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CONTENT

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WHY DO WE DEAL WITH THE ECONOMICS OF INNOVATION IN SUCH AN UNCERTAIN PERIOD AT THE GLOBAL LEVEL?

Prof dr Petar Đukić
Editor-in-Chief of Economics, Innovative and Economics Research Journal

Editorial

INCEPTION

The world today is burdened with a number of war zones, threats of war, and partially with cold war, as well. Paris Climate Agreement (after the USA quit it), as well as the European Union (after Brexit), could also be quit by other participants or members. Hence, where does the motivation to deal with new economy based on innovations and knowledge come from?

DEPICTION OF GLOBAL ECONOMY

Bearing in mind the complexness of the moment, it may be the best to start from the fact that global economy is currently growing at the rate of (3.7%), which is slightly higher compared to expectations declared six months ago. Projections for upcoming years are cautiously optimistic. Intending to implement the idea of organising a conference on the following topic "New Economy 2018 – Innovations, Reforms and Modern Business", which will be held here in Bijeljina, in the heart of West Balkan, on 24-th of May 2018, at this uncertain and unfavourable moment internationally; we started from the approach that a hope for renewal of cooperative international political scene should always exist and be maintained, in order to encourage innovative technological and economic collaboration worldwide.
This should make room for social synergy which would then lead to a number of particular actions to be taken in order to create conditions for comprehensive and inclusive growth as long-term and fundamental betterment for a large part of the planet. It is much more difficult to propose particular actions for making one incentive ambient for the competition of innovations, as oppose to the competition of strategies of geo-political and military impact and domination.
Still, the will for that should never be lost. Any desire for improving the situation is at the same time encouragement for innovations. They are an endless resource of growth and development, as well as of international long-term collaboration. The works published in this Issue have been intended for the international conference. Furthermore, some of the participants from distant countries will contribute to this through Skype, one of the paradigm innovations, which has rapidly become common technology and global public good. However, in this case, the most important issue is to present a topic which is inspiring enough for such broad participation.

INNOVATION CONTROVERSIES OF THE WORLD TODAY

Innovative economy simply appears as a flawless concept, as well as a solution without precedent in the world today. However, it is not exactly the case. Anything occurring at the global scene, which is relevant to reconfiguration of global power, by its definition interferes with interests of people, relative status of families, social classes, nations and regions. Therefore, a number of controversies and reluctance appear as a rule. Global innovative economy nowadays has been facing some serious challenges, as follows:

1. Institutions and innovations. Innovation can be of a spontaneous nature, but current global experience has shown that institutionalisation of an innovative process simply implies. Moreover, without firm and stable institutions, an innovation frequently shows and then disappears before long. Ownership rights, protection of intellectual property, the right to a patent, etc., are all epochal achievements of the civilisation, which could easily collapse if the Law is not obeyed and if informal, customary or extractive institutions over rule, since they exhaust economic effects and aggregate the benefit from institutions inappropriately;
2. Risks to innovations and necessity of adjustment. Many innovations appear rather frequently, but they cannot be controlled in the same manner as it was the case in the past. Therefore, an institutional network is to be built to facilitate adjustment to innovations, especially of participants in labour market, as well as of many professions, businesses and work methods which undergo relevant and essential changes. Another significant risk to innovations is potential technology manipulation, along with a misuse of the power of technology in a number of fields. This is not about cybercrime only, but about risks to the environment and biodiversity as well, or to human health and safety (GMO);
3. Inequality. Innovations accelerate social differentiation and increase inequality. This issue is to be dealt with by future economy and society worldwide, as well as by processes included in innovative economy. The world today is more strictly divided into the 1% of the powerful and 99% of powerless ones, which has been proven in studies made by researchers of inequality, out of that two Nobel Prize laureates (Stiglitz - the USA, and Piketty - France) and equally good Serbian researcher of global inequalities Branko Milanović of the World Bank. Control of inequality and risks pertaining to above mentioned ratio, will be one of key challenges of new economy and even of the innovation policies.
4. Incentives to innovations - innovation bureaucracy. What is the benefit of introducing economic policies in the innovation sector? Does the policy of allocating incentives to the rapidly growing IT sector create the effect of unnecessary feeding someone who is already full? What will happen to differences between the most advance sector and the other ones which are less innovative-intensive? Could innovations be influenced by bad, extractive institutions (Robbins, Acemoglu) in addition to good (inclusive) ones? These questions require socially responsible and professionally founded responses.
5. Social and political contents of innovations. In addition to technical innovations, pure economic, market, organisational (entrepreneur), specific social and cultural innovations are present as well, and they are not to be neglected. What is their long-term social impact; to what extent do positive externalities of innovations overlap; and who is responsible for negative externalities? What are intergeneration and moral consequences of innovations; what is their ideological impact on political values and objectives?
There is no much speculation there on in the theory or practice of innovation. The responses will probably be found spontaneously through practice. But is this sufficient?

INNOVATION POLICIES: INCENTIVES, CONTROL AND CAUTION

People should not be indifferent to ever-growing waves of potential innovations or to new economy in general. As a matter of fact, fascism emerged from a number of social innovations which were used by extreme ideologists and leaders to have attracted followers through very pragmatic measures. They were to a large extent similar to acceptable social innovations such as: social care, public work, solidarity, collective assistance and self-help. IT viruses and cybercrime, which are present today, had emerged spontaneously as an innovation and so called “business”, but they have “exploded” as a technology risk number one of the modern world.

One social fact should be doubtless: innovations are an integral part of the dynamic economic reality, and there are no structural changes or encouraging technological advancement without them. Most of the world’s nations currently need a more dynamic growth above all, to contribute to social betterment, with elements of humane and inclusive development. Cardinal structural changes arising from new technological solutions, innovations and new economy contribute to this growth to the largest extent.

However, this does not mean that a spontaneous development without social, environmental or moral control of technology advancement is what we need as a whole. Besides, scientific research and innovations offered in medical science, including genetic engineering, manipulation with genome or potential cloning of human and other structures are very disputable morally and hard to be accepted from social point of view.

Inclusiveness in development is frequently defined as the potential of growth, which provides for a permanent decrease of poverty, controls social and environmental balance; saves resources and energy, contributes to employment and minimises inequality, causes a positive effect to climate changes, and makes the society more humane. All of these are very difficult to achieve at the same time, but they are worth trying. A policy which would strategically shape new innovative economy moving towards humane, socially balanced and environmentally sustainable development, requires permanent reconsideration and redefining, for the very purpose of continuity of useful and good innovations.

Innovation must be and should remain the means of achieving an objective and an initiator of cardinal social changes, but only if it is under the institutional, legal and democratic control of the society, i.e. its existing and future social consequences should be put under control.

CAN BUSINESS EXIST WITHOUT INNOVATIONS AND REFORMS?

It certainly can. Only, there is the issue of the level of development and social-economic progress which can be achieved thanks to innovations. However, the most important part of the response to the question asked in the heading depends on objectives and orientation of the society and economy, including macro-economic goals, regional or developmental ones, as well as micro-economic goals which consider more deeply the meaning of categories such as the following: reforms, entrepreneurship and technological changes.

Economies today mainly do not function as aggregate of activities performed by all of the economic subjects, traditionally taken as enterprises and households. Interconnection at the horizontal, vertical, geo-strategic or global levels is the inevitability which new technologies bring. This does not mean that there are no more small, traditional or single economic entities. Even if they do exist, they are at the margins of the new economics structure worldwide, known as new economy. This is good news for small companies and small nations. A number of local communities within underdeveloped societies, even with medium and lower income, have shown a high level of capacities for innovations and use thereof, based on both high and medium-level technologies. Key contribution to development of new economy based on knowledge and innovations can be expected from those small and medium economies. The world as a whole is expected to make more room for innovations which lead to humane and inclusive development, protection of people and nature, and less for any form of destruction.

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INNOVATIVE APPROACH TO MEASURING THE IMPACT OF FDI ON SOME MACROECONOMIC INDICATORS IN B&H

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SUMMARY

The necessity of economic life and economic development of every economy is the free movement of capital. The international movement of capital has its balance of payment when capital export represents economic surplus in relation to consumption of the national economy and the import of capital represents an increase of consumption in regard to the output of a national economy. Analysis of the influence of foreign direct investment (FDI) on economic growth of the host country, among other things, is emphasized in the function of the achieved phase of its economic development. Taking all this into consideration, the aim of this paper refers to an attempt to indicate the significance and the role of FDI as well as the importance of attracting foreign direct investment in B&H and the determination of the effects of FDI on the economy of B&H. In this regard, we will try to determine the level of FDI's impact on some macroeconomic indicators in B&H (GDP, import, export, unemployment) by using contemporary SPSS statistical analysis program (model) and applying the methods (calculating coefficients) of correlation and regression analysis. In other words, we will determine the analytical expression used to describe a statistical relationship of these macroeconomic categories.

Key words: FDI, macroeconomic indicators, regression and correlation, Bosnia and Herzegovina

INTRODUCTION

Foreign direct investment (FDI) is the form of international capital flow influencing economic growth of a country and is considered to be an important source of capital whose effects depend on the form and location of investments. Strictly speaking, foreign direct investment implies investment in order to derive profits arising from activities in other countries. The most significant motif of FDI's placement is the profit (expected, long-term capital gain) which is not isolated. It is a complex investor's behavior based on the analysis of the set of parameters in business policy in order to achieve the highest return on investment. In doing so, investors take into account the overall business strategy. It means that, if necessary, they will consciously operate at loss in favor of total profit to ensure the prospects for a long-term increase in profit and the overall prosperity of the company.

TERM AND MOTIVES OF FOREIGN INVESTMENT

The realization of foreign investment implies the import of foreign accumulation, which creates the possibility for investments to be higher than domestic accumulations and that increases the rate of economic growth. Reflections of an increased rate of economic growth are visible in a more complete and efficient use of domestic resources. Foreign capital hires domestic labor, that is, it reduces unemployment which is one of the biggest problems in transition countries, including B&H. FDI has an important impact on economic growth and development of transition countries. Previous experiences show that foreign investment has had a significant role in structural changes of production and import in the countries benefiting from these funds. For countries that have difficult access to the international capital market, FDI represents a ''vent" for using foreign assets. Investigated from the temporal perspective, FDI falls into the long-term flow of capital. According to the economic criterion, i.e. long-term movement of capital is realized within the framework of the loan and capital investment. The aims of international movements of long-term capital are determined by the possibilities and needs of investment on an international scale as well as economic and political relations in the world. International capital movement is manifested in two forms. These forms are: 1) portfolio investment and 2) direct investment.

Portfolio investment refers to investing in financial assets. Financial assets which are traded in financial markets usually include: shares, bonds and financial derivatives as derived financial instruments.

Foreign direct investment (FDI) represents an investment in real assets such as manufacturing facilities, property, equipment and so forth. They are related to taking over an existing enterprise, establishing new manufacturing facilities, constructing new factory ''on greenfield land" which is called a greenfield investment. However, today the purchase of shares in the amount of 10 percent of the company's value or more is considered to be a direct investment.

FDI has three components: 1) equity capital represents the purchase of a company's shares in one country by a foreign investor; 2) reinvested earnings are earnings based on the possession of the company's shares that are not paid as dividends by a branch office or earnings which are not assigned to a foreign direct investor; 3) intra-company loans or intra-company debt transaction are short or long-term loans between a direct investment and a branch office.

Foreign direct investment has two main forms: 1) horizontal and 2) vertical. The horizontal direct investment appears when a company locates manufacturing of the same product or a group of related products in more facilities in different countries. There are three basic methods (ways) of creating these facilities: 1) establishing a new facility (Greenfield operation), 2) purchasing a controlling block of shares of a foreign company which manufactures the same product (acquisition), 3) merging with a foreign company in the same manufacturing group (merger). In this way, multinational companies try to keep secrets of the manufacturing process, management skills and business success under their control.

The vertical foreign direct investment appears when specific operations in the chain of manufacturing and marketing are located in facilities in different countries.

Facilities can be formed in one of the three ways mentioned above (new facilities, purchase and merging). This type of investment is often motivated by the need to secure raw materials abroad for a domestic industry. A characteristic example of vertical investment is the investment of developed countries in mines of underdeveloped countries.

FOREIGN DIRECT INVESTMENT IN B&H

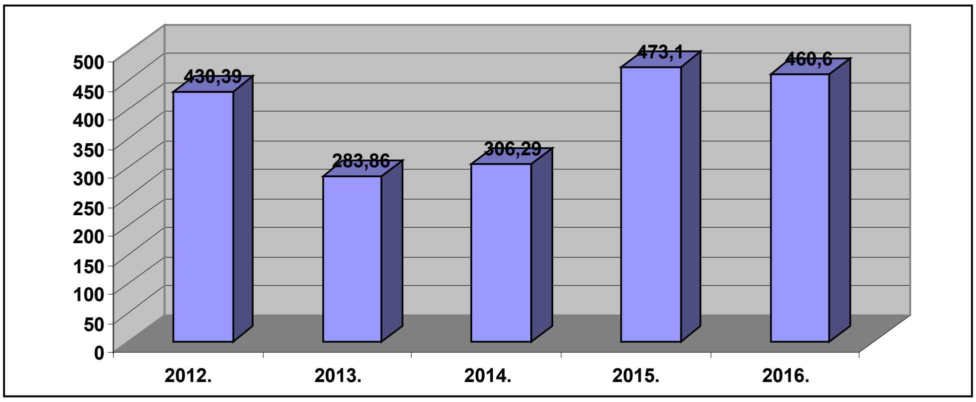
The quantity and quality of investment realized by economic entities are crucial for sustainable economic growth and development. However, retained earnings of enterprises and their own accumulation are often insufficient for major investments. Therefore, an enterprise will find additional external sources of financing. One of the possible sources of investments is foreign direct investment as a special form of financing. Foreign direct investment in the transition countries of Central and Eastern Europe has been shown as a more stable source of financing than any other flow of foreign capital usually without generating debt in a foreign currency.

