project itself will bring the expected cash flows faster.

Third, market conditions today are such that investment cash flows must be carefully planned and all potential risks must be reasonably

assessed. Of course, the financial effectiveness of the investment project will also be significantly higher, the longer the period of economic duration of the investment. As investment projects consume considerable financial resources.

It is necessary to provide adequate financial resources. In this direction, the development of the capital market is important, as well as the choice of the form of financing precisely because of the time gap between investment and the realization of the expected rate of return. Financial resources should be engaged not only in the procurement of the necessary material, parts, equipment, but also for the engagement of a large number of workers, which regularly follows every investment project. This means that numerous activities and a large number of phases that intertwine with each other require a coordinated network of mutual relations between the participants in the implementation, which also makes this type of project a complex undertaking.

Since the execution of works, the construction of an investment facility, the installation of equipment, etc., is carried out in the implementation part, this phase also lasts

longer than the phase in which the project is being prepared.

3. Who can participate and with what tasks in the implementation of the investment project?

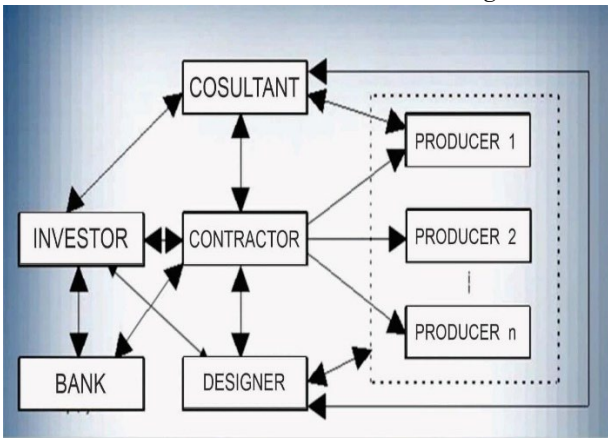
All the mentioned activities and procedures require, among other things, appropriate executors who, in the domain of their knowledge, skills, their field of activity and on the basis of the assumed powers, should carry out a series of tasks in the implementation of the investment project. In order for them to succeed in this and for the project to be effectively managed, it is necessary to have a feedback loop between all participants. Any improper communication or non-distribution of relevant data and information between project managers and physical workers in the field can lead to serious problems.

All participants in the implementation of investment projects are called stakeholders by the American organization PMI. It defines them as individuals or as organizations that are actively involved in the project and whose interests are connected with the realization of the project itself. They can have different influence on the outcome of the

investment project as well as different interests, regardless of whether they are indirectly or as a direct participant, i.e. parties interested in the project. Each of them contributes to the success of the project.

The main participants in each project are (picture 2):

- Investor and/or user,
- General contractor or contractor,
- Subcontractor, subcontractor,
- Consultant,
- Designer,
- Expert supervision and within it,
- Design supervision,
- Financial institutions and
- Influential organizations that are not direct participants in the implementation of the project, but can positively or negatively influence its course.



Picture 2: Participants in the investment project

The degree of engagement of each of the above participants is subject to change over time depending on their needs, their expertise and their interests. Also their responsibility and authority may vary during the life cycle of the project.

An investor is an organization, an individual or a company that has a need to build a building and has the necessary financial resources for its realization. As a legal or physical person who invests his own or borrowed funds in a business in the present expecting profit in the future, it is important for the investor to conclude an appropriate contract with all other participants in order to realize his goals. They require control over the quality, deadlines and price of the project and management of the work in each of the

phases of project implementation. For these reasons, a large number of investors cooperate with specialized consulting companies that perform an economic and financial assessment of the possibility of building a building or some other business activity, which

le taking into account various regulations.

Consultants primarily have an advisory role, but investors can authorize them to represent them in certain tasks. Consultants protect the interests of investors and the project itself. In addition to investors, contractors can also be hired in certain phases of project implementation, so there are often several consulting firms that, on the one hand, protect the interests of both within their contractual relationships, but certainly also the investment venture itself.

The types and scope of services provided by consultants are numerous. All are defined by the corresponding legal acts. In our country, it is the Law on Planning and Construction, carefully adapted to the needs of clients and bidders on the market.

