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MODERN SLAVERY AS A GLOBAL PHENOMENON

Summary: *It is estimated that over 40 million men, women and children worldwide are in some form of slavery. Although formal slavery and forced labour have been abolished in all the world, there is no country in the world that doesn't have at least some form of modern slavery. Modern slavery has become a global phenomenon. Thus, the objective of this research is to investigate the relationship between economic inequality of countries, population and number of people in some form of modern slavery. This research starts with the assumptions that the number of people in some form of modern-day slavery is higher in the countries that, according to the methodology of the International Bank for Reconstruction and Development, belong to the group of countries with a lower income and in the countries with a larger population. Many scientific methods were used in various combinations to confirm the set hypotheses, of which the most important are the method of analysis and synthesis, method of induction and deduction, the method of descriptive statistics and the method of correlation analysis. The results of this research are based on secondary data sources.*

Key words: *modern slavery, economic inequality, population, income groups of countries*

JEL classification: *J46, K38*

INTRODUCTION

Most cited part of the *United States Declaration of Independence* (1776) and one of the most known lines in English, *We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness* – laid the foundations in fighting slavery. Greatly inspired by the United States Declaration of Independence, French Revolution (1789) and its postulates on the equality of all people, regardless of their race, gender or class, had a strong influence on the abolition of slavery. Two years later (1791) on the night between 22 and 23 August, the men and women that were brought from Africa were they had been working as slaves in what was at the time French colony of Haiti, started the first rebellion of slaves in modern times. To commemorate the event, the United Nations established the *International Day for the Remembrance of the Slave Trade and its Abolition*.

The suppression of slavery began in 1807 in the UK with the enactment of the law that made the slave trade illegal on both sides of the Atlantic (Van Der Liden 2011, 47). In 1820, the United States also passed a law making the slave trade punishable by death. In the British colonies slavery was abolished in 1833 at what time more than 750,000 slaves were freed (Musa, 2017: 92). The United States did so in 1865. Mauritania is the last country in the world that abolished slavery only in 1981. It is estimated that in Mauritania even today slaves represent 20% of the population.

Slavery (Herceg-Pakšić and Juric 2016, 285) was first defined by the 1926 *Slavery Convention* or the *Convention to Suppress the Slave Trade and Slavery* in art. 1 (1) as *the status or condition*

of a person over whom any or all of the powers attaching to the right of ownership are exercised.

European Convention on Human Rights expressly prohibits slavery and forced labour (art. 4). The ban is absolute. In principle, modern slavery refers to severe exploitation of people where a person does not have the ability to refuse or leave because of threats, violence, coercion, abuse of power and fraud. Modern slavery is big and lucrative business. This research will elaborate on the emerging forms of modern slavery and will examine the connection between economic inequality of countries as is measured by GDP/p.c., country population and estimated number of people who are in some form of modern slavery.

1. THEORETICAL FRAMEWORK AND CONCEPT OF RESEARCH

40.3 million men, women and children worldwide were estimated to be in some form of slavery in 2016. Three times more than the number of slaves enslaved and sold between the 15th and 19th century (cf. Table 1).

Table 1. Trans-Atlantic Slave Trade – estimates (Slave Voyages 2020)