The special significance of foreign direct investment for Southeastern European countries, including B&H, arises from manufacturing and organizational knowledge (know-how) of foreign companies, which is undoubtedly important in the restructuring transition economies intended to develop a more competitive framework. Foreign direct investment plays one of the key roles in creating sustainable economic growth in B&H. Hence, foreign direct investment attraction becomes one of the objectives aiming at strengthening the economic sector. Expansion of investment activities would enable an increase of production base which is necessary for generating economic development. Foreign capital attraction would profile national economy through expansion of the product range for export. In fact, it is well known that many investors own chains of distribution and sale of the products that could be made in B&H. Foreign direct investment is one of the prerequisites for maintaining and increasing production which would lead to an increase in export.

Except the above mentioned, the foreign investor provides an easier access to other markets. Also, international risk and the country's ranking according to the degree of reforms achieved are positive in correlation with foreign direct investment that a country is able to achieve. Efficiency, height and the structure of investment in B&H undoubtedly are parameters for successful restructuring and strengthening export competitiveness as well as achieving high growth rates over a longer period of time.

In the case of B&H, the FDI inflows were KM 7, 025 billion during the period from 2007 to 2012, while the FDI inflows were KM 2,313 billion in the period of 2009-2012. According to data from Ministry of Foreign Trade and Economic Relations of B&H, foreign direct investment accounted KM 428, 24 billion in 2011 which represents a decrease of 37,14 compared to 2010 when the total FDI inflow was KM 681, 28 billion. However, during the fourth quarter of 2011, FDI inflows accounted KM 130 billion which is the amount 4,4 times higher comparing to the same period in 2010. Foreign direct investment inflows were KM 430,39 billion and they realized the minimal increase of 0,5 % compared to the year 2011.

Chart 1 FDI in Bosnia and Herzegovina in the period of 2012-2016 (mil. KM)[1]



[1] Source: Savjet ministara BiH, *Bosna i Hercegovina-Ekonomski trendovi,* Godišnji izvještaji 2011-2016.

The above indicators point to the fact that foreign direct investment (FDI) is characterized by an upward-downward trend line over a five-year period. To be specific, after a slight increase in 2012 compared to 2011, FDI flow declined of 34%. A slight increase of 8, 13 were accounted next year. A significant growth of FDI flow of 54, 50 % occurred in 2015 comparing to the year 2014. Hence, FDI inflow declined of 2, 64 in 2016.

THE IMPACT OF FDI ON SOME MACROECONOMIC INDICATORS IN B&H

Positive results of foreign direct investment inflows should be shown in increasing and changing GDP, manufacturing structure and increasing the employment rate as well. However, foreign direct investment can cause negative consequences to the host economy because of their sector structure. This refers to a decline in employment which is followed by the dismissal of employees due to increased productivity. Movements of some macroeconomic indicators in B&H are presented in the following table.

Table 1 Movements of macroeconomic indicators in B&H in the period of 2007-2016[2]

Year	FDI (mil. KM)	GDP (mil. KM)	Export (mil. KM)	Import (mil. KM)	Number of unemployed (000)
2007.	2.600	21.836	5.937	13.898	489
2008.	1.337	24.759	6.712	16.293	493
2009.	352	24.051	5.530	12.348	498
2010.	431	25.886	7.532	13.005	517
2011.	428	26.798	8.403	14.637	530
2012.	430	27.308	8.483	14.635	543
2013.	284	28.027	9.037	14.496	552
2014.	306	28.189	9.299	15.477	549
2015.	473	29.462	9.884	15.216	542
2016.	461	30.389	10.587	15.636	521

In order to achieve correlation between FDI and the observed indicators, it is necessary to apply regression analysis based upon the indicators shown in the table 1. Regression analysis will determine the relationship between the observed variables and it is also necessary to emphasize that simple linear regression will be applied in order to determine individual relationships and conclusions between FDI and GDP from one side and export, import and unemployment from another.

Table 2 Coefficients of determination between variables GDP-FDI

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.714[a]	.509	.448	1929.13242
a. Predictors: (Constant), FDI				

The table 2 shows the relationship between GDP as the dependent variable and FDI as the independent one. The results reveal that 50,9% of GDP variance is explained by FDI variance, that is , 50,9% of GDP variable is determined by FDI variable. Based on the data obtained by the F-test (F=8, 308;p value =0,02), it can be concluded that the relationship between FDI and GDP

[2] Source : Savjet ministara BiH, Bosna i Hercegovina-Ekonomski trendovi, Godišnji izvještaji 2007-2016.

is statistically significant , that is, the obtained coefficient of determination is not a coincidence because FDI can be statistically significant indicator in estimating the level of GDP in the years ahead.

Table 3 Indicators of regression analysis (GDP-FDI)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	28474.500	873.995		32.580	.000
	SDI	-2.540	.881	-.714	-2.882	.020
a. Dependent Variable: GDP						

The obtained coefficient B or β indicates in which way and how string the independent variable affects the dependent one and accordingly, we get the equation of regression which shows that the increase of FDI of one million results in a GDP reduction of KM 2, 54 million.

$$Y = 28474{,}50-2{,}5401*X1$$

Table 4 Indicators of regression analysis (import-FDI)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.543[a]	.295	.207	1497.08886
a. Predictors: (Constant), FDI				

According to obtained data in the table 4, it can be concluded that 29, 5 % of the variation of the dependent export is determined by the variation of the dependent FDI. Further analysis and results of F-test (F=3,35; p value= 0,105) indicate that given indicators, coefficient of determination R2 and B, that is β, are not statistically significant and we can conclude that FDI as the independent variable cannot be an adequate indicator in terms of export.

Table 5 Indicators of regression analysis (export-FDI)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9029.363	678.257		13.313	.000
	SDI	-1.252	.684	-.543	-1.830	.105
a. Dependent Variable: EXPORT						

The equation of regression given in this analysis , as in previous case, shows that the increase of FDI results in reduction of the export level in B&H.

$$Y=9029{,}363-1{,}252*X1$$

Table 6 Coefficients of determination between variables export-FDI

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.032[a]	.001	-.124	1283.73239
a. Predictors: (Constant), FDI				

By analyzing the relationship between FDI and export, based on the obtained results in the table 6, we can conclude that there is no relationship between observed dependents. Namely, only 0,1 % of the variable export can be explained by variations of FDI . To be more specific, every change of FDI affects changes in export only by 0,1%. Consequently, it was expected that there is no statistical significance of the relationship between these variables as evidenced by results of F-test (F=0,008), while the p value is 0, 931, which is significantly higher than the significance level α=0,05.

Table 7 Indicators of regression analysis (import-FDI)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14526.778	581.596		24.977	.000
	SDI	.053	.586	.032	.090	.931
a. Dependent Variable: IMPORT						

The relationship between variables is not statistically significant; it is clear that the obtained coefficients B, that is β, are not statistically significant (t = 0.90; p value 0.931), and we cannot consider the SDI variable as an adequate predictor of import variable.

Table 8 Coefficients of determination between variables unemployment-FDI

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.687[a]	.472	.406	18.24283
a. Predictors: (Constant), FDI				

The last relationship analyzed relates to SDI and unemployment. The model shows that 47.2% of variability of dependent unemployment is determined by variations of the variable SDI. Given the F test results (F = 7,163; p value = 0,028) this indicator can be considered statistically significant.

Table 9 Indicators of regression analysis (unemployment-SDI)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	539.241	8.265		65.244	.000
	SDI	-.022	.008	-.687	-2.676	.028
a. Dependent Variable: number of unemployed						

Statistical significance indicates that the relationship between the dependent variables is not accidental, but that there is a certain legitimate relationship that is represented by the equation of regression. In this analysis, the equation of regression is formed on the basis of the coefficient B, and it follows:

$$Y=539,241-0,022*X1$$

This equation of regression suggests that the growth of FDI in B&H will lead to a reduction in unemployment.

In order to complete the analysis and gain a better insight into the relationship between observed variables, except regression analysis, it was necessary to do a correlation analysis which will provide information on the strength and the way of matching certain variables. Before joining the correlation coefficient calculation, a check of the normality of the observed data positions was made by using the 3B Stat statistical package, and it was concluded that all variables do not have a normal position This conclusion pointed to the need to calculate Spearman's coefficient of correlation (rho). In the following table are given all calculated Spearman's correlation coefficients.

Table 10 Correlation coefficients of variables

Correlations							
			FDI	GDP	EXPORT	IMPORT	NUMBER OF UNEMPLOYED
Spearman's rho	FDI	Correlation Coefficient	1.000	-.248	-.164	.248	-.709*
		Sig. (2-tailed)	.	.489	.651	.489	.022
		N	10	10	10	10	10
	GDP	Correlation Coefficient	-.248	1.000	.988**	.552	.721*
		Sig. (2-tailed)	.489	.	.000	.098	.019
		N	10	10	10	10	10
	EXPORT	Correlation Coefficient	-.164	.988**	1.000	.576	.697*
		Sig. (2-tailed)	.651	.000	.	.082	.025
		N	10	10	10	10	10
	IMPORT	Correlation Coefficient	.248	.552	.576	1.000	.164
		Sig. (2-tailed)	.489	.098	.082	.	.651
		N	10	10	10	10	10
	NUMBER OF UNEMPLOYED	Correlation Coefficient	-.709*	.721*	.697*	.164	1.000
		Sig. (2-tailed)	.022	.019	.025	.651	.
		N	10	10	10	10	10
*. Correlation is significant at the 0.05 level (2-tailed).							
**. Correlation is significant at the 0.01 level (2-tailed).							

From the data presented in the above table, it is evident that FDI is in the strongest correlation with unemployment (rho = -0,709) and that this relationship is indirect, i.e. that with the growth of FDI there is a decrease in unemployment. The obtained data also indicate that this correlation coefficient is statistically significant. The data indicate that the relationship with GDP and imports of identical strength (rho = 0,248), but with different indications, which lead to the conclusion that with SDI growth there is a decrease in GDP and an increase in imports. The correlation coefficient between GDP and imports is positive, and it implies that there is a direct relationship between these variables, which is not statistically significant. On the other hand, the coefficient of GDP and export correlation is extremely high (rho = 0.988) and its sign indicates that GDP growth indicates growth of B&H exports. The relationship between exports and imports is direct, but not statistically significant, while the rho correlation coefficient is 0.576. Also, the relationship between exports and unemployment is direct, but statistically significant (rho = 0.697).

CONCLUSION

Foreign direct investment has one of the key roles in creating self-sustaining economic growth in Bosnia and Herzegovina. Foreign direct investment in Bosnia and Herzegovina amounted KM 7,025 billion in the period from 2007 to 2012, while foreign direct investments in the four-year period (2009-2012) amounted KM 2,313 billion. However, Bosnia and Herzegovina has not been spared the impact of the global financial crisis, the consequences of which are, above all, visible in the real sector of the economy. Apart from having a negative impact on the financial and real sector, the global financial crisis has left a visible mark on the inflow of foreign direct investment in Bosnia and Herzegovina. Domestic factors such as slowed down economic growth and reduced inflows of foreign direct investment also contributed to economic instability in Bosnia and Herzegovina. In addition to weak domestic demand, unfavorable external environment and political stalemate, the poor performance of the macroeconomic, business and legal environment halted the economic recovery of Bosnia and Herzegovina.

The obtained results of the regression analysis relate to the strength, direction and statistical significance of the relationships between the observed variables. In this regard, regression analysis indicates that there is a statistically significant relationship between FDI and GDP, as well as the link between FDI and unemployment. The obtained regression equations point to the conclusion that with SDI growth there is a decrease in GDP, which is not logical. In addition, the correlation coefficient obtained (rho = -0,248) is also indicated. This illogical picture can partly be explained by the extremely high FDI amounts in the first two years observed, which due to the low development of the economy in B&H, failed to follow the adequate level of GDP. This is supported by the fact that if two years were excluded from the analysis, the correlation coefficient would have been positive and would indicate that FDI growth corresponds to GDP growth. In contrast, the obtained equation of regression between FDI and unemployment indicates that the growth of FDI results in a decrease in unemployment. This claim goes to the value of the correlation coefficient obtained (rho = 0.709). A further analysis of the correlation coefficient suggests that GDP growth did not contribute to the creation of new jobs and recruitment of labor, but some other factors. This means that with the growth of exports there was no significant development of the economy and the creation of new jobs.

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LOCAL CONTRIBUTIONS OF FORESTS TO ECONOMIC GROWTH OF PERU: A CASE OF *PINUS RADIATA* PLANTATIONS

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SUMMARY

The economic contributions from forestry sector remain relatively important in all developing economies. Over the past few decades, value added in the forestry sector of these economies has gradually increased. Consequently, the need for a detailed and accurate assessment of the economic contribution of the sector has grown in order to gain the attention of the policy makers and to highlight its importance in poverty alleviation and sustainable development. Contrarily, In Peru, forestry sector continues to be left behind due to faster growth in other sectors of economy. Despite having considerable forest resources, the full extent of economic contributions of the forestry sector to local as well as the national economy is still poorly understood. Sparsity of up-to-date data on value added in the forestry sector and a general disregard to any forests other than Amazonian rainforests have compounded the already existing situation. In this context, this paper aimed at making an empirical analysis of the direct contributions of the forestry sector to the local economy of Peru in the short run using an annual time series data from 2007 to 2016. The Pinus radiata plantation forests of the Department of Ayacucho located in the Southern Peruvian Andes served as a case for this study. The results revealed nominal but significant contributions of the Pinus radiata forests to the economic growth of the Department of Ayacucho. As our study was limited only to direct cash benefits, future studies should also take into account informal and non- cash benefits in order to fully apprehend the economic contributions of the forestry sector to local and national economy.