Professional services of consultants are divided into five major categories:

- Advisory services - advice in management, production, supervision, quality control, in the area of representation before the competent authorities in case of disputes in order to present expert opinions and evidence and other advice;
- Pre-investment services, i.e. pre-investment studies that precede the decision on whether to proceed with the realization of the invest-

ment, where all relevant indicators important for the execution and justification of the project are considered through the main features of the specific project, the selection of the construction site, for example - depending on the investment undertaking word, and economic and financial analysis, as well as the calculation needed for project evaluation;

- Services of design and supervision of the investment undertaking, which include four stages:
 - A) Pre-project - in the framework of which works related to the justification study, topographical and other measurements and research are carried out, analysis of existing capacities is carried out, schemes are drawn up, etc.
 - B) Preliminary solutions, which include the assessment and definition of the customer's requirements, elaboration of the concept and examination and research of all other factors and conditions concerning the project;
 - C) The stage of making detailed solutions and drawings with the costs of the complete investment project;
 - D) Special services - those for which a special need arises. It is the supervision of an invest-

ment undertaking. When it comes to the construction of an object, supervision includes the services of consultants who always have a chief supervision engineer on the construction site. It's the resident engineer.

E) Project management on behalf of the investor is one of the most responsible roles that an investor can entrust to a consultant. Investors who are not professional and qualified or do not have the ability to monitor all investment and project activities and make decisions independently, can leave that work and entrust it to consultants.

The purpose of consulting companies and their professional services is to help the successful and profitable completion of an investment project.

The designer's role is to, at the request of the investor or consultant, consolidate all input data concerning the appearance, content, functioning of the project, technology and materials that are necessary for its realization, that is, the designer is responsible for the preparation and control of technical documentation. The designer must possess certain knowledge and skills and his engagement during the realization of the project is continuous. He plans to use all ava-

ilable techniques in order to make the realization of the investment venture successful.

In order to realize the investment, the investor can hire one or more contractors. In accordance with our national regulations, he performs tasks related to the realization of undertakings - eg. construction of an object.

The investor provides professional supervision during the implementation of the project. When it comes to larger, more complex and multi-year investment ventures, it is preferable to divide it into design and execution projects. Expert supervision includes control of project implementation, i.e. control of existing technical documentation, quality control of the performance of all types of activities, control of the application of regulations, standards and technical norms, verification of evidence of the quality of equipment and parts that are installed, etc. In addition to the participants within the project, important influence on the implementation of the investment project is also exerted by participants from the environment such as: state authorities that grant appropriate permits and consents, institutions that grant consent to project documentation, utility companies, banks and others.

Since the goal is to implement investment projects so that they are sufficiently financially profitable, the main issue is a realistic assessment of the available sources of funds for its financing. If the investor cannot independently provide financial resources in the necessary volume, a wide range of participants appears in the role of financier. The evaluation of the profitability of the project and the evaluation of the participants in the specific project is important from the aspect of providing additional sources of financing. In addition to banks - domestic and foreign, there are investment funds, international and local development financing banks, equipment manufacturers, contractors, buyers or users of the project, etc. When it comes to international financing, funds can be secured through numerous arrangements, that is, specific jobs.

Key interest groups, which directly influence the development of the project, are usually the following:

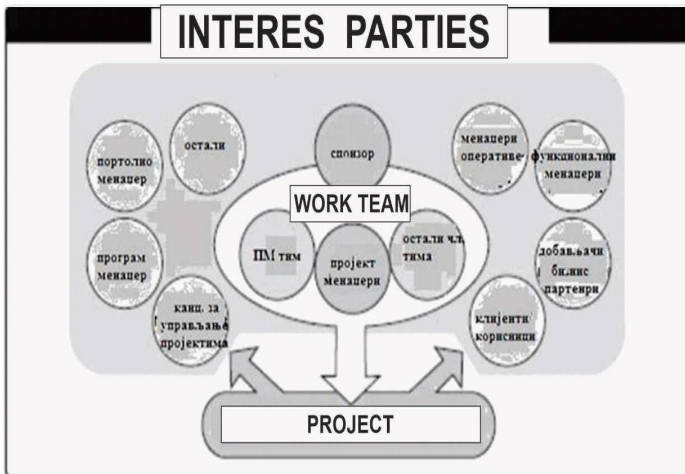
- Investor – a person or organization that provides financial resources, or a project sponsor. When it comes to the sponsor, he must ensure the proper use of the funds and resources allocated to the project, and ensure that the funds

and resources are aligned with the expected business goal.