Spain / Uruguay	Portugal / Brazil	Great Britain	Netherlands	U.S.A.	France	Denmark / Baltic	Totals	
1501-1525	6,363	7,000	0	0	0	0	0	13,363
1526-1550	25,375	25,387	0	0	0	0	0	50,762
1551-1575	28,167	31,089	1,685	0	0	66	0	61,007
1576-1600	60,056	90,715	237	1,365	0	0	0	152,373
1601-1625	83,496	267,519	0	1,829	0	0	0	352,844
1626-1650	44,313	201,609	33,695	31,729	824	1,827	1,053	315,050
1651-1675	12,601	244,793	122,367	100,526	0	7,125	653	488,065
1676-1700	5,860	297,272	272,200	85,847	3,327	29,484	25,685	719,675
1701-1725	0	474,447	410,597	73,816	3,277	120,939	5,833	1,088,909
1726-1750	0	536,696	554,042	83,095	34,004	259,095	4,793	1,471,725
1751-1775	4,239	528,693	832,047	132,330	84,580	325,918	17,508	1,925,315
1776-1800	6,415	673,167	748,612	40,773	67,443	433,061	39,199	2,008,670
1801-1825	168,087	1,160,601	283,959	2,669	109,545	135,815	16,316	1,876,992
1826-1850	400,728	1,299,969	0	357	1,850	68,074	0	1,770,978
1851-1875	215,824	9,309	0	0	476	0	0	225,609
Ukupno:	1,061,524	5,848,266	3,259,441	554,336	305,326	1,381,404	111,040	12,521,337

Contemporary 21st-century slave traders make 25 to 30 times more money than the 18th and 19th-century slave traders (Kelly, 2017). This is certainly one of the reasons why slavery, although in its altered form, is still present in modern times. Thus, we can state that for every 200 people in the world, one is in some form of modern slavery relationship. Out of the total number of people in modern slavery, 24.9 million are on forced labour, while 15.4 million are in forced marriage. Women and girls form a particularly vulnerable group that, estimated to number 28.7 million, represents 71% of the total number of people in modern slavery. Every fourth person in the world is a child. Modern slavery is most prevalent in Africa (7.6 people per thousand), followed by Asia Pacific (6.1 people per thousand) and Europe and Central Asia (3.9 people per thousand).

The concept of modern slavery (cf. Figure 1) includes: 1) forced labour, 2) human trafficking, and 3) slavery or slavery-like relationship.

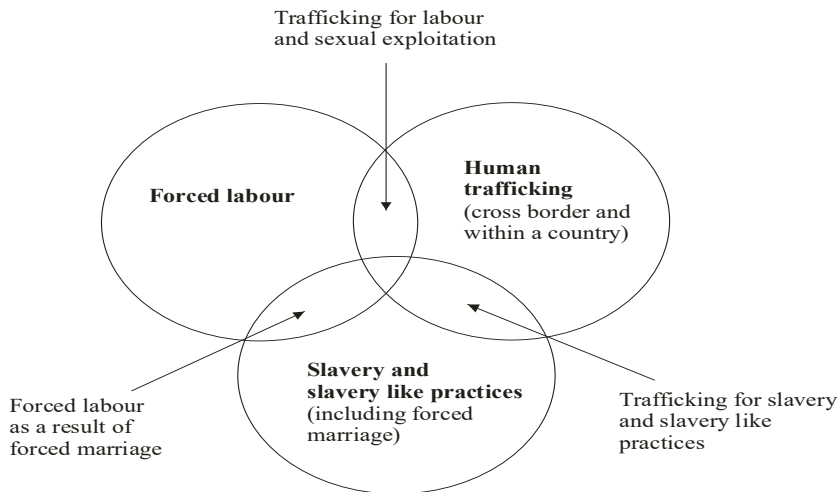


Figure 1. Forms of Modern slavery (Made by authors according to The Global Slavery Index 2018, Walk Free Foundation)

In relation to forced labour (Duvnjak 2009; Duvnjak 2018; Pupavac and Budić and Marinac 2019; Pupavac and Maršanić and Krpan 2019; Pupavac 2015; Pupavac 2015; Rafajac and Pupavac 2017; Vukmirović and Pupavac and Šehanović 2016; Duvnjak 2018), it is most common in countries of Asia and the Pacific (4 people per thousand), Europe and Central Asia (3.6 people per thousand), Africa (2.8 people per thousand), and Arab countries (2.2 people per thousand) and America (1.3 people per thousand). It is estimated that out of the total number of people in forced labour, 16 million are employed in the private economic sector, 4.8 million in the sex industry and 4.1 million in the public sector. Typical businesses where slavery relationships are forming involve various agricultural activities, production of bricks and coal, textile manufacturing, household chores, deforestation and so on.