Keywords: Ayacucho, forestry sector, economic growth, Pinus radiata, forest plantations, OLS regression, causality test

INTRODUCTION

There is a great diversity of contexts in which both conservation and destruction of tropical forests occur in the vast Asia-Pacific region. There are many actors involved (societies, governments and industries), responding to very different pressures (Byron, 1997). Therefore, it is difficult to assemble comprehensive evidence of the importance of forest products to rural people in Asia-Pacific. Data on various aspects of forests in relation to other social, economic, and institutional indicators are patchy in space and time, are very difficult to compare across countries and regions, and are insufficient as a firm basis for policy action (Agrawal et al., 2013). Byron (1997) reported that official statistics from the region provide little assistance, because most production, consumption and marketing of low value timber products and all non-timber forest products (NTFPs), including wood-fuel, is outside the formal economy. The absence of aggregated data on the economic contributions related to these timber and non-timber forest products and their value, and the lack of information systems that can incorporate such data systematically are major bottlenecks in a better understanding of forest sector contributions (Agrawal et al., 2013). The Asia-Pacific region in particular, it has become imperative to recognize and appropriately value the outstanding economic contributions of forests to human welfare and development in order to slow down, if not reverse, the ongoing trends and patterns of deforestation that contribute significant amount of global forest-related Green House Gas (GHG) emissions, more than sub-Saharan Africa and Latin America combined (FAO, 2010). While forest sector is seldom a priority among the major sectors of the economy for some countries of the region such as China or Australia, its contribution to the national economy and poverty alleviation can still be significant for selected developing economies such as Indonesia, Mexico or Peru (Puustjarvi, Mickels-Kokwe, & Chakanga, 2005). Notwithstanding, incomplete valuation of forests and contribution to local as well as national economics is currently being practised because the sector often makes its input outside of the cash economy and the benefits are indirect or even intangible. This has reinforced perceptions that forests have little worth other than for their timber, which has made governments in the region assign low priority to the forestry sector (Kengen, 1997).

In Peru, a middle-income economy located in western South America bordering the South Pacific Ocean, the role of the forest sector in economic development has not yet been fully recognized. FAO (2015) estimated that 57.8% or about 73,973,000 ha of Peru is forested. Of this 88.9% is classified as primary forest, the most biodiverse and carbon-dense form of forest. The annual rate of deforestation between 1995 and 2015 was calculated at 0.2%, comparatively lower than neighbouring Brazil. However, considering only the recent period (2010 – 2015), the annual rate of deforestation for Peru was much higher (0.3%) than Brazil, for which the rate was close to zero. While deforestation is highly context specific, changing demographics and socio-economic circumstances are frequently cited primary causes of forest loss (Geist & Lambin, 2001). Peru, the fourth most populous country in South-America with an estimated population of 32 million, had a growth rate of 1.3% per annum in 2016 (The World Bank, 2018b), higher than most of the South-American countries. The economy of Peru has grown in proportion to the growth in population and in concert with changes in the national economy. The per capita GDP increased three folds from USD 2,000 in 2000 to USD 6000 in 2016 (The World Bank, 2018a). From a primarily agrarian economy in the 1900s, Peru became a centre for manufacturing in South America (García-Herrero et al., 2014). More recent growth has focused on the service sectors, increasing the diversity of the economy. Through all these developments, Peru's forests have provided raw materials for both wood and non-wood based industries (Palo & Mery, 2012). But the pattern of overall economic changes in such contributions should be a major cause of concern to forest professionals, whether that interest is related to ecological sustainability, ecosystem services, or economic benefits.

While the questions of deforestation and reforestation in Peru generally conjure images of the nation's Amazon Basin, the term is less commonly associated with Peru's Andean mountains. The Southern Peruvian Andes have many mountainsides with large stands of forest, consisting of both native and introduced species (Luzar, 2007). Much literature has addressed deforestation and forest transitions happening in the Amazons (e.g., Andersen, Granger, Reis, Weinhold, & Wunder, 2002; Geist & Lambin, 2001; Robertsen, 2012), however, until recently, this important phenomenon of forest cover changes have been largely overlooked in the southern Peruvian Andes. At various points in the 20th century, and especially in the late 1960s and early 1970s, the Peruvian government collaborated with peasant communities to reforest large tracts of land—most commonly with fast growing species (pine and eucalyptus)—to address a growing shortage of timber and fuel wood for the burgeoning manufacturing sector (Jobbágy, Baldi, & Nosetto, 2011; Luzar, 2007). In the 1990s, increasingly globalized forestry markets and companies together with favourable local ecological (fast growth rates) and economic (low land and labour costs) conditions (Cubbage et al., 2007) propitiated a new wave of forest plantation expansion that still continues in the Peruvian Andes. Species covering the largest area of the Peruvian Andes are *Eucalyptus grandis, Eucalyptus globulus* and related hybrids, together with *Pinus elliotti* and *Pinus radiata* (Jobbay). Despite an initial scepticism, for example, a concern over dedicating agricultural land to an unfamiliar tree species (Oficina Nacional de Evaluacion de Recursos Naturales, 1986), plantations forests in recent decades have grown in economic and cultural importance (Luzar, 2007).

Despite their apparent and realized benefits, there is a paucity of relevant studies that link the output of forest plantations to local as well as national economies in Peru. While the contribution of overall forestry related activities to the country's GDP is well understood (Hotz & Guarín, 2014), the sectoral contribution (e.g., from plantation forests, natural forests, mangroves etc.) to the national as well as the local economies is still elusive, and not much effort has been made to account for such contributions due to a decline in the prominence of forests compared to other sectors of economy. Agrawal et al. (2013) report that the relatively isolated nature of forestry agencies and services, including the limited exchanges between professionals in the forest and other sectors have contributed towards making forest sector less prominent economically. Limited availability of hard data and a largely outdated and fragmented statistical information has made it more difficult to assess the sector's present and potential contributions in addition to the general lack of attention towards forestry sector and sub-sectors. While challenges are prevalent elsewhere, available literature from other developed and developing economies suggest evidence of strong positive relationships between forestry sector and local economic growth (e.g., Abt, Winter, & Huggett Jr, 2002; Barik & Mishra, 2008; Hassan, Mbuli, & Dlamini, 2002; Puustjarvi et al., 2005; Whiteman & Lebedys, 2006). However, most previous studies lacked a concrete methodological approach that is simple and inexpensive, and at the same time, will appeal to governments and multilateral organizations. The focus of this investigation is to analyse the direct economic contributions of the forest sector, especially those related with *Pinus radiata* plantations in the Southern Andes of Peru, to the local economy of Department of Ayacucho based on existing time-series data obtained from government and sources. Our a priori assumption, based on the review of relevant literature, is a significant impact of the outputs from the existing *Pinus radiata* plantations to the overall economic growth of Ayacucho. Econometric models were specified and analyzed to test the validity of our assumption. The indirect and intangible benefits (e.g., value of environmental services) were excluded from the scope owing to lack of data. Extensive basic research and data collection would be needed to provide estimates on these contributions.

LITERATURE REVIEW

The economics of forestry is about land and the human activity in the forest (Hyde, 2012). Despite their popular image of stability, forests do change, in part because they are alive, and also because some of their trees are cut to satisfy societal needs that may reflect complex, long-term goals (Buongiorno, 1996). Meyer and Turner (1996) noted that human land use (both deliberately and inadvertently) alters forests in 3 ways: converting, or changing it to a qualitatively different state; modifying it or quantitatively changing its condition without full conversion; maintaining it in its condition against natural agents of change. There is a growing concern over shrinking areas of forests worldwide in the recent time (Barraclough & Ghimire, 2000). According to FAO (2015), the global forest coverage declined from 4,128 million ha in 1990 to 3,999 million ha in 2015, representing an annual deforestation rate of 0.13%. Tropical forests in particular have experienced the highest levels of deforestation (Kaimowitz, 2002; Lambin, Geist, & Rindfuss, 2006). Given this context, the need to address the causes of forest cover loss has received increasing attention from scientists and policy makers due to increased realization of its threat to local, regional and global climate, biodiversity, and livelihoods and economy (Angelsen & Kaimowitz, 1999; Fitzherbert et al., 2008; Karkee, 2007;

Shukla, Nobre, & Sellers, 1990). For understanding the dynamics of forest cover changes, the von Thünen model provides an appropriate starting point. The model focuses on land rent, based on an assumption that land is allocated to the use generating the highest land rent (surplus) (Angelsen, 2007). The rent of alternative land uses is determined by a number of factors such as crop prices, input costs, available technologies, agro-ecological conditions, etc. Many of these depend directly or indirectly on the location of the land. However, over time evidence started to indicate that in some countries, both in the north and the south, that lands that had been cleared started to show the resurgence and this phenomenon led to the birth of the forest transition theory (Mather, 1992). According to forest transition theory (FTT), one path towards reforestation is when development shifts human activities from agriculture to industry thus allowing fields to revert back to forestland (Mather, 1992; Mather, Fairbairn, & Needle, 1999). Much as the forest transition theories uphold the demographic and economic causes of deforestation, they are seen to be optimistic in their approach compared to earlier models of von Thünen model or the Malthusian Theory (Weir, 1991) which contended that an increase in population density would lead to deforestation.

Given the widespread problem of deforestation and related forest cover changes, national and sectoral forest sector policies play key role in the sustainable management and utilization of forests, and its state in the future. According to Tikkanen (1981), organization and implementation of forest sector policies aim at maximizing the utilities produced by the forest resources now as well as in the future. The focus of forest policy goals and the mutual relationships between them vary in different countries with respect to the production of wood and other tangible forest goods, the conservation and improvement of the environment and the provision of recreational facilities. The differences in the preferences originate from the relative significance of forestry and forest industries in the national economy, or from the environmental functions the forests are serving (Tikkanen, 1981). Managing the forest to make sure that it will satisfy the diverse needs of society, contribute to the welfare of nation and at the same time provide valuable ecosystem services requires (Buongiorno, 1996). In the United States, the use of rigorous econometric methods to forecast forest product markets began in the 1950s. Pringle (1954) and Gregory (1960) did some pioneering works that led to the first generation of econometric models that had clear potential for policy studies. (McKillop (1967) developed a first model that dealt with the entire forest sector, from the supply of logs to the demand for final products. During the 1980s, forest economists were encouraged to pursue works of synthesis, i.e. complete models of sectors. Adams and Haynes (1980) collaborated to develop the timber assessment market model that dealt mostly with the solid wood. The global trade model (GTM), developed by an international team of forest economists still remains a prominent global model in the field of applied economics (Binkley, Dykstra, & Kallio, 1987). GTM has led to discussions related to a need to avoid any single paradigm, but to exploit the best features of econometrics, operations research (Buongiorno, 1996). In conjunction with the national models, several other econometric models have been developed in the last few decades for smaller geographic areas (e.g., Brooks, 1985; Newman, 1987).

Analytical models such as von Thünen model or the Forest Transition models use theoretical constructions of the interrelationships between the factors involved. They include no empirical data, but they present theories in a rigorous framework, which allows researchers to determine the logical implications of their assumptions. They use formal mathematical equations, but these equations have only algebraic expressions, and no numbers (Kaimowitz & Angelsen, 1998). Usually, standard mathematical techniques, such as Lagrange optimization (with equality constraints) and linear programming (with inequality constraints), are employed to solve the objective functions (Shi, 2015). Empirical statistical and econometric models, on the other hand, use statistical methods to deduce the theoretical relationships between these factors from a large number of data sets (Kaimowitz & Angelsen, 1998). However, these approaches have also been criticised on heuristic and methodological grounds. (Perry, 2016) notes that in essence, the question to ask is 'how much can an empirical- statistical model illuminate process and causality?' Bates and Granger (1969) suggest combining different sources and modelling techniques in some way so that the resulting model forecasts may be more accurate than any of the individual components. Consequently, researchers are developing and applying new mathematical, statistical and computational tools to develop novel econometric time-series methods embedded in automatic modelling software to improve empirical econometric analyses and forecasting that allow to combine theoretical insights with empirical evidence to discover new results (Institute for New Economic Thinking, 2018). By retaining theory models, far larger information sets can be investigated without risking spurious findings, thereby allowing new features to be discovered when the theory-model is incomplete or incorrect.

MATERIALS AND METHODS

STUDY AREA

The study was carried out in the Department of Ayacucho, Peru that is located in the South-central Andes of the country between geo-coordinates 13^0 42’ 45” S latitude and 74^0 02’ 03” W longitude (Figure 1). With an area of 43,814.8 km^2, the Department of Ayacucho covers approximately 3.5% of the total land area of Peru. Its capital is the city of Ayacucho. Over 90% of the Department belongs to the Andean highlands. The elevation ranges between -473 m above sea level (MASL) at the lowest point to 7,444 m MSAL at the highest point. The climate varies depending on the altitude and agro-ecoregions. 6 of the 8 agro-ecoregions in Peru are found in the Department of Ayacucho. The main characteristic of the climate in the area is the temperate climate with a temperature of 20°C during the day and 10°C during the night. The average temperature is between 11°C and 16°C, the highest temperature is between 22°C and 29°C, and the lowest temperature is between -7°C and -4°C. Annual precipitation averages 450 mm.