- Project team: project manager, project management team and other members of the project team who work together with the aim of realizing project management activities - from budgeting, planning, reporting, control, communication, risk management, etc.

Groups whose influence on the investment project is smaller or indirect and who have an interest in the project are:

- Project users, i.e. customers,
- Vendors – external companies that provide the necessary components or services,
- Business partners - with whom the investor has special relations based on which a certain type of support is provided on the project,
- Functional managers,
- Program Manager,
- Project Management Office,
- Other groups (media houses, government agencies, individual citizens, lobby organizations, scientific research agencies and institutes).

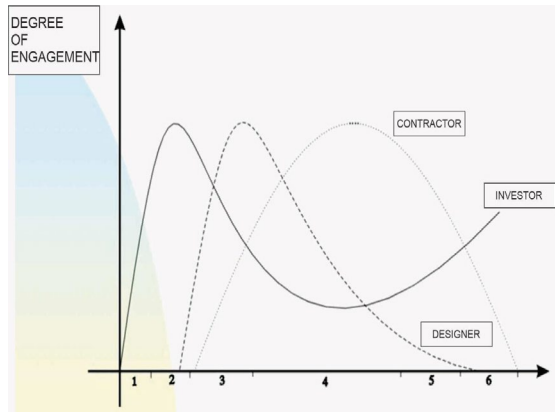


esented, that they be competent and that they function as one harmonized unit. As the project progresses, so does the degree of their engagement, which is common to all participants.

Picture 3. The most common interested groups and their relationship with the project

"The more complex the project, the greater the demands for more efficient joint work of highly educated experts from various fields - designers, engineers of various professions, economists, lawyers, etc."⁷

All participants in the implementation of investment projects are faced with the demands and needs of the market, for which reason they must consider the influence of various factors. In every investment venture, it is necessary that persons and organizations of all professions and specialties be repr-



Picture 4. The degree of involvement of the main participants in the project in relation to the phases of the life cycle of a complex investment project.

⁷ Oladapo M., (2001), A framework for cost management of low cost housing. Internatio-

nal Conference on Spatial Information for Sustainable Development, Nairobi, Kenya. 2-5 October 2001.

4. Time period from the creation of an investment project idea to its realisation - life cycle

Every project goes through a life cycle. "The life cycle of a project is the period of time from the creation of an idea about a project to its realization".⁸ It consists of a certain number of phases and activities, whereby the entire process of realization of a project is broken down into global and smaller parts, which makes it possible to find and determine the best opportunities for realization of the entire project management process. It starts when a certain need is noticed or when the market demands the initiation of an investment project. In the conception phase, possible solutions are considered, economic and technological studies of the feasibility of certain alternatives are carried out in order to make a decision on the best possible investment solution. This is followed by the preparation of project technical documentation, and on the basis of it, the procurement of the necessary services and equipment is contracted. The life of the investment project does not end with the com-

pletion of the investment and its handover to the user.

It continues through its purposeful use and investment maintenance during its lifetime, i.e. until its demolition or reconstruction, modification, replacement, depending on the type of investment project in question.⁹

Each project has its own life cycle composed of the following basic four phases:

- Project identification,
- Project preparation,
- Assessment and
- Monitoring and control of project implementation,

According to the type of work performed on the project, the following four phases are also distinguished:

- Conceptualizing the project - is the initial phase that represents the identification of needs and opportunities, determination of alternatives and definition of project organization, definition of scope, purpose, goals, resources, goods, time frames and project structures.
- Planning - is a phase that includes preparation of preparatory

⁸ Буричин, Д., (2003), Управљање помоћу пројеката. Београд

⁹ Петровић, Д., Михаић М., Жаркић-Јоксимовић Н., Јашко О., Орлић, Р., Богојевић-

Арсич В., Обрадовић, В., (2011), Менаџмент и организација, Београд: Факултет организационих наука

plans and sketches, detailed design and preparation of a complete plan that enables the completion of the project, which will be managed by the project manager throughout the entire duration of the project development, who will monitor and control time, costs and quality.