According to some estimates (Bales, 2017) 15% of all illegal profits are related to forced labour. Forced marriage is most prevalent in Africa (Sarich, Olivier, Bales, 2016). More than 70% of the 4.8 million people in the sex industry are victims of sexual exploitation in the region of Asia-Pacific.

Countries with the highest number of victims of forced slavery are the following (cf. Figure 2).

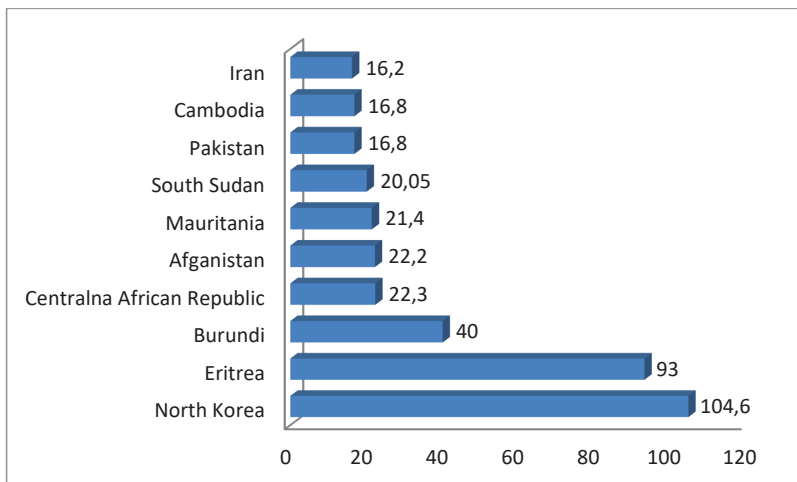


Figure 2. Number of victims of forced slavery per 1.000 inhabitants (Made by authors according to Global Slavery Index)

It can be concluded from Figure 2 that the number of victims of modern slavery per thousand inhabitants is the highest in economically underdeveloped countries.

According to some estimates, modern slavery annually generates more than 150 billion dollars in profit each year, with a third is realized in the developed countries of the world, including the European Union (cf. Figure 3).

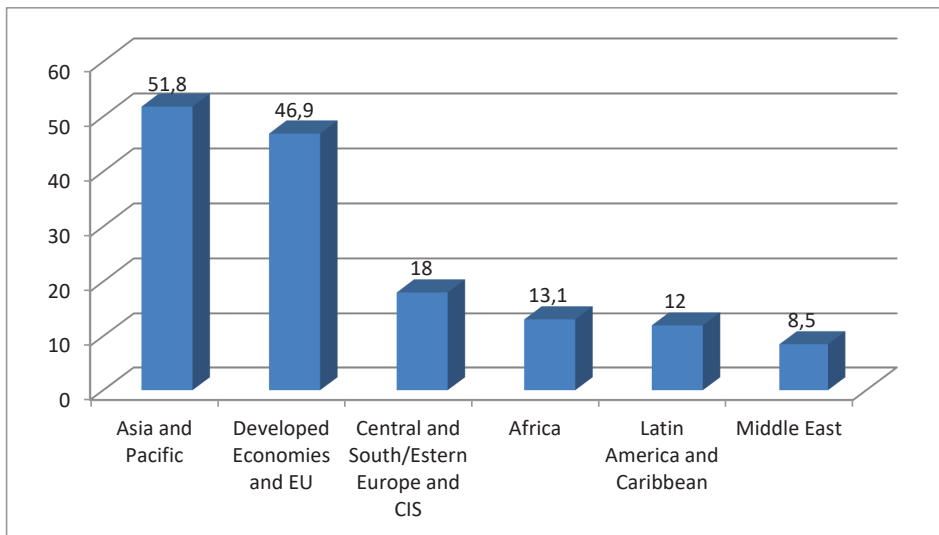


Figure 3. Annual profits of forced labour per region (USD \$ billion) (ILO 2014, 14)