According to the 2005 census, the total population of the Department was estimated to be 619,552 with a population density of 14/km^2. The region has a high incidence of poverty at 72.5%, highest for any Departments of Peru. The nominal contribution of the Department to the national GDP is only 0.65%, the lowest contribution among all other Departments in the country. The main income source of the population in the Department is agriculture and the major farm products are potatoes, wheat, barley, and sheep meat. The Department was one of the hardest hit by terrorism during the 1980s during the guerrilla war waged by Shining Path known as the internal conflict in Peru (Fumerton, 2001).

High montane forests (Young & León, 1999) or subtropical yungas (Zamora, 1996) of the Department are characterized by high species diversity and endemism of the flora and fauna. In terms of mammals, this region holds 60% of all endemic species in the country (39 species), most of which are rodents. Forests of Ayacucho are considered a unique but, at the same time, very fragile ecosystem because of the fast rate of habitat degradation by human activities, and therefore, they are considered one of the 18 priority terrestrial ecoregions for conservation (Mittermeier, Myers, Mittermeier, & Robles, 1999). Primarily due to smallholder peasant’s logging activities, Ayacucho lost 9,842 ha of forest between 2001 and 2015 (INEI, 2015).

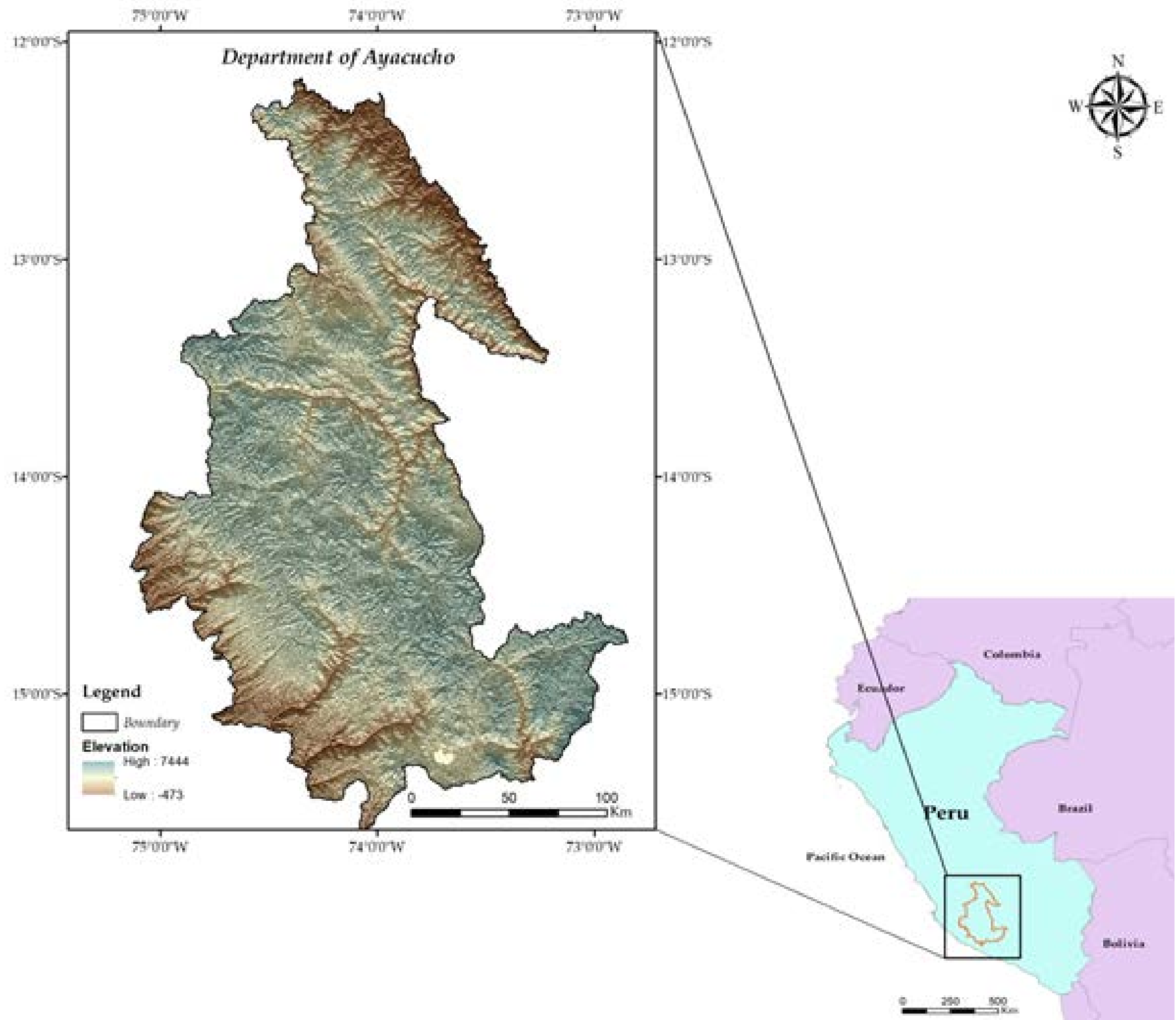

Figure 1 Location Map of the Department of Ayacucho in Peru

RESEARCH DESIGN

This research was fundamentally analytical and descriptive as it embraced the use of secondary data to determine the effect of the forest sector through the benefits from *Pinus radiata* on the economic growth of Ayacucho, in a short run. For the analytical test, we used various econometric tests for modeling the annual time series data. For descriptive analysis, we used the ordinary least square regression.

KINDS AND SOURCES OF DATA

For the current research, we needed an annual time series data that covered the period between 2007 – 2016 including, data on Gross Domestic Product (GDP) of Ayacucho, data on the forest and agriculture sector of Ayacucho (as value added) to the GDP from Ayacucho and benefits from the production of *Pinus radiata*. The data for this research was obtained from different national sources depending on the availability. In the case of the GDP and the forest and agriculture sector of Ayacucho, the sources were Peruvian Central Bank of Reserve (PCBR) and their annual reports, and the National Institute of Statistic. In the case of the benefits of pine production, the source was the Municipality of Victor Fajardo Province.

MODEL SPECIFICATION

In order to examine the contribution of the forest and agriculture sector of Ayacucho to the economic growth of Ayacucho, the model was specified as following:

$GDPAY_t=f(FAGDPAY_t)$, (1)

To discard the differences in the measurement units, natural logarithm was applied on both sides of the equation 1, for the minimization of the gap between the dependent and independent variables.

$LGDPAY_t=\beta_0+\beta_1 LFAGDPAY_t+e_t$ (2)

Where:

LGDPAY	=	Natural logarithm of the Gross Domestic Product of Ayacucho.
LFAGDPAY	=	Natural logarithm of Forest and Agriculture Sector of Ayacucho, as value added to the GDP.
e_t	=	Error term
β_0	=	Constant term
β_1	=	Parameters of explanatory variables estimated in the model

In order to examine the contribution of the benefits from the *Pinus radiata* to forest sector growth supply-side perspective, the model was specified as following:

$FAGDPAY_t=f(BPINE_t)$, (3)

To discard the differences in the measurement units, natural logarithm was applied on both sides of the equation 3, for the minimization of the gap between the dependent and independent variables.

$LFAGDPAY_t=\beta_0+\beta_1 LBPINE_t+e_t$, (4)

Where:

LFAGDPAY	=	Natural logarithm of Forest and Agriculture Sector of Ayacucho, as value added to the GDP.
LBPINE	=	Natural logarithm of the benefits from *Pinus radiata*.
e_t	=	Error term
β_0	=	Constant term
β_1	=	Parameters of explanatory variables estimated in the model

ESTIMATION PROCEDURES

In this case, for the short run analysis, regression for the multivariable series was used, and enforced for the Unit Root Test and the Causality Test.

UNIT ROOT TEST

The usage of ordinary least squares (OLS) regression analysis on time series data usually requires that the data should be stationary to avoid the problem of spurious regression. A variable is considered as stationary if it has a constant mean, variance and auto covariance at any measured point. A non-stationary time series may become stationary after differencing a number of times. In the case the series is not stationary at the base level, it would be stationary after successive differencing. The order of integration of a series is the number of times it needs to be differenced to become stationary. A series integrated of order I (n) becomes stationary after differencing n times. In this study, the stationary test was carried out using the Augmented Dickey-Fuller (ADF) test, which was formulated by Dickey and Fuller (1979). The decision rule states the series is stationary if the ADF test statistic is greater than the critical value, and that it isn't stationary if it is less than the critical value. The general ADF Test form is represented by the following regression:

$$\Delta Y_t=\alpha_0+\alpha_1 Y_{t-1}+\sum_{n=1}^{N}\alpha\Delta Y_i+e_t \text{ ; it includes only drift,} \quad (5)$$

$$\Delta Y_t=\alpha_0+\alpha_1 Y_{t-1}+\sum_{n=1}^{N}\alpha\Delta Y_i+\delta_t+e_t \text{ ; it includes only the drift,} \quad (6)$$

Where:

Y	=	Time series of specified variable
t	=	Time trend
Δ	=	First differencing operator
α_0	=	Constant term
N	=	Optimum lags' number
e_t	=	Random error term

PAIRWISE GRANGER CAUSALITY TEST

To examine the significant causality relationship of the forest and agriculture sector (as value added) to the GDP from Ayacucho with the economic growth in Ayacucho; and of the benefits from *Pinus radiata* production with the forest and agriculture sector (as value added) to the GDP from Ayacucho, Granger Causality Test (Bates & Granger, 1969) was performed. The independent variable is considered as a Granger-cause variable of Y, if the y_t (the variable Y in the current period) is conditional on the past values of the variable X (x_{t-1}, x_{t-2}, x_{t-1} … x_0).

Focusing on the forest and agriculture sector of Ayacucho as the engine of the economic growth of Ayacucho, we were interested in the bidirectional causal relationship between the two to provide evidence of that independent variable as the cause of the economic growth of Ayacucho between 2007 and 2016. Therefore, we considered the following Hypothesis:

For the case of LGDPAY (Natural logarithm of the Gross Domestic Product of Ayacucho) and LFAGDPAY (Natural logarithm of Forest and Agriculture Sector as value added to the GDP from Ayacucho):

i. LGDPAY does not Granger Cause LFAGDPAY

ii. LFAGDPAY does not Granger Cause LGDPAY

And, focusing on the benefits of *Pinus radiata* production as the engine of the forest and agriculture sector growth of Ayacucho, were interested in the bidirectional causal relation between the two to provide evidence of that independent variable as the cause of the economic growth of Ayacucho between 2007 and 2016. Therefore, in this case, we considered the following Hypothesis:

For the case of LFAGDPAY (Natural logarithm of Forest and Agriculture Sector as value added to the GDP from Ayacucho) and LBPINE (Natural logarithm of the benefits from *Pinus radiata*):

i. LFAGDPAY does not Granger Cause LBPINE

ii. LBPINE does not Granger Cause LFAGDPAY

RESULTS AND DISCUSSION

EMPIRICAL RESULTS

Before the comprehensive econometric analysis, it is necessary for a brief interpretation of statistical analysis. The definitions and summary of the statistics of those variables are provided in Table 1, which reported that the average of the GDP growth in Ayacucho was USD[1] 1.6 billion with USD 445 million as the standard deviation. In the case of the combined forest and agriculture sector growth as value added to the GDP from Ayacucho, the average was USD 260.5 million and the standard deviation was USD 46.3 million. Finally, the benefit of pine production had a mean value of USD 623,957 and a deviation standard of USD 487,547.

[1] 1 USD = 3.24 local currency (Peruvian Sol) in 2018

Table 1 Summary Statistics of variable, from 2007 - 2016.

Variable	Mean (1000 USD)	Median (1000 USD)	Max (1000 USD)	Min (1000 USD)	Std.Dev. (1000 USD)	Skewness	Kurtosis
GDPAY	1,620,370	1,694,444	2,209,877	919,753	444,444	-0.25	1.73
FAGDPAY	260,185	258,951	314,815	176,543	46,296	-0.34	1.94
BPINE	624	505	1,517	85	487	0.61	2.12

Source: Researcher's compilation from Stata 13.0

For the measure and the direction of skewness (which gives the measure of departure from symmetry), a skewness analysis was carried out. While the GDP of Ayacucho and the forest and agriculture sector as value added to the GDP from Ayacucho presented an approximately symmetric distribution, the benefits of pine production showed a moderately skewed distribution.

The result of the regression equation (2), which showed the relation between the GDP of Ayacucho and the forest and agriculture sector as value added to the GDP from Ayacucho, is shown in Table 2. It indicated that this function best fitted the model with significant effects on the GDP of Ayacucho, having 84.18% as the R^2 and 82.20% as the adjusted R^2. This result implied that the independent variable explained the 82.20% of the total variation in the GDP of Ayacucho. The F-statistic was 0.0002 that indicated the significance, which implied that the parameters were significant at 5% even at 1%. The Durbin Watson was acceptable because it's more than the superior limit 1.31971 (1.68) that also supported the OLS regression.

Table 2 Regression results (LGDPAY and LFAGDPAY)

Variable	Coefficient	t-Statistic	P-value
LFAGDPAY	1.453296	6.520	0.000
CONSTANT	-7.503068	-1.640	0.140
R-squared	0.841800		
Adjusted R-squared	0.822000		
Prob (F-statistics)	0.000200		
Durbin-Watson stat	1.681027		

Source: Researcher's compilation from Stata 13.0

So, the equation for the model defined in the equation (2) was given as:

$$LGDPAY_t=-7.503068+1.453296*LFAGDPAY_t+e_t, \quad (7)$$

According to this equation, the increase in 1% of the Forest and Agriculture Sector of Ayacucho (LFAGDPAY) led to an increase of 1.45% in the Gross Domestic Product of Ayacucho (LGDPAY). It also showed if the Forest and Agriculture Sector of Ayacucho didn't have an increase, the GDP of Ayacucho would decrease in 7.50%.