- Execution or performance is the phase that signifies the execution and coordination of all activities and resources in order for the project to be completed; During the project implementation phase, the project team produces the materials needed for the work, while the project manager monitors and controls the quality of the materials that are delivered to the company for the implementation of the project.
- The final or final phase - includes the final activities and tasks if the project goals are not achieved.

Conclusion

The investment process includes a set of all activities in the entire period of planning, preparation and realization of an investment project, that is, the entire process of realization, from the

creation of an investment idea to the final completion of the investment venture. It is a very complex process that includes a large number of subprocesses, phases and individual activities, the totality of which in efficient preparation and implementation leads to the realization of the original idea, that is, to the realization of the planned investment project.¹⁰ From the idea of building a large production facility, which represents one of the largest and largest investments (or from the idea of introducing new machines or new technology into production), to the normal exploitation of this facility, it is necessary to realistically plan and carry out a large number of activities. The spontaneous unfolding of this complex process, without direction and guidance, certainly cannot lead to positive final effects. Obviously, it is necessary to manage this complex process in order to realize it in the best possible way. So, the management of investments, that is, the entire investment process, is a necessity derived from the enormous complexity of this process and at the same time the first condition for its efficient development and final realization.¹¹

¹⁰ Дедовић Н., Дедовић А. (2015), Управљање инвестицијама, Висока економска школа струковних студија Пећ у Лепосавићу, Лепосавић

¹¹ Јовановић П., (2008), Управљање инвестицијама, Висока школа за пројектни

The characteristic of all serious projects, such as investment projects, is that before the start, experts of all professions must be engaged in order to make certain analyzes and create an investment study before the final decision is made. Participants of investment projects are the most important component because their interests are connected with realization of the project. Due to different interests, they have different influence on the outcome of the investment project. Since a large number of organizations participate in a complex investment venture, their correct identification is important. These are participants from different professions, profiles and knowledge.

Of all the participants, the investor is the most important and he bears the greatest consequences in case of failure. The goal of every investor is to carry out the activities according to the plan, in the given time and within the provided financial resources. As each of the participants has their own interests and engagement periods, they also develop their own project management methodology, which is necessary in order to carry out the assumed obligations and make optimal management decisions, of course with the aim of achieving the investor's goal

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within the planned budget, time and quality.

Given that an investment project, whether it is an industrial, traffic, agricultural or construction project, is a production process that as a rule, it involves a large number of participants and implies large investments, where the projected conditions are prone to change and that these are projects that carry increased risk, and there may be deviations from the predicted and achieved results, any omission can have serious consequences. For this reason, these projects require effective management. Any investment project that was completed on time, met the goals, satisfied the quality and was implemented within the budget will be successful.

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ZNAČAJ, SADRŽAJ I ŽIVOTNI CIKLUSI INVESTICIONI PROJEKATA U SAVREMENIM USLOVIMA

Nedeljka Dedović

Sažetak: Investiranje je veoma složen i kompleksan proces, koji obuhvata i niz potprocesa, faza i pojedinačnih aktivnosti. Sadrži dve veoma bitne i međusobno povezane dimenzije - vreme i neizvesnost. Vremenski period od pojave ideje o potrebi investiranja do realizacije investicije je najčešće veoma dug. Sledeći korak je priprema za realizaciju investicije, zatim sledi realizacija investicije i na kraju priprema proizvodnje. Posebna grupa koju čine investicioni projekti usmereni na izgradnju i opremanja objekata različitih namena, tema su ovog rada.

Ključne reči: Investicija, investiranje, rizici, projekat, investicioni projekat, životni ciklus.

UPUTSTVO AUTORIMA ZA PRIPREMU RADOVA

Redakcija časopisa "Ekonomski signali" ¹

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Rezime. Rezime treba da obuhvati sadržaj rada i da sadrži najmanje 70 i najviše 150 reči. Veličina fonta za rezime treba biti 10, ceo rezime treba biti uvučen 1 cm sa leve i desne strane margine. Takođe, potrebno je razdvojiti rezime sa 2 prazna reda (veličina 10) sa gornje i donje strane. Potrebno je, takođe, naslov, rezime i ključne reči prevesti na engleski jezik i poslati ga na kraju rada...