Kara (2009) estimates that 50% of the total illegal profit of modern slavery comes from the sex trade. The average profit per person for their exploiters is about \$ 4,000. But as the sex industry is the most profitable, the average profit per person in sexual exploitation slavery is estimated to range from \$ 35,000 to \$ 80,000 (Baker, 2018). The average annual profit per person in forced labour is highest in developed economies (cf. Figure 4).

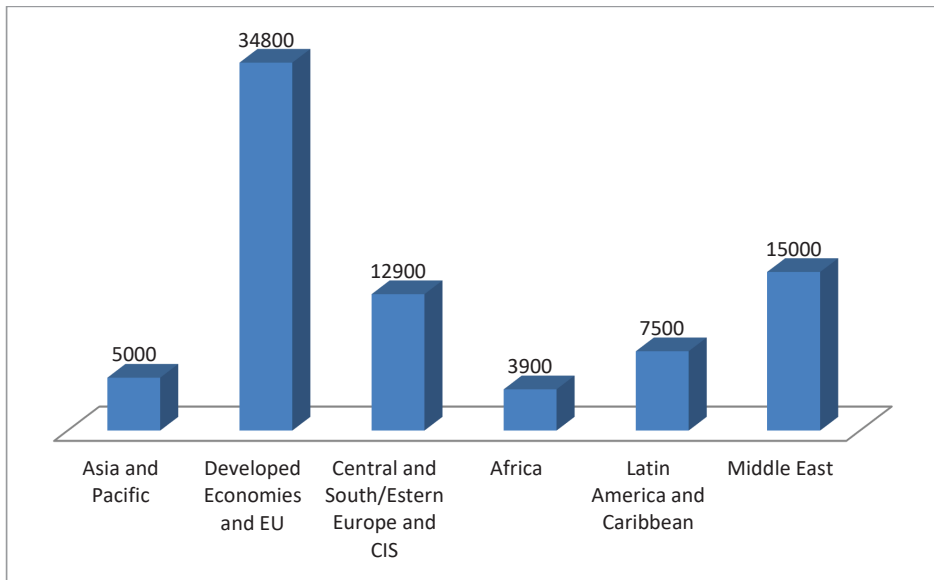


Figure 4. Annual profit per victim of forced labour per region (USD \$) (ILO 2014, 14)

It is important to point out how the estimations regarding the number of people in modern-day slavery are also being affected by the country population size. Thus, for instance, some of the most populated countries in the world are at the same time also the countries with the largest number of people in some form of modern slavery (cf. Table 2).

Table 2. Ten leading countries in the number of people in some form of modern slavery in the world, 2018 (Statista 2020)

Country	Number of persons in some form of modern slavery
India	7989000
China	3864000
Pakistan	3186000
North Korea	2640000
Nigeria	1386000
Iran	1289000
Indonesia	1220000
Democratic Republic of the Congo	1045000
Russia	794000
Philippines	784000

About 60% of people in some form of modern slavery are in these 10 countries where, at the same time, more than half of the world's population lives.

A conceptual research model was founded on grounds of the available literature (cf. Figure 5).

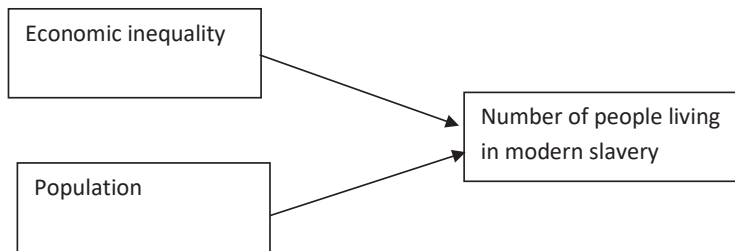


Figure 5. Conceptual model of research of modern slavery in the world
(Authors)

It defines the number of people living in modern slavery in different countries of the world. The number of people living in some form of modern slavery in a country is determined by economic inequality measured by GDP/p.c. and its population. Therefore, the following hypotheses were set:

H1: Countries with a lower GDP/p.c. have a larger part of the population affected by modern slavery.