The result of the regression equation (4), which showed the relation between the forest and agriculture sector as value added to the GDP from Ayacucho with the benefits of pine production, was shown in Table 3. It indicated that this function best fitted the model with significant effects on the forest and agriculture sector of Ayacucho, having 86.67% as the R^2 and 84.99% as the adjusted R^2. This implied that the independent variable explained 85.00% of the total variation in the forest and agriculture sector as value added to the GDP from Ayacucho. The F-statistic value of 0.0001 indicated the significance, which implied that the parameters were significant at 5% even at 1%. The Durbin Watson was acceptable because it is more than the superior limit 1.31971 (2.04) that also supported the OLS regression.

Table 3 Regression results (LFAGDPAY and LBPINE)

Variable	Coefficient	t-Statistic	P-value
LBPINE	0.182180	7.210	0.000
CONSTANT	17.956290	50.050	0.000
R-squared	0.866600		
Adjusted R-squared	0.849900		
Prob (F-statistics)	0.000100		
Durbin-Watson stat	2.037874		

Source: Researcher's compilation from Stata 13.0

So, the equation for the model defined in the equation (4) can be given as:

$LFAGDPAY_t=17.956290+0.182180*LBPINE_t+e_t$ (8)

According to this equation, the increase in 1% of the benefit of pine production (LBPINE) led to an increase of 1.45% in the Forest and Agriculture Sector as value added to the GDP from Ayacucho (LFAGDPAY). It also showed if there was no benefit from the pine production, the Forest and Agriculture sector as value added to the GDP from Ayacucho would have an increase of 17.96%.

UNIT ROOT TEST RESULTS

Augmented Dickey-Fuller test was performed on all variables (gross domestic product of Ayacucho, forest and agriculture sector as value added to the GDP from Ayacucho and benefits of pine production). The results of Augmented Dickey-Fuller test for showing the existence of unit root of once differenced data were represented in Table 4.

Table 4 Unit root test for order of integration of variables (ADF)

Variables	At Level	First difference	Critical values (%)			Probability	Order of Integration
			1	5	10		
LGDPAY	-4.103		-3.750	-3.000	-2.630	0.0010	I(0)
LFAGDPAY	-3.536		-4.380	-3.600	-3.240	0.0357	I(0)
LBPINE	-23.151		-3.750	-3.000	-2.630	0.0000	I(0)

Source: Researcher's compilation from Stata 13.0

The reported result in Table 4 confirmed the stationary test of the variables at the level form I (0) for the LGDPAY, LFAGDPAY and for the LBPINE. According to this, the null hypothesis of non-stationary could be rejected at 5% and 10% critical value level confirming that the ADF test statistics was greater than the critical value, which also could be understood as the P-value was significant at the level form I (0) because it is less than 0.05. Since the null hypothesis was rejected for all the variables at a convenient significant level, the variables did not have a unit root at levels. Therefore, we could conclude that the variables data were stationary at the level of order one I (0). Those stationary tests supported the econometric model of the equation (7) and equation (8).

GRANGER CAUSALITY TEST RESULTS

We analyzed the causal relationship between LGDPAY (Natural logarithm of the Gross Domestic Product of Ayacucho) and LFAGDPAY (Natural logarithm of Forest and Agriculture Sector as value added to the GDP from Ayacucho); and the causal relationship between LFAGDPAY (Natural logarithm of Forest and Agriculture Sector as value added to the GDP from Ayacucho) and LBPINE (Natural logarithm of the benefits from *Pinus radiata*) using Granger (1969) Causality Test. The Table 5 showed that value of the Test considering the probability value of 5%.

Table 5 Pairwise Granger Causality Test

Null hypothesis	F-statistic	Prob.
LGDPAY does not Granger Cause LFAGDPAY	0.000039	0.995
LFAGDPAY does not Granger Cause LGDPAY	7.402200	0.007
LFAGDPAY does not Granger Cause LBPINE	6.500000	0.011
LBPINE does not Granger Cause LFAGDPAY	0.018380	0.892

Source: Researcher's compilation from Stata 13.0

The result for the causal relationship between LGDPAY (Natural logarithm of the Gross Domestic Product of Ayacucho) and LFAGDPAY (Natural logarithm of Forest and Agriculture Sector as value added to the GDP from Ayacucho) showed it was unidirectional, while the LGDPAY did not reveal to have an influence on the LFAGDPAY, the LFAGDPAY had an influence on the LGDPAY. For the case of the LFAGDPAY (Natural logarithm of Forest and Agriculture Sector as value added to the GDP from Ayacucho) and the LBPINE (Natural logarithm of the benefits from *Pinus radiata*), it was demonstrated that there was also a unidirectional causal relationship between them, where the LFAGDPAY Granger caused the LBPINE. The results showed that the Forest and Agriculture sector of Ayacucho caused the economic growth of Ayacucho, and the forest and agriculture sector growth of Ayacucho caused the benefits of pine production.

CONCLUSION AND RECOMMENDATIONS

Over the past millennia, economic contributions from forests to household economies, community livelihoods, national incomes, and global output have been consequential to the continued economic development. The importance of properly recognizing the role of forests in sustainable development, and local green economy and poverty eradication could not be overstated. Notwithstanding, the general lens through which forests are viewed by national and international agencies continue to be a holdover from colonial times promoting visions of forests as resources to be mined in perpetuity for the short run financial returns. This is more evident in the southern Peruvian Andes, where the complex nexus of forestry, poverty and economic development had been disregarded for centuries until recently when local governments started large scale plantations development in order to improve the livelihoods of the rural poor and meet the timber demand of the burgeoning manufacturing industries. In this context, the aim of the present study was to make an empirical analysis on the direct contribution of forest sector, especially those related with *Pinus radiata* plantations in the Southern Andes of Peru, to the economic growth of Department of Ayacucho in the short run using an annual time series data from 2007 to 2016. Several econometric models were specified for the analysis. In particular, ADF Test that was used to determine the stationary characteristics of the data showed all determinants achieved stationary at the level I (0) supporting the regression model used for the short run analysis. The analysis revealed a positive relationship between the forest and agriculture sector growth and the economic growth of the Department, and between the benefits from *Pinus radiata* production and the forest and agriculture sector growth. Moreover, Granger Causality test revealed a unidirectional causality relationship between forest and agriculture sector and the GDP of the Department. A unidirectional causal relationship between benefits from *Pinus radiata* production and forest and agriculture sector of Ayacucho Department was also uncovered doing the analysis. In the first case, the forest and agriculture sector caused a growth in the GDP of the Department, while in the second case the benefit from *Pinus radiata* production didn't cause the forest and agriculture sector growth of the Department. These results are not surprising because people in Ayacucho Department have depended since ancient times on forestry and agricultural activities, the main reason for which the local government has been investing heavily in plantation and reforestation projects in the region with participation from the local peasant communities.

In Peru, forestry sector has seen notable development in the past few decades, due to reduction of natural forests cover and the expansion of forest plantations of exotic species. The expansion of forest plantations and the wood based industries has gained forestry sector a relevant role in local and national economy, and a global position in the wood market. While there are many benefits that Peru and its local Departments derive from forest plantations, there are also costs associated that are often ignored as they are primarily borne by the rural poor sited in the plantation areas. Experience from Peru as well as other South American countries has shown that forest plantations establishment often leads to displacement of small indigenous communities rendering them landless. At the same time, there is a growing concern that job creation through tree plantations is irregular and cannot sustain rural livelihood development. Furthermore, large scale plantations are cited as one of the major cause for rural depopulation, loss of social capital, agriculture land abandonment, and other local social and environmental problems. At national context, a strong neoliberal economic strategy has paved the way for a model of export-led growth through extraction of existing natural resources, this development has also brought some remarkable transformations in land use through large scale plantation developments in existing natural forests areas with some regional and global consequences. It is therefore important to consider important environmental, social and economic externalities, at local, national and regional scale, resulting from such large scale forest plantations. A proper realization of the externalities, in addition to direct and indirect cash and non-cash benefits from the forest plantations would only make a study about their economic contributions meaningful.

In conclusion, our study demonstrated an efficient and practical approach to analyze the direct economic contributions of the forest sector to the local economy in regions that are marginalized from the mainstream development processes, and where relevant researches are sparse. Attempts such as those undertaken in this paper to develop a systematic assessment of the economic contributions of forests run up against persistent problems of data availability common in the developing nations. The data on various aspects of forests in relation to other social, economic, and institutional indicators are patchy in space and time, are very difficult to compare across different geographic regions, and are insufficient as a firm basis for policy action. Available data allow only a blurry picture of the extent of positive externalities and non-cash economic benefits forests provide that is not sufficient to allow the inference, against the commonly hold belief, that non-cash forest benefits are far larger than those derived from the tangible forest products that are exchanged in market. Therefore, further studies focus not only on the contributions of direct, cash benefits from forest products but also the non-cash and informal benefits forest generate through non-wood forest products, biodiversity conservation, carbon sequestration, hydrological regulation, and similar other ecosystem services. Forest agencies, in particular, should invest considerable efforts in order to collect data on non-cash and informal benefits in addition to the social, economic and environmental externalities forests generate. This could be achieved through collaboration across different sectoral agencies to integrate datasets, and make them publicly available through web-hosting or other forms of data dissemination in order to improve research and sharing in forestry. Areas that have historically been marginalized by the research community due to lack of relevant data would greatly benefit from such endeavors. Furthermore, within forestry sector, sub-sectors such as plantation forests and agro-forests require greater attention and further research in order to elevate the benefits from these sectors to livelihoods of local communities, and to the regional and national economy. While doing so, an interdisciplinary approach, taking into account the externalities from individual sub-sector, is essential. Measures as such would only ensure that the economic contribution from forestry sector will be in sizable proportion against contribution from other sectors of the economy to the overall economy of the nation.

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METHODS OF CONTROLLED TRANSACTIONS AND THE BEHAVIOR OF COMPANIES ACCORDING TO THE PUBLIC AND TAX POLICY

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SUMMARY

This paper aims to the analysis of the most common methods of controlled transactions, and the interpretation of the arm's length principle under the view of the tax income comparison between countries with high and low tax rates. Moreover, the factors of comparability scrutinized with a mathematical approach which shows how the tax factors interact within the countries' economies in the frame of a global view.

Keywords: controlled transactions, transfer pricing, tax impact factors

INTRODUCTION

The scope of this paper is to represent the methods of controlled transactions subject to the issue of high and low tax policies. The methodology which used is based on the Q.E. method. Therefore is used a quantification method of quality data, to illustrate the behavior of transactions subject to the form of the tax and public policy. Then, based on theoretical structures we determine the behavior of the economic mathematical model, to extract conclusions about the behavior of this model, using quantification and mathematical tools (Q.E. method).

THE CONCEPT OF THE QUANTIFICATION OF QUALITY DATA[1]

The concept of this theory is based on a methodology which stands on the determination of mathematic equations subject to conditions which also considered. One more important thing is the determination of the upper and the lower limit of the values of the independent variables. Forasmuch as, the dependent variable represents the behavior of selected model, pending on a generator which produces random values to all the independent variables to configure the interaction between them and their behavior under different conditions. At least the basic study includes two facets which are:

- The analysis of the behavior of the model which stands on the scrutiny of the structural characteristics of each model accordingly allowing with that way the extraction of general

1 See paper: Challoumis, Constantinos, Quantification of Everything (A Methodology for Quantification of Quality Data with Application and to Social and Theoretical Sciences) (November 12, 2017). Available at SSRN: https://ssrn.com/abstract=3136014 or http://dx.doi.org/10.2139/ssrn.3136014

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 basically the impact that one independent variable has with one or more others independent variables.
- The dependent variables are these which are modified for the generator. Thereupon, the generator produces values for the dependent variables. The extracted values of the generator allow the creation of magnitudes, which are the base for comparisons, and for the analysis of mathematical equations. With that way is plausible to quantify quality data, and theoretical terms. Moreover, according to this methodology the created magnitudes allow to proceed furthermore to econometrical analyses. In general is a methodology for quantification of quality data. Thus, using the Quantification of Everything (Q.E.) methodology is plausible to clarify the behavior of any model and to determine its standalone behavior, or its comparatively behavior, between different models. Therefore, this methodology as index permits the study of the following issues:
- Is possible the scrutiny and the examination of theoretical themes, from a quality analysis to quantity analysis.
- The creation of magnitudes can be used for any other analysis using that data as axis for further estimations with different scientific tools, and sciences.
- Consequently, the created magnitudes permit an econometric analysis.
- The units which crated don't have an S.I. (International System of Units) or any other type of unit determination system. But, is plausible to determine new units of measure under following international procedures, or only for the aim of each study.
- These units initially if are not determined are "virtual units". The term "virtual units" means that are used only for the purpose of each study and for comparability analysis.
- This methodology of transformation of quality data into quantity data allows a completely different approach of theoretical studies, as it permits the mathematical determination of terminologies, and the study of them in a different scientific field.

Hence, the Q.E. method follows as index four basic steps. The reason which referred as index is because there could be many modifications, and moreover a lot adaptions pending from the subject of study. For the serve of this scope follow these steps.