1. Uvod

Instrukcije i odgovarajući šablon MS Word dokumenta dati u ovom radu predstavljaju formu koju autori moraju poštovati prilikom pisanja radova za časopis Ekonomski signali. Radovi predati u tehnički neodgovarajućoj formi biće vraćeni na ispravku, ili odbijeni ukoliko izmene ne budu završene na vreme.

2. Priprema rada

Redakcija časopisa "Ekonomski signali" preporučuje da se koristi MS Word za pripremu radova, a zatim da se pošalje rezultujuća MS Word datoteka (file). Moguće je pisati rad i u LaTeX-u, pri čemu je, pored obaveznih LaTeX datoteka, neophodno poslati i PDF datoteku poslednje (odobrene) verzije rada. Mole se autori da se pridržavaju instrukcija i u ostalim stavkama, kako bi bilo moguće napraviti jedinstvenu formu za sve radove jednog broja.

Napomenimo da klasa/stil datoteka i šablon rada ne može biti promenjen. Zato je potrebno pridržavati se uputstva vezanog za format i veličinu fonta, sve u cilju da krajnji proizvod bude što je moguće više homogen.

2.1. Region za štampanje

Region za štampanje je 122 mm x 193 mm. Tekst treba biti poravnat sa obe strane kako bi se obezbedilo zauzimanje cele širine linije. Treba obezbediti da desna margina ne bude neravna, sa rečima koje su spojene crticom, kao što je uobičajeno.

2.2. Izgled, vrsta slova, veličina fonta i numerisanje

Koristiti font Century za sva formatiranja teksta. Koristiti veličinu 10 za ime (imena) autora i veličinu 9 za adresu (adrese) i rezime. Za glavni tekst koristiti veličinu fonta 10 i prored 1. Za naslove najvišeg nivoa (1., 2. itd.) koristiti veličinu 12, a za ostale nivoe koristiti veličinu 10. Italic stil može biti korišćen radi naglašavanja reči u tekstu. Podebljane i podvučene reči treba izbegavati. Sa ovim veličinama, prostor između linija trebao bi biti tako postavljen da na jednoj strani ima oko 45 linija punog teksta.

Naslovi. Naslovi treba da počinju velikim slovom i, sa izuzetkom naslova rada, trebaju biti poravnati sa leve strane. Veličine fonta date su u tabeli 1.

Leme, pretpostavke i teoreme. Brojevi koji se odnose na leme, pretpostavke, teoreme itd. treba da se pojavljuju u uzastopnom nizu, počev od broja 1, a ne, na primer, od broja 11.

Tabela 1. Veličine fonta za naslove. Naslovi tabela trebaju uvek biti pozicionirani iznad tabele. Poslednja rečenica naslova tabele treba biti završena bez tačke

Nivo naslova	Primer	Veličina fonta i stil
Naslov rada (centriran)	Predavanje o ...	16, podebljan
Naslov prvog nivoa	1 Uvod	12, podebljan
Naslov drugog nivoa	2.1 Region za štampan'e	10, podebljan
Naslov trećeg nivoa	Naslovi. Tekst koji sledi ...	10, podebljan
Naslov četvrtog nivoa	<i>Napomena.</i> Text koji sledi...	10, italic

2.3. Slike i fotografije

Autori se mole da svoje slike prave u elektronskom obliku, ukoliko je moguće, i integrišu ih u svoju tekstualnu datoteku. Ukoliko se koristi MS Word, potrebno je koristiti "In Line with Text" opciju za integrisanje slike sa tekstem.