H2: Countries with a larger population have a higher number of people who are in some form of modern slavery.

2. RESEARCH METHODOLOGY

For research purposes, data were collected from secondary data sources, as follows: 1) *International Monetary Fund* data on gross domestic product per capita (also GDP/p.c.) for 2018 and 2) *Walk Free* foundation data on *Global Slavery Index*, population and number of people in some form of modern slavery in the 2018 report. The data collected were analyzed using the statistical data processing software *Statistica*. The analysis included 149 countries of the world that were with accessible data on GDP/p.c. and the *Global Slavery Index*.

Among the methods applied in this research were the method of analysis and synthesis, method of induction and deduction, descriptive statistics method and the statistical method of correlation analysis. Method of descriptive statistics will be used in the analysis of GDP/p.c. and the *Global Slavery Index* at the global level. The method of correlation analysis will determine the type and strength of the statistical relationship first between economic inequality, measured by GDP/p.c., population and number of people in some form of modern slavery globally, and then between GDP/p.c., population and number of people in some form of modern-day slavery in low-income countries, lower-middle-income countries, high-middle-income countries and high-income countries.

3. RESEARCH RESULTS AND DISCUSSION

A brief descriptive analysis of GDP/p.c., population (POP) and the estimated number of modern slavery victims (ENV) was based on the data collected for 149 countries of the world (cf. Table 3).

Table 3. Descriptive statistics of GDP/p.c., population and number of modern slavery victims (N = 149) (Authors)

	GDP/p.c.	POP	ENV
Mean case 149	13968,2695	47974255	250825,503
Median case 149	5032,9	10725000	44000
Standard deviation	18979,9499	160374362	811200,51
Sum case 149	2081272,16	7148164000	37373000
Min case 149	305,5	330000	1000
Max case 149	101376,5	1397029000	7989000
25th case 149	1337,8	4874000	15000
75th case 149	17715,6	31557000	137000

37 373 000 that is, 93% of the total estimated number of victims from modern slavery were incorporated in the analysis of these 149 countries. A wide range in variations is evident from Table 3 for all three variables. For instance, the minimum ENV is 1 000, while the maximum ENV goes up to 7 989 000. The minimum value being 1 000, one can conclude that there is not one country, out of all 149 countries been analyzed with no victims of modern slavery. The lowest number of modern slavery victims is present in the European countries of Luxembourg and Iceland (1 000), and the highest is in India (7 989 000). The calculated coefficient of quartile deviation is 0.80 and states a high degree of dispersion. The first quarter (quartile) is comprised of countries that are estimated to be with less than 15 000 victims of modern slavery, while the last quarter (quartile) is comprised of countries estimated with more than 137 000 modern slavery victims. In the remaining 50% of countries, the number of victims is in between and ranges from 15 000 to 137 000. The calculated median value ($M = 44\ 000$) indicates that in the first half of countries ENV is less than 44 000 and in the second greater than 44 000. Variables to have a large degree of variability can also be concluded by their value of standard deviation, as being high and thus, stating that the variable has large deviations from its arithmetic mean. For example, the average deviation of ENV is $SD = 811\ 200$ or 323% (coefficient of variation). Following below is the correlation analysis between economic inequality measured by GDP/p.c., population (POP) and ENV in some form of modern slavery (cf. Table 4).