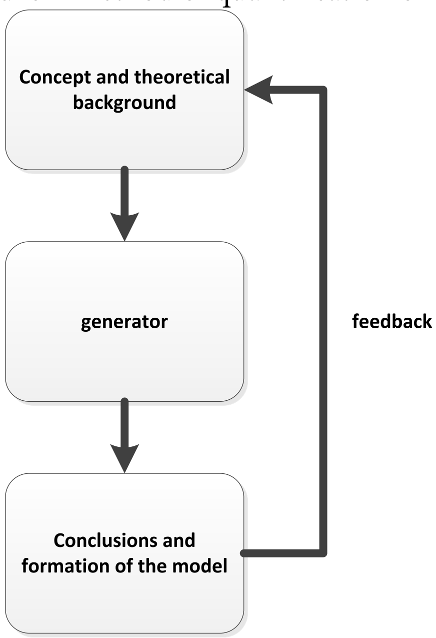
THE PROCEDURE OF QUANTIFICATION OF QUALITY DATA

Initially should be noted that that the mathematic approach is that which creates the range of data, and not the opposite. But, the initial determination of the upper and the lower limit of value is for the clarification of the independent variables, so it is irrelevant from the range of data. Then for this reason is not possible to have from the range of data the mathematical determination. Technically is plausible to make this opposite approach, but is out of the scope of this methodology; by strictly point of view. Ergo, each study of quantification of quality data has as initial point the mathematical determination, which comes from the theoretical approach. for this reason the mathematic equation consists and a hypothesis. This means that after the application of this methodology should be checked the consistent of the theory with the quantitation transformation. Otherwise, should be made the appropriate adjustments to comply the mathematical analysis with the theoretical principles. Thereupon, in a different if the theory is not determined and the basis point is the mathematical point of view the analysis initiates from a different point of view. But, always we have a feedback before and after the application of the Q.E. methodology. The collateral of this procedure is the consistency between the results, and the hypothesis, and this happens through a feedback, which always should be considered after the establishment of a theory using a hypothesis or check of an existing theory. Therefore in this point, we conclude the three basic points that the hypothesis and the mathematical determination need to complete its simplest form for the establishment of quality data:

- The first step is about the hypothesis. Hence, at this point is determined what it is under thought, and what is the scope of the analysis that follows. Thus, the mathematical determination is the main point of this step.
- The second step is about the generator, which produces the values for the independent variable. The key element is the upper and the lower limit, which used for the productions of values under randomization. This technique allows the formation, of the variables in a quantity control, which is not directed by the scientist. Thereupon, after a critical number of irritations is plausible to sketch the mathematical equation. Inasmuch as concluded the behavior of the equation. This procedure needs at least on mathematical equation, but an appropriate analysis needs at least two mathematical equations, with a lack of some variables, or more variables to the existing equation to understand how the equation reacts in different forms.
- The third step is very critical, as it is the point where is plausible to determine conclusions, and make a feedback with the first step, and with that way is plausible to proceed or with a confirmation of existing theory, or to submit new thesis.

Consequently the three steps which illustrated above show the general concept of quantification quality data. These three steps are illustrated in the next scheme:

Figure 1 Method of quantification of quality data



The Q.E. method uses the prior three steps for the formation of the model. The theoretical background or the theory is the source the generator which produced the data and gives shape to the mathematical approach. After the production of data and the formation of the equation is plausible to extract conclusions and/or to proceed to a further mathematical analysis.

THE MOST COMMON METHODS OF CONTROLLED TRANSACTIONS AND THE METHODOLOGY FOR THE PRICES, THE PROFITS, AND THE TAX ANALYSIS

There is a series of methods that used to identify the controlled transactions from the authorities, but the same procedure is followed by the enterprises which try to aim to the most appropriate method to achieve the best transactions for them. The one method is the CPM method which is the acronym of Comparable Profits Method. Another method is the RPM which is the acronym of

Resale Price Method. One more method that is used in controlled transactions is the CUP method which is the acronym of the Comparable Uncontrolled Method. And moreover two other methods are the PSM for Profit Split Method and the Cost-plus method.

- In the CPM the authorities compare the data that they have for their own case with the data that are available from the transactions in the market. Therefore is a pricing method that applies intercompany transfers. These comparisons are about the tangible and intangible property. The key element in this method is about the indicators. Therefore, the CPM uses objective measures of profitability. These indicators called profit-level indicators, and are used for the determination of the arm's length price. The uncontrolled companies are the base to extract conclusions about these indicators, because these companies engage in similar business activities under similar circumstances. These indicators apply to the controlled transactions, to find the appropriate arm's length price.[1]
- In the case of RPM the mechanism to control tax avoidance is about the determination of profitability of a distributor. The resale price method clarifies that it is easier for a distributor to determine its gross margin. The price of the resale price method is about the price of the distributor to the consumer. Then, in this situation the transfer price is the price to the customer, less the applicable gross margin which achieved by the distributor. The way to apply the resale price method is based on the adjustments for the differences between controlled and uncontrolled transactions where should be made if the differences between controlled and uncontrolled transactions affect gross margin in the materials. Therefore, these adjustments should be made to the gross profit margin earned from the uncontrolled transactions.
- Moreover, the comparable uncontrolled price (CUP) method estimates the amount charged in a controlled transaction is arm's length. The mechanism in this controlled transaction is about the comparison between the controlled transactions with the comparable uncontrolled transactions. The receipt of comparable data comes from two main sources. The first source is from the analysis of the prospective uncontrolled transactions. The second source is from public exchanges and quotation media.
- In the profit splits method each controlled taxpayer determines its appropriate share of profits in a way that reflects the functions performed, the resources employed, the risks assumed by each company in relevant activities. There is a distinction between profits split method. The first profit split method is about the comparable profit split method, and the second one method is about the residual profit split method. Therefore the comparable profit split method pends on the profit or loss on comparable transactions between two unrelated companies. The conclusion in this situation is that the aim of this method is to tackle operating profits by dividing them among the controlled taxpayers in amounts similar to those arising by the uncontrolled transactions. The second one specific profit split method, which is the residual profit split method is about the combined operation profit and loss from relevant enterprise activity which is allocated between them. It is obtained that the operating income is allocated to each participant to be able to yield a market return to the business activity. The residual profit that belongs to the controlled group's valuable intangible property is distributed between the participants.
- The cost-plus method is a similar method with the resale price method, but the main difference between them is that the RPM uses the profitability of the distributor and the cost-plus method uses the profitability of the manufacturer. The cost-plus method assumes that is more easy for a manufacturer to determine its cost than to use the gross margin of a distributor. On the other hand, the resale price method assumes that it is easier for a distributor to clarify its gross margin than it is for the manufacturer to conclude its cost pricing. Therefore, the cost-plus method of transfer pricing combines the costs that needed to produce the property with the gross profit markup which comes from the costs. The amount that is charged in controlled transactions is compared with the amount of the uncontrolled transactions estimating whether the gross profit markup is arm's length.[2]

These methods are the base of comparison between controlled and uncontrolled transactions to estimate the tax avoidance of enterprises by their business activity. These are the base for the next theory analysis and the mathematical comparison of tax income between countries.
In addition must be underlined that the methodology which followed is based on the Q.E. method using mathematical analysis and programming tools to establish the conclusions about this economic approach. [3]

TAX INCOME COMPARISON BETWEEN COUNTRIES WITH HIGH AND LOW TAX RATES

The estimations of all the prior methods for controlled transactions happen through the comparison of prices between the companies that have similar business activities. In this point introduced the equation about the tax income of countries, whose are tax heavens.

$s = \sum_{j=1}^{n} s_j$ (1)

The symbol of, shows the impact factor of the tax revenues of the countries which are tax heavens. In addition the countries which lose tax income described by the following equation:

$\tilde{s} = + \sum_{i=1}^{m} s_i$ (2)

The symbol of, represents the impact factor of the tax revenues of the countries which are not tax heavens. These countries receive the products that are taxed in different countries losing with that way income. If the companies didn't make tax avoidances then these countries wouldn't lose money by the taxpayers. On that logic the equation (1) and (2) are considered in global economic environment.
The loss of tax income from some countries is more than the profits that make the countries which are tax heavens. This though is based on the principle that this is and the reason why the offshore companies prefer the tax heavens. But, simultaneously this means that the aggregate income in a global view is less, from the case that these tax heavens didn't exist. This doesn't mean that we have negative global tax income [see equation (3)], but that we have losses and this represented in the next equation:

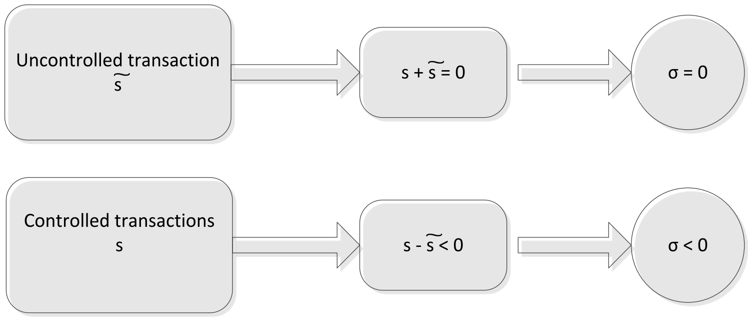
$\sigma = s - \tilde{s} < 0$ (3)

The symbol of is the impact factor of balanced tax income. In the previous equation this income is negative because there are tax heavens which cause this loss of global tax income, comparing with the case where the tax heavens weren't exist. This point of view is illustrated by the following equation:

$\sigma = 0$ (4)

Therefore, by the previous equation we have the case that uncontrolled transactions represent the market where the transactions are in balance between the countries which are not tax heavens and the countries that could be tax heavens, meaning that these are potential countries for tax avoidance. The interpretation is that in that instance doesn't exist any tax avoidance (equation (4)). A different case is the instance that we have tax heaves, and there are countries which are not tax heavens and countries which are tax heavens. [4] The reason why the equation (3) is negative stands on the view that the global income for (no tax heavens) is more than s (existence of tax heavens). [5][6]

Figure 2 Tax income factors



The previous figure for the tax income factor shows the prior analysis for the equations (1), (2), (3), and (4). The equation (4) is an identical view, where globally no tax avoidance through controlled transactions could be achieved by any company.

METHODS WHICH APPLIED IN THE CONTROLLED TRANSACTIONS

The arm's length principle is an international standard that OECD member countries have agreed to use for taxation. The transfer prices are determined under this standard and are considered as the conditions which made between companies in their commercial relations, and are different from those which would be made between independent companies. This determination according to OECD shows the way how to estimate the profits which are not taxed. The arm's length principle is applied to the prior methods to find the appropriate taxation to the enterprises. The arm's length range is about the acceptance of a control transaction under the arm's length principle. The methodology for the arm's length range is established or by applying the same transfer method to multiple comparable data or from applying different transfer pricing methods.[7]

The enterprises follow procedures to find the most appropriate method, mainly some of the prior referred methods to avoid taxation, or to minimize their tax obligations. Each company chooses the method which prefer, and afterwards the authorities examine the submitted data from the companies, and make comparisons under the OECD standard of the arm's length principle to determine the taxation. The problem for the enterprises and the same time for the authorities is that the available data many times are not so secure and accurate. This means that the data which are referred to extremely similar conditions of uncontrolled business activities is very difficult to be found. Therefore, the enterprises have at least two themes where they can adjust their prices according to arm's length principle:

The enterprises can adjust their prices according to the data that can submit to authorities for the comparison with the uncontrolled business activities of companies.

The enterprises can choose their controlled transaction method.

Therefore, we conclude that the companies which participate in controlled transactions have an extended frame, where they can establish their business activities. Then, the basis for this analysis is the comparison between the controlled and uncontrolled transactions, to identify the most appropriate method to submit their data to the authorities for their taxation. Then, the comparability is the mainstream strategy of the companies which participate in the controlled transactions to achieve the best tax-plan pricing.

FACTORS OF COMPARABILITY ANALYSIS IN COMBINATION WITH THE IMPACT FACTOR OF BALANCED TAX INCOME

The comparability that companies use for their controlled transactions can be distinguished in some parts. It is obtained that all factors which affect prices and profits must be considered in the comparability analysis. Therefore, the five factors of comparability analysis are the functional analysis, the contractual terms, the economic conditions, the property or services, and the risk.

The functional analysis aims on the resources employed and anything that is affiliated with these functions, and with the functions performed by the business activities of the companies. According to this transfer pricing approach we have a comparison of functions which performed by a company, and the other connected parties with this company to determine the grade of comparability, between the controlled and the uncontrolled business activities. This happens by comparing the most economically significant activities. This means because companies have not unlimited sources and time, must use the most significant information to extract their conclusions. The main point of functional analysis is to begin with the designing of the product and end with the sales of this product. The factors that are connected with the planning of a product from this as a starting point until the sale of this product are considered as important factors.