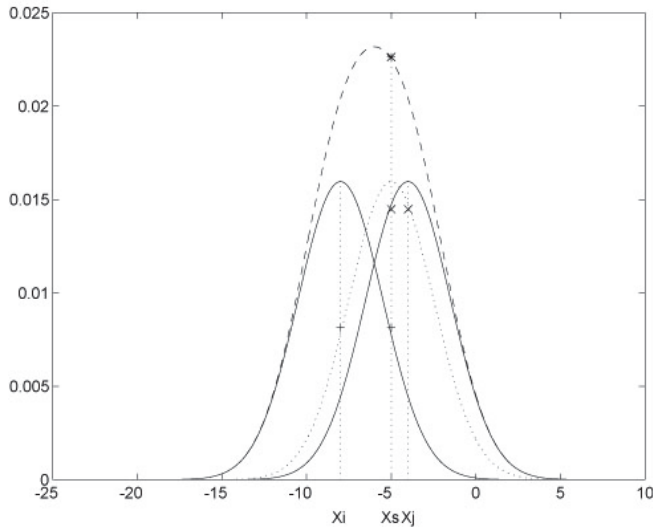
Treba proveriti da li su linije crteža prekinute, ili cele i da li imaju konstantnu širinu. Mreža i detalji unutar slike moraju biti jasno čitljivi. Linije crteža moraju imati rezoluciju najmanje 800 dpi (poželjno je 1200 dpi). Za digitalne crno-bele ilustracije (polutonove) 300 dpi je obično dovoljno. Natpis na slikama treba da ima širinu od 2 mm (veličina 10).

Slike treba da budu numerisane i da imaju naslov koji bi uvek trebao biti pozicioniran ispod slike, za razliku od naslova tabele, koji uvek treba da

bude iznad tabele. Poslednja rečenica naslova, bilo da se radi o slici, ili o tabeli ne treba da se završava tačkom. Potrebno je centrirati naslov slike između margina i koristiti veličinu fonta 9 (Slika 1. na primer). Prostor između teksta i slike treba biti oko 8 mm, a prostor između slike i naslova oko 5 mm.

Napomena 1. U štampanim brojevima, ilustracije su generalno crno-bele (polutonovi) i samo u izuzetnim slučajevima, ukoliko je autor spreman da pokrije dodatne troškove za reprodukciju slika u boji, mogu se prihvatiti slike u boji. Ukoliko su slike u boji neophodne, molimo vas da nam pošaljete odvojene datoteke u boji.

Napomena 2. Da biste obezbedili da reprodukcija vaših ilustracija bude prihvatljivog kvaliteta, savetujemo da izbegnete korišćenje senke. Kontrast treba biti što je moguće veći. Ovo se posebno odnosi na ekranske forme.



Slika 1. Ovo je prikaz slike koja se sastoji od različitih tipova linija. Elementi slike opisani u naslovu trebali bi biti napisani u *italic* stilu. Poslednja rečenica u naslovu slike treba, generalno, da se završava bez tačke

2.4. Formule

Prikazane jednačine ili formule su centrirane i stavljene u posebnu liniju (sa dodatnom linijom prostora iznad i ispod). Prikazani izrazi trebaju biti numerisani. Bro'evi trebaju biti uzastopni unutar svake sekcije, ili unutar priloga, sa bro'evima koji su zatvoreni zagradama i koji se nalaze na desnoj margini. Na primer:

$$x + y = z . \quad (1)$$

Molimo vas da punktirate prikazane jednačine kao i originalan tekst, ali sa malim razmakom pre interpunkcijskog znaka.

2.5. Programski kod

Programski listinzi, ili programske komande u tekstu se postavljaju u tekstu u fontovima Courier, ili Courier New.

Primer kompjuterskog programa Jensen K., Wirth N. (1991) Pascal user manual and report. Springer, New Mork

```
program Inflation (Output)
  {Assuming annual inflation rates of 7%, 8%, and
  10%, ... years};
  const MaxYears = 10;
  var Year: 0..MaxYears;
      Factor1, Factor2, Factor3: Real;
begin
  Year := 0;
  Factor1 := 1.0; Factor2 := 1.0; Factor3 := 1.0;
  WriteLn('Year 7% 8% 10%'); WriteLn;
  repeat
    Year := Year + 1;
    Factor1 := Factor1 * 1.07;
    Factor2 := Factor2 * 1.08;
    Factor3 := Factor3 * 1.10;
    WriteLn(Year:5,Factor1:7:3,Factor2:7:3,
      Factor3:7:3)
  until Year = MaxYears
end.
```

2.6. Endnote

Endnote treba smestiti na kraju rukopisa, ispred Referenaca.

Fusnote se ne prihvataju.

2.7. Citati

Prezime autora, godina publikovanja i strana izvora: na primer: (Wang, 1997, 144);

Direktno navođenje u tekstu, na primer: "Ako su ljudi zauzeti ceo dan ..." (Heleta, 2008, 110). Ili, na primer: Heleta (2008, 112) navodi "... kreativnost predstavlja pobedu navika sa originalnošću".