Table 4. Correlation analysis results between GDP/p.c., population and estimated number of modern slavery victims (N = 149) (Authors)

Correlations (Modern_Slavery) Marked correlations are significant at $p < ,05000$ N=149 (Casewise deletion of missing data)					
	Mean	Std.Dev.	GDP/p.c.	POP	ENV
GDP/p.c.	13968	18980	1,000000	-0,056821	-0,147314
POP	47974255	160374362	-0,056821	1,000000	0,853982
ENV	250826	811201	-0,147314	0,853982	1,000000

The results of the correlation analysis in Table 4 demonstrate the correlation between population and ENV to be strong ($r = -0.85$; $p < 0.05$), and correlation between GDP/p.c. and ENV to be weak ($r = -0.14$; $p < 0.05$).

Correlation analysis has confirmed Hypothesis 2, therefore, it can reliably be stated that the number of victims of modern slavery depends on the population of a given country. In terms of Hypothesis 1, correlation analysis showed there is a weak correlation between economic inequality measured by GDP/p.c. and ENV and so Hypothesis 1 could not be accepted.

Hypothesis 1 hasn't been confirmed by the correlation analysis and so, to claim that increasing GDP/p.c. the number of victims of modern slavery will statistically significantly be reduced, isn't reliable.

However, coefficient of correlation being of a negative sign gives grounds to research further the strength of correlation between these variables, but for differently economically developed countries, and their place in different income groups according to the methodology of the *International Bank for Reconstruction and Development*: 26 low-income countries, 37 countries with lower-middle-income levels, 38 high-middle income countries and 47 high-income countries (cf. Table 5).

Table 5. Results of correlation analysis between GDP/p.c. and the number of victims of modern slavery for different income groups of countries(Authors)

Country classification	GDP/p.c.-average	ENV-average	Correlation	p
Low-income economies (1025\$ or less)	674,44	279 889	R = 0,24	p < 0,05
Lower-middle income economies (1026 to 3995)	2273,64	496 730	R = -0,14	p < 0,05
Upper-middle-income economies (3996 to 12373)	7391,92	249 421	R = 0,06	p < 0,05
High-income economies (12 376 or more)	36128,60	41 681	R= 0,02	p < 0,05

According to the correlation analysis results set in Table 5, the negative correlation between GDP/p.c. and the number of victims of modern slavery is present only in the lower-middle-income group of countries ($r = -0.14$; $p < 0.05$). That group simultaneously is also the one with the highest average number of victims of modern slavery. The absence of any connection between GDP/p.c. and the number of modern slavery victims can be stated for 38 higher-middle income and 47 high-income group of countries. High-income group of countries are the group with the lowest average number of modern slavery victims (41 681). However, 1 959 000 victims of modern slavery are estimated to be present in high-income countries, with additional 9 478 000 victims estimated to be in the higher-middle income countries, together makes 30.60% of the total number of victims of modern slavery living in the economically developed world. Low-income group of countries are with the largest (although weak and positive) correlation between GDP/p.c. and the number of victims of modern slavery. This instance could be interpreted as wiliness of people in low-income countries to subject others from their country to the same modern slavery they've endured once they "pay off their debt" and significantly increase their own income.

Correlation between the population and ENV in different income groups of countries, is in all income groups positive, while it is the lowest in the low-income group of countries ($r = -0.27$; $p < 0.05$). In the group of countries with lower-middle level of income ($r = -0.96$; $p < 0.05$), then with higher-middle level of income ($r = -0.95$; $p < 0.05$) and a high level of income ($r = -$

0.89; $p < 0.05$) group of countries, correlation between the population and ENV is very strong and positive.

According to some estimates, the abolition of modern-day slavery would take two decades and require the amount of about 23 billion dollars (Bales, 2017). From the very beginning until today, Great Britain has been among countries whose governments are making significant efforts in the suppression of slavery (cf. Table 6).