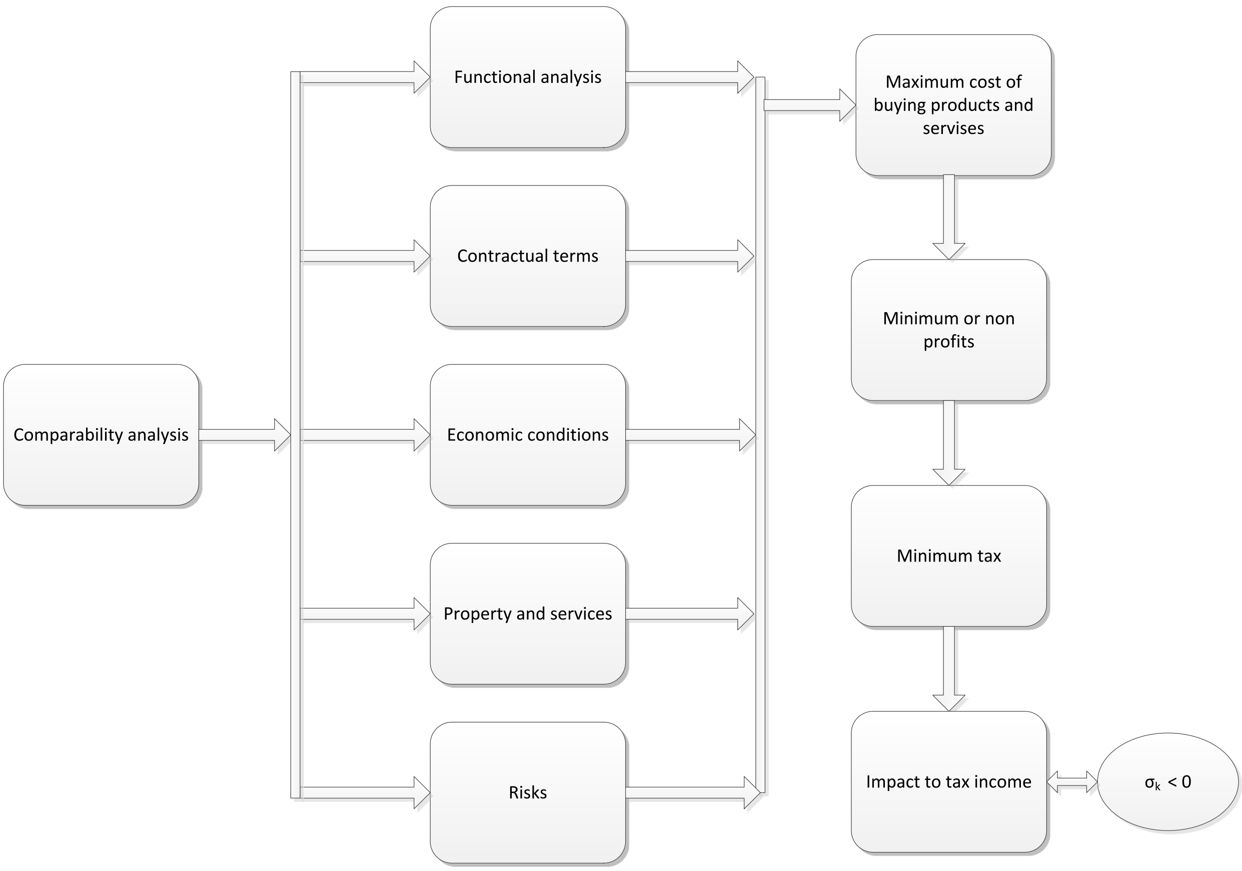
The issue about the contractual terms it is important in the controlled transactions, because it is the factor which could affect the transactions between companies, as the terms can affect the prices. Therefore, the companies scrutinize some facets of contractual terms. As index some of them are the payment terms, collateral terms for the business acuities between a buyer and seller, collateral terms between a company and its subsidiary, the form which charged to the tax payer, the volume of purchases, the volume of sales, the warranties, the rights for the intangible property, the duration and the termination of the agreement, and anything relevant with this contractual terms, which could affect the transfer prices between the companies. Then, companies make adjustments to the contractual terms to avoid any unwanted disturbance in their prices. In this point should be referred that there is a separation between written agreements, and non-written agreements. The written agreements are used for the creation of stable and consistent agreements between the companies and their ancillaries. The non-written agreements are very important, because are not so obvious and detectable for the authorities. Then, the result is that the controlled transections possibly are a little bit more insecure, but simultaneously are giving more space to the companies to adjust their transfer prices to the wishing level.[8]

The theme of the economic conditions is one more important factor for the transfer pricing of the business activities. One basic characteristic of this factor is not stable, so the companies should predict and estimate the economic conditions of the countries where they have business activities. As significant economic conditions considered these conditions which can affect the prices and the profits. The impact of economic conditions is important to determine the degree of comparability between the controlled and the uncontrolled transactions. [9] As index some of these economic conditions are the level of similarity between the markets which belong to the same geographical region, the local costs and the cost for distribution of these products, the competition of each market, if the market is a retail or wholesale market, and in general anything that is connected with the significant economic conditions for each case separately.

The factor for the property and services is transfer pricing method where the controlled transactions are considered under the view of the property and the services. These property and services could be considered in a macroeconomic approach as the capital and the labor accordingly. [10] Transfer pricing happens to a company with its subsidiaries for the tangibles, but also the same happens for the intangibles. The intangibles could be a part of the property or a part of the services.

And the risk is one more factor which can have impact to the prices and the profits of the companies which have business activities in controlled transactions. The identification of the risk pends on the entrepreneur, because must decide which risks are important and which of them have significant impact to their functionality and to their activities. [11] Therefore, a company which participate in controlled transactions should consider the credit risks, the market risks, the financial risks, the product risks, the liability of the products, the disturbances in the exchange of foreign currency, the fluctuations in the interest rates, the fluctuations in the costs, in the demand, the R&D activities, and the market risks.[12] The market risks is one of the most significant risks that must an enterprise should consider to its business plan, because affects directly the business activities of the companies. We conclude that independently from the data which used for the scrutiny of the transactions between the companies, in any case the comparability analysis serves the arms' length principle. The companies have the advantage to choose the method which find as best for the determination of their prices and their profits.

Figure 3 Comparability analysis and impact factor of balanced tax income



To the previous scheme is concluded that the companies which participate in controlled transactions achieve to allocate their profits, their prices and tax obligations. Enterprises try to maximize their costs in high tax rates environments to achieve less tax in these economic environments. Because, following that procedure these companies present low profits or nonprofits, and then the authorities tax them in limited amounts of money. This figure indicates the case that described in the equation (3).

It is obtained that $\sigma_k < 0$ represents the limited or the no existence presentation of profits by the companies which participate in controlled transactions. Therefore, for the comparability analysis we have the following equation:

$\sigma_K = \sum_{k=1}^{l} \sigma_k$, where $k = 1, \dots l$ (5)

The symbol of is the impact factor of balanced tax income but for each company separately, and is the aggregate number of companies, which reflect the tax income for the authorities. Subject to the previous figure we have that:

$\sigma_K < 0$ (6)

The equation (6) indicates that we have less tax income, for the reason that there are controlled transactions. In a different situation where no tax avoidance could exist, there in that identical situation the equation is this:

$$\sigma_K = 0 \qquad (7)$$

Based on the previous analysis and the arms' length range, companies decide if they would proceed to business activities in the frame of the control transactions. In addition under the perception of the range where the companies should comply, we identify three at least cases which can be used in the comparability analysis:

- The first approach is about the situation where a company has only one method which could apply for its controlled transactions.
- The second approach is about the case where a company has more than one method which could apply for its controlled transactions.
- The third approach is about the situation where a company is not plausible to apply any method for its controlled transactions, and therefore must use special techniques to avoid the difficulties. The most usual technique is to use different sources of data from the uncontrolled transactions to fix the divergence between the controlled and the uncontrolled transactions.

With the previous analysis of the prices, the profits, the taxation, the impact factors of the tax revenues of the countries which are tax heavens, the countries which are not tax heavens, and the balanced tax income (including and the case of) we can determine the factors that interact with the tax income. Therefore, we have the following equation:

$$s = \frac{k+l}{r+c+t} \qquad (8)$$

Subject to:

$$\tilde{k} > k,\ \tilde{l} > l,\ r > \tilde{r},\ t > \tilde{t}, \text{and}\ c > \tilde{c} \qquad (9)$$

The symbol of defined previously, and the new coefficients are and. The symbol of is about the impact factor of capital, the is the impact factor about the liability of the authorities of the tax system; meaning how much unbalanced it is (making a lot of changes), the r is about the risk, the t is about how much trustworthy is the tax system (lack of bureaucracy), and the symbol of c is about the cost of enterprises. The symbols with the "~" are accordingly the same thing, but from the view of the uncontrolled transactions. Thus, the numerator is proportional with the income of taxes, as the investments and the stable tax environments, with lack of bureaucracy enhance the tax income. On the other hand the denominator is inverted proportional with the tax income, as the risk, the cost, and the unbalance of taxation cause less tax income. Moreover, for we have that:

$$\tilde{s} = \frac{\tilde{k}+\tilde{l}}{\tilde{r}+\tilde{c}+\tilde{t}} \qquad (10)$$

Considering the equation (9) and the equation (10) we determine the aggregate impact factor of tax revenues, which is symbolized by, and is determined by the following equation:

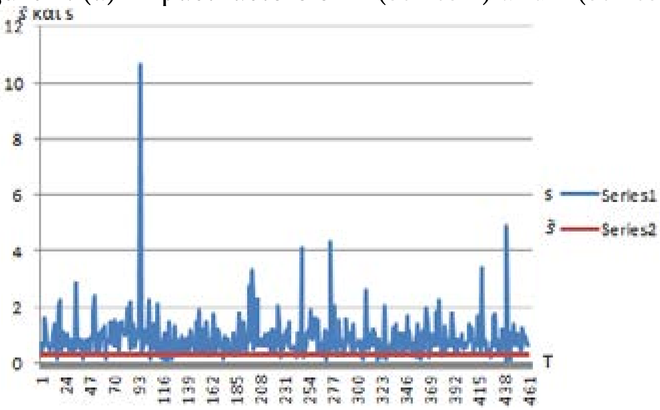
$$\hat{s} = s + \tilde{s} \qquad (11)$$

In consequence of equations (8), (9), (10), and (11), we continue to a detection of the behavior of the impact factors of tax revenues in the case tax heavens, and in the case of the non-tax heavens. Appling the Q.E. method and choosing the appropriate values for the coefficients we have the following table:

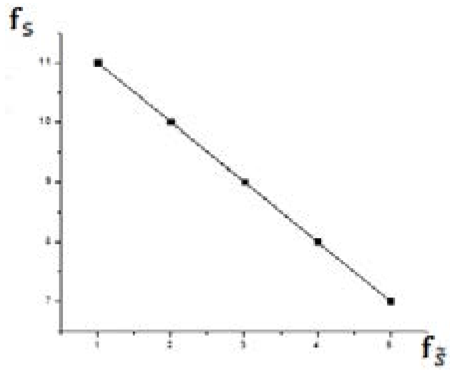
Table 1 Compiling coefficients

Factors	Values
k	0.4
l	0.4
r	0.6
c	0.3
t	0.21
fs	<0.3
f	>0.3

The generator of this procedure used the coefficients which appeared on the previous table. This means that generated the prior equations with the values of these coefficients and extracted the next diagrams. Thus, we have that the factors have an upper limit of 1, and a lower limit 0, but and are plausible to receive values greater than one as their mathematical structure allow this. After 461 iterations using Q.E. methodology extracted the following diagrams:
(a)(b)
Figure 4: (a) Impact factors of s (series 1) and $\tilde{s}$ (series 2), (b) frequencies s of $\tilde{s}$ and



(a)



(b)

In diagram (a) the $\tilde{s}$ is used as a constant for the comparison with the s. The diagram (a) shows that there are some disturbances when the nominator of equation (8) is lower than the denominator. The reason for this is that the tax system hasn't got good characteristics and is not friendly for the enterprises. In diagram (b) we obtain that the frequency of f_s is higher than the frequency of $f_{\tilde{s}}$. . Hence, the controlled transactions are more than the uncontrolled transactions. This happens in diagram (b), because as we saw in diagram (a) we have in that examination a bad taxation (high taxation) environment as the denominator of equation (8) is higher than the nominator. Then, the companies prefer to proceed to controlled transactions, to establish more profits, and better allocation to their prices, through their transfer pricing.

CONCLUSIONS

In this paper we determined the behavior of the controlled and uncontrolled transactions subject to the case of low and high tax economic environments. The controlled transactions are increased in the case that in any economy the taxation is high, and on the other hand the uncontrolled transactions are increased when the taxation is low. Thence, the public and tax policy affect the behavior of the enterprises directly. The theoretical approaches in combination with mathematical and quantification tools allowed the designation of behavior of enterprises subject to the taxation and the public policies.

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INNOVATIVE ECONOMY IN THE LIGHT OF REFORMS AND BUSSSINESS MODERNIZATION[1]

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SUMMARY

It is widely obvious that the modern business depends on many new previously unknown factors: innovations, technology expanding, information dispersion and collection, culture, imaginations, and other intangible productive factors. This paper deals with some of the unexpected changes that we could recognise as the most influential ones in the new economy era. Purpose and findings of the substantial theoretic and empirical analysis are oriented to the modernisation and sophistication of today business, especially in developing, emerging and small countries. All of them are exposed to severe market reforms, in order to be more efficient and effective in global and regional level. This paper contains the analysis of content of global development documents and literary materials, as well as cross-referencing of statistical and other available data. The findings of this study could result in better orientation of industrial policies and clearer path for the future broader researches to be conducted in this field.