2.8. Numerisanje strana i zaglavlja

Rad ne treba da sadrži numerisane strane: njih će postaviti izdavač. Nije potrebno stavljati ni zaglavlja (Header and Footer).

2.9. Kvalitet štampe

Očekuje se da, pored elektronske verzije u MS Word, i PDF formatu, treba priložiti i štampanu verziju (jednostrano štampanu). Molimo vas da koristite štampače visoke rezolucije, preporučljivo je laserske štampače sa najmanje 300 dpi. Tekst treba biti poravnat sa obe strane. Format papira (A4, Letter) je irelevantan.

3. Lista za proveru

Prilikom slanja radova u redakciju, potrebno je proveriti da li sadrži sledeće:

- izvornu datoteku, npr. MS Word datoteku koje integriše tekst i slike;
- datoteku u PDF formatu;
- jednostranu štampanu verziju (ne fotokopiju) finalne verzije rada;
- datoteke sa stilovima, šablonima i specijalnim fontovima koji su, možda korišćeni;

Ukoliko postoji dodatni materijal, potrebno je poslati:

- kratak opis dodatnog materijala;
- datoteke sa slikama u boji u elektronskoj verziji

4. Reference

U tekstu:

- u slučaju jedne reference, izvor se navodi na sledeći način: (Keur, 2014, 423-425);
- u slučaju više referenaca, izvore treba poredati hronološki, na primer: (Heleta M., 2008, 120-121; Frain, B. 2014, 166)
- ukoliko je referenca publikacija zvanične organizacije navodi se skraćenica naziv (RZS, 2010, 22)

Kod referenci sa jednim ili dva autora, navode se prezimena autora, godina izdanja, i strana. Primer dva autora: (Talbot & McLean, 2014, 115)

Kod referenci sa tri ili više autora, navodi se prvi autor i nastavak "i dr.," (autori na engleskom nastavak "et al.,". Primer: (Trklja i dr., 2015, 125), odnosno (Keur et al., 2014, 89).

U listi referenaca na kraju rukopisa:

- treba navesti samo one izvore na koje se autori neposredno pozivaju i na njih upućuju u svom rukopisu;
- radovi se navode bez numerisanja, prema prezimenima autora, u abecednom redosledu;

- ukoliko više od 'edne reference ima isto autorstvo i datum - da bi se obezbedilo razlikovan'e referenaca - koristi se: a, b,... nakon datuma, na primer: Jackson, M. C. (2006a);
- ukoliko neka referenca posedu'e DOI bro', treba ga navesti na kra'u reference.
- u referencu publikacije zvanične organizaci'e doda'e se skraćenice iza naziva.

4.1. Knjiga sa jednim autorom:

Frain, B. (2014). *HTML5 i CSS3, Prilagodljiv web dizajn*, Beograd, Kompjuter biblioteka

Heleta M. (2008). *Menadžment kvaliteta*, Beograd, Univerzitet Singidunum

4.2. Knjiga sa dva autora:

Talbot, J. & McLean, J. (2014). *Programiranje Android aplikacija*, Beograd, CET

4.3. Knjiga sa više od dva autora:

Keur, C., Hillegass, A. & Conway, J. (2014). *Prgramiranje aplikacija za IOS*, Beograd, Mikro knjiga

4.4. Članak u časopisu:

Trkl'a R., Dašić B. & Trklja M. (2015). Budžet Republike Srbije - pregled prihoda i rashoda. Leposavić, *Ekonomski signali*, 10(2), str. 44.

4.5. Web site:

Krstanoski, N. (2015). Trunk with branches public transport scheduling under condition of uniform headway operation, *International Journal for Traffic and Transport Engineering*, 2015, 5(4): 400 - 405, Posećeno 01.06.2016, <http://ijtte.com/issues/64/>

4.6. Zvanična publikacija

Republički zavod za Statistiku (RZS). (2010). Klasifikacija delatnosti. Beograd, Republika Srbi'a: Republički zavod za Statistiku.

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EKONOMSKI signali / glavni i odgovorni urednik Boris
Siljković. — Vol. 1, br. 1 (mart 2006) - . - Leposavić: Visoka
ekonomska škola strukovnih studija Peć, 2006 -
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