Table 6. Overview of countries whose governments are doing the most/least in fighting modern slavery, 2018. (The Global Slavery Index 2018, 41)

Ordinal number	Most action	Least action
1.	The Netherlands	North Korea
2.	United States	Libya
3.	United Kingdom	Eritrea
4.	Sweden	The central African Republic
5.	Belgium	Iran
6.	Croatia	Equatorial Guinea
7.	Spain	Burundi
8.	Norway	Congo
9.	Portugal	Sudan
10.	Montenegro	Mauritania

According to the *Global Slavery Index* for 2018, 6.9 million people estimated to be in some form of modern slavery are from the top ten countries whose governments are the least invested in fighting modern slavery. Table 6 data points to the low engagement of governments in taking measures to prevent modern slavery as one of the main factors for the modern slavery.

CONCLUSION

Modern slavery is a global phenomenon. The main forms of modern slavery are forced labour, human trafficking and slavery or slavery-like relations. The number of victims of modern slavery is increasing more and more. There are many reasons for this phenomenon, like excessive exploitation of natural resources in poor countries, large global migration flows, the development of communication technologies, low transportation costs, low risks involved, relatively low cost of modern slaves and the fact that it is an extremely lucrative business. Women and young girls are common victims of modern slavery. Despite the fact that economically underdeveloped countries lead in the number of victims of modern slavery per thousand inhabitants, the relationship between economic inequality measured by GDP/p.c. and the estimated number of victims of modern slavery cannot be fully confirmed. The correlation between GDP/p.c. and the estimated number of victims of modern slavery was researched further within different income groups of countries. However, it also has not confirmed Hypothesis 1. Accordingly, Hypothesis 1 which suggests that countries with higher levels of GDP/p.c. have a smaller number of victims affected by modern slavery is rejected. Hypothesis 2, which suggests that the number of victims of modern slavery directly and significantly depends on the population, can with high confidence be accepted. In the next few decades modern slavery could be abolished but only with a strong political and global will. The future research should place focus on the relationship between poverty and the number of victims of modern slavery.

REFERENCES

1. Baker, Aryn. 2018. "An Ancient Curse Kept Nigerian Women Bound to Sex Slavery. Now, It's Been Reversed." *TIME*. Accessed April, 2. 2020. <https://time.com/longform/juju-curse-nigeria-sex-slavery-europe/>
2. Bales, Kevin. 2017. "Unlocking the Statistics of Slavery Chance". *Journal of the American Statistical Association*. 305-12.(3): 5-12.
3. Duvnjak, Valentina. 2009. „Značaj socijalne politike u BiH za smanjenje siromaštva“. Rad prezentovan na Međunarodnom naučnom skupu Društvena kriza i prevazilaženje siromaštva u Republici Srpskoj i Bosni i Hercegovini, Defendologija Centar za bezbjednosna, sociološka i kriminološka istraživanja, Zbornik radova, Banja Luka, BiH, 413-431.
4. Duvnjak, Valentina. 2018. "The effects of reducing the costs if living adjustments and a salary increase to improve consumption". *Business studies*. 10(19-20):25-37.
5. Duvnjak, Valentina. 2018. "Coping with Business Crisis in the EU Periphery: A Case of Bosnia and Herzegovina". *Journal of Balkan and Near Eastern Studies*. 20(2):196-210.
6. European Court of Human Right. 2013. *European Convention on Human Rights*. Council of Europe F-67075 Strasbourg cedex. Accessed April, 2. 2020. https://www.echr.coe.int/Documents/Convention_ENG.pdf
7. Herceg Pakšić, Barbara i Jukić, Miroslav. 2016. Primjena konvencijskog prava u području zabrane ropstva i prisilnog rada: Europski standardi i hrvatska postignuća. *Hrvatski ljetopis za kaznene znanosti i praksu*. 23 (2):281-310. Accessed January 5. 2020. <https://hrcak.srce.hr/177432>.
8. Hodal, Kate. 2019. "One in 200 people is a Slave. Why?" *The Guardian, International edition*. Accessed January 5. 2020. <https://www.theguardian.com/news/2019/feb/25/modern-slavery-trafficking-persons-one-in-200>.
9. International Labour Organization. 2014. "Profits and Poverty: The economics of forced labour". Geneva.
10. International Labour Organization. 1926. "Slavery Convention". Accessed January 5. 2020. [ilo_1926_slavery_convention_en.pdf](https://ec.europa.eu/anti-trafficking/ilo_1926_slavery_convention_en.pdf), <https://ec.europa.eu/anti-trafficking>.
11. International Labour Office. 2017. "Global estimates of modern slavery: Forced labour and forced marriage". Accessed January 5. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_575479.pdf.
12. Kara, Siddharth. 2009. *Sex Trafficking: Inside the Business of Modern Slavery*. New York: Columbia University Press.
13. Kara, Siddharth. 2017. *Modern Slavery – A Global Perspective*. New York: Columbia University Press.
14. Kelly, Annie. 2017. "Modern-day slavery in focus: 'Human life is more expendable': why slavery has never made more money". *The Guardian*. Accessed January 5, 2020. <https://www.theguardian.com/global-development/2017/jul/31/human-life-is-more-expendable-why-slavery-has-never-made-more-money>.
15. Musa, Irena. 2017. „Trgovina ljudima – ropstvo 21. Stoljeća“. *Hum*. 12 (17-18): 88-112. Accessed January 5, 2020. <https://hrcak.srce.hr/200585>
16. National Archives. 2020. "Declaration of Independence": Accessed January 5, 2020. <https://www.archives.gov/founding-docs/declaration-transcript>.
17. Pupavac, Drago and Budić, Hrvoje and Marinac, Antun. 2019. „Achieving dynamic stability of organization in knowledge economy“. *Journal of Sustainable Development*. 9(23): 57-71.