Keywords: invention, innovative economy, modern business, modernisation, sophistication, sustainable business

INTRODUCTION: TERMINOLOGY DISCTINCTION AND OBJECTIVES

Numerous analysts, not only economists, but also sociologists, philosophers, engineers, have noted that since the end of XX century, there have constantly been essentially different developments in the socio-economic structure of today's world. The effect of innovations and the rapid pace of continuous changes are the primary reason for the absence of a unified, single theoretical distinction of the terms "new economy" and "new society". Previously, such occurrence was identified by sociologists Alain Touraine and Daniel Bell as "post-industrial society". Some others used the category "information society", whereas Peter Drucker created the term "knowledge society" or "post-capitalist society". It is obvious that fairly heterogeneous, uncertain and somewhat elusive processes involving not only the economy and technology, but the lifestyles and cultures around the world, could not have been encompassed by a single, well suited term. Judging by the current situation, such status will be maintained for some time.
In the response to the question of why there are no unified theoretical postulates on "new society"

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and “new economy”, the reason should be sought in the pace of change or in the effect of innovation. Innovation (as derived from Latin “innovātiōn” - something new or different introduced) is “the process of transitioning a new idea into practical application”. It is preceded by invention, as “the process of transforming intellectual ideas into a new artefact (usually being a product or a process)” (Stošić 2013, p.2). While this interpretation may appear as somewhat confusing, most people realize that innovation cannot be achieved without new and different ideas, as well as without its conceptualization, and ultimately, without respective application that mainly depends on the practical needs of the people. One should not forget that all of the above is conditioned by the endless variety of needs, as well as their continuous generation and innovation, due to changes in technologies, culture and lifestyle in general.

Innovative economy primarily involves the economic structure and economic processes that are mostly based on innovation. However, the notion of an innovative economy did not occur simply as a result of the impact analysis of the innovations themselves. Even before the use of this concept there was a shift in the focus of the analysis of economic development from the effects of labour, capital, technology and natural resources into new so-called immaterial or intangible factors such as knowledge, information, culture..., which was, alongside with the notions of management and entrepreneurship, and in the absence of a better term, named the new economy.

The new economy is a term that explains the qualitative redefinition of the structure of productive factors, undergoing change in the late XX and early XXI century. As such, it encompasses the meaning of the comprehensive impact of all tangible and intangible factors that condition economic activity and development as a whole, with particular reference to categories such as productivity, efficiency, sustainability, etc.

NEW ECONOMY AND REDEFINITION OF PRODUCTION FACTORS

Every systemic and paradigmatic[2] economy was once “new”. That was also the case more than ten thousand years ago in the changes caused by the agricultural revolution (Beeby, Brennan, 2008, p. 268). Similar changes have been made by the expansion of international trade that came through the merchant capitalism of the XV and XVI century. Then came the original industrial era (XVIII and XIX century), followed by the phase of new industrial revolutions (XX century), and finally, the famous globalization era. The authors who reviewed them and defined their principles made no epochal discoveries. They only managed to register changes that spread diligently thanks to advancements in technology, communications and culture. One thing is certain - innovations have become an integral part of all the crucial socio-economic changes in people’s lives during the 20th century. However, the XXI century brought about the expedition of these innovations and even more drastic changes

THE THEORETICAL EVALUATION OF THE “NEW ECONOMY”

The creator of modern economy Adam Smith although indirectly, insisted on innovation as the driving force of positive change and development in general, alongside with many other authors. Smith in “The Wealth of Nations” claims that freedom of business and market choice, international division of labour, specialization, as well as the competition of entities with equal rights in the market, leads to the development and efficiency of each economy. Therefore, Smith wrote two and a half centuries ago, stated in a prophetical manner that there is a “natural course of things”, according to which “a major portion of the capital from a growing society is focused onto agriculture, followed by manufacture and finally onto foreign trade” with the prospect that such a change in the structure would have to reverse the order of things in all modern European countries (Smith 1970, p. 537).

[2]*Paradigm* is the word from the ancient Greek, meaning *an example*. It was used by Thomas S. Kuhn in his work “*Structure of Scientific Revolutions*” (1962) to show that the dominant thinking system and the method of thinking change due to changes made through respectable scientific models and achievements - examples (Kuhn, 1980).

The Marxist interpretation of the social effect of the technological changes of the XIX century industrial capitalism through the phrase "development of productive forces" accented the emerging contradiction between technology and people. Technological progress towards this development model leads to the minimization of the role of "living labour" in comparison to the "materialised one" or technological one, which further produces labour surplus, generates the "reserve army of labour" and increases unemployment. No one is as disillusioned any more on the matter that automation and robotics lead to the reduction of directly employed labour, and that it is one of the risks of a technological civilization (Vinay, Nandy, 2012).

The entire spectrum of new terms and concepts referred to the ever-lesser economic and developmental impact of the sector usually named industries, that is, of the manufacturing industry. When information and ideas, strategies and decision-making systems became more influential on market results than the number of products achieved within the specific time unit and when the material product as the objective of economic activity increasingly started to be replaced by the vast array of services, the aforementioned Bell skilfully used the category "post-industrial". Under the influence of modern, progressive and increasingly digitalized technologies, the term "digital economy" was introduced later. In the effort to accentuate certain aspects of the new economy, the terms "weightless economy" and the "knowledge-based economy" have emerged, as the determinants that en masse may somehow fit into the rather vague but comprehensive term "new economy".

INNOVATION - A LUCRATIVE COMMODITY OR STRATEGIC ADVANTAGE: AN EXAMPLE OF ASIA

Knowledge has become a key factor that has spawned many innovations as well as new technological solutions by systematic expansion following the Second World War. First of all, economist James Tobin confirmed that in the 1970s, the contribution of knowledge to growth and productivity in advanced economies was over 70%, whereas the contribution of labour and capital was only 12%. In Japan, even at such early stage, the contribution of knowledge was as much as 95%, with all the other factors being only 5%. This brought forth many other structural changes. Due to labour productivity growth in the "new knowledge-based industry", the number of production staff in the OECD countries was abruptly cut down from about 2/3 of the total employees during the sixties, to just around 1/3 at the end of the XX century. (Filipović, Đukić, 2007; Đukić, Đukanović, 2014).

Whenever the discussion on the role of economic development and the long-term relative growth of national economies or regions is initiated, we are always faced with a paradigmatic example of Japan, which emerged as a Phoenix from the ashes of the Second World War and evolved until the 1990s utilising its innovation strategy and knowledge to create and implement new technologies. Somewhat later, Drucker[3] explained what the category "social entrepreneurship" meant for the entire Japan, and that Japan, during the 1990s, implemented overly traditional and conservative policy of restructuring and industry, which included too many employees. Ichimura explained in a comprehensive way that a wide range of factors, from depopulation and aging of the population, to poor administrative organization and industrial policy, caused the later trailing of Japan, as the opposite to it being noted as the prime example of global growth in the XX century (Ichimura 2016, pp. 70, 71).

Either way, in the course of the last decades of the XX century, it was necessary to adapt to the entrepreneurial growth model, which became the key advantage for creating a multitude of new jobs, thus becoming a haven of the workforce in the restructuring processes. From the United States, through the Czech Republic, to Turkey and Indonesia, thanks to the entrepreneurial economy, the reform of the real sector of the economy and rapid technological change were easier and more

[3]In generating the idea of „the new society" Drucker referred to the evolution of the term "scientific management" he attributed to the economist Fritz Machlup and to the founder of scientific management theory Frederick Winslow Taylor

successful (Drucker 1993, p. 119).
OECD analyses have shown that the innovation economy has enormous potential in synergy with entrepreneurship, and not only in the so-called sector of high and advanced technologies, but particularly in medium and lower technologies. Namely, the notion of "new technology" changed very quickly. There is a danger that many changes in the knowledge-based economy are attributed exclusively to information and communication technologies. French author F. Rischard convincingly demonstrated that "the new world economy" implies a "radically different business system" that has nothing to do with the Internet or with a "narrow concept of a new economy," and that it brings "a new method of thinking that was brought by the economic and technological revolution" (Rischard, 2008, p. 19).
The aforementioned developmental fatigue of Japan which occurred in 1990s was luckily followed by China's expansion, which is likely to be joined by some other countries in the future that are probably to be positioned at the top as the new growth champions. The Asian financial crisis of 1977 only briefly spread to the whole world. Its consequences did not greatly counterbalance the whole of Asia, which also avoided the major devastating effects of the global crisis of 2008-2009, which hit the European continent in several waves. Growth in the leading Asian economies of China and India has remained dynamic and has supported many smaller Asian economies. The secret of Asian ascension, occurring at the end of the XX and the beginning of the XXI century, is undoubtedly related to the global initiative and development of international trade, as well as to the principle of innovation that is nurtured not only in the most technologically advanced economies. This is testified to by a illustrated OECD report referring to innovative Asia. The economic scene of the 1970's and 1980's launched the so-called small Asian tigers such as Singapore, Taiwan, Hong Kong ... Dynamic growth based on knowledge and innovations brought South Korea into focus, only for China to follow, with the limelight being rapidly turned towards India, Vietnam, Indonesia... Asian examples of "innovative intensive economies" and knowledge-based new economies are not the only ones but they are very indicative as they give a chance to less developed economies of other continents.

KNOWLEDGE, INNOVATION AND INCOME GROWTH

Recent economic research on generating long-term growth particularly underlines the category of technological changes, resulting in the "endogenous technological change theory". This theory aims to "reveal the method by which private market forces, decisions in public policy and alternative institutions lead to different patterns of technological change." Such direction of growth theory, in contrast to neoclassical theory, is primarily focused on the changes themselves and benefits from them. For the purpose of the authenticity of the message, we shall deviate from the regular practice and quote the following paragraph in its entirety: "Technological change - which increases output produced for a given bundle of inputs - is a crucial ingredient in the growth of nations. The new growth theory seeks to uncover the processes which generate technological change "(Samuelson, Nordhouse 2009, pp. 567)
However, any technological change is a product that is susceptible to severe market uncertainties and frequent failures as technology is a public good that is expensive to produce but suitable for reproduction. Consequently, Governments increasingly seek to provide strong intellectual property rights for those who develop new technologies (Samuelson, Nordhouse 2009, p. 568). The basic feature of technologies as the best possible combination of science, skills, creations and crafts is that it is mostly a public asset, as it can be simultaneously used by a large number of market participants, thus contributing to rapid expansion of their utilization and increase of the overall social impact. Without the notion to diminish this effect and with the intention to support private interest in scientific discoveries and technological innovations, governments seek to protect developers of technological changes by protecting the so-called intellectual property. Intellectual

property (embodied through legal institutes in the form of inventions, patents, licenses ...) is one of the most important features of a modern market economy that guarantee long-term growth. The World Economic Forum (WEF) places the quality of the institutions as the main or the first of the twelve "pillars of competitiveness" of national economies. The conclusion that a long-term growth requires a proper combination of knowledge in its broadest sense, innovation and institutional arrangements that provide support and protection, remains indisputable.

The role of knowledge legitimately emerged in recent theory and practice of "total factor productivity" (TPF - Tobin, Carillo, 2005). Bearing in mind the growth of its economic and technological importance, Peter Drucker was the first to name a very formidable social group formed on the fundamentals of competencies as "knowledge workers" (Drucker 1995, p. 23). Unlike regular workers, they classify as different group, and as bearers of the economy and the knowledge society they seek employment in the modern services sector, not exclusively in high technology sector.

The latest global practices show that economic activity is no longer divided into a capital-intensive and labour-intensive one. Nowadays, it seems that we need to consider "knowledge-intensive" activity as a dedicated aggregate economic sector. In doing so, all sub-sectors of the knowledge economy have essential preconditions for success, although this does not mean that they will automatically succeed (OECD 2014). Differences in the income of countries such as Mexico, Brazil, South Korea during the 1960s were negligible, but in the late 20th century Korea already made 9 USD per working hour, in Mexico and Brazil hourly wage was not more than 2 USD, whereas in China it amounted to only 0.6 USD (Đukić, 2013, p.68). In the meantime, China has become the world's leading economy based on a comparable overall GDP (calculated on purchasing power parity - GDP p.p.p.), while the average hourly earnings of Chinese workers nowadays amount to about 2.65 USD.4

According to per capita income, China is still a medium-developed country, meaning that we could classify its relative innovation results and development into the context of some of the medium-sized economies of the Western Balkans. To illustrate the comparison, data for Japan and Poland will also be tabulated, according to the Global Competitiveness Index (GCI) report.

Based on the information from the World Economic Forum, China with a 8113 USD per capita income is placed above Montenegro (6628 USD per capita) and Serbia (5376.3 USD per capita), but below Croatia (12095 USD per capita). Of all the selected countries (relevant for our analysis) in Table 1, Japan has the highest general competitiveness rank (column 1), which occupies the 9th place on the world rankings. However, its ranking among the world's nations is even more favourable when it comes to pillars within the third block, pillars: 11th business sophistication (column 3); and 12th innovation (column 4). In order to perceive the entire picture, we have used Technology readiness levels (column 2). The average of the global index of these three pillars (ranks from columns 2-4) is given in column (5). The synthetic rank obtained by this method can be conditionally named synthetic innovativeness. We used it to compare these derived relative estimates with respect to the overall ranking of the given countries.

The results obtained indicate that the average rank coefficient of a country, with respect to the field of business sophistication and innovation as opposed to the general ranking of the country may be either lower or higher than 1. If it is higher than 1, in our case it means that the economy in question is an innovative intensive economy, whereas the values below 1 indicate a net lower inclination towards innovation and sophistication (modernization) of businesses.

In all of the cases regarding the post-transition countries or in the countries undergoing reforms (such as the former socialist economies of the Balkans, as well as Poland and China), this coefficient is significantly lower than 1. The only exception is Slovenia, which was the most developed constituent republic of SFR Yugoslavia, having started its individual development in 1991, becoming a member of the EU in as early as 2004. The Slovenian innovation and modernization coefficient amounts

[4]Author's calculation per official data on income and exchange rate of Chinese Yuan (https://www.statista.com/statistics/233886/minimum-wage-per-hour-in-china-by-city-and-province/, accessed on 25 May 2018)

to 1.26, whereas in the case of Japan, this coefficient is clearly the highest and amounts to 1.63. In spite of the delay in growth elaborated above, in recent decades