18. Pupavac, Drago and Maršanić, Robert and Krpan, Ljudevit. 2019. "Elasticity of Demand in Urban Traffic Case Study: City of Rijeka"*Periodica Polytechnica Transportation Engineering*. 48(13): 7. doi:10.3311/PPtr.11750.
19. Pupavac, Drago. 2015. „Održivi razvoj - novo lice ekonomije“. *Socijalna ekologija*. 24(2-3) 103-123. doi:10.17234/SocEkol.24.2.2.
20. Pupavac, Drago. 2015.“The ghost of herzberg motivational theory: motivators and demotivators.“ *International journal Vallis Aurea*. 1: 15-25. doi:10.2507.IJVA.1.1.2.2
21. Rafajac, Ozren i Pupavac, Drago. 2017. „, Organizacijska inteligencija u Republici Hrvatskoj“. *Ekonomski pregled : mjesečnik Hrvatskog društva ekonomista Zagreb*. 68 (1): 88-106.
22. Sarich, Jody and Olivier, Michele and Bales, Kevin. 2016. Forced Marriage, Slavery, and Plural Legal Systems: An African Example“. *Human Rights Quarterly*. 48(2): 450-476.
23. Van Der Linden, Marcel. 2011. Appendix: An Act For The Abolition Of The Slave Trade 47° Georgii III, Session 1, Cap. XXXVI, in *Humanitarian Intervention and Changing Labor Relations*. Netherlands:Brill.
24. Vukmirović, Slavomir and Pupavac, Drago and Šehanović, Jusuf. 2016. "Modeling and Visualization of Quadratic Assignment Problems on the Example of Plant Location“. *Montenegrin journal of economics*. 12(4): 29-39.
25. Walk Free Foundation. 2018. "The Global Slavery Indeks“. Accessed January 5, 2020. <https://www.globalslaveryindex.org/>

Statistical databases

1. <http://statisticstimes.com/economy/countries-by-gdp-capita-ppp.php>)
2. <https://www.slavevoyages.org/assessment/estimates>
3. <https://www.statista.com/statistics/301095/global-slavery-index/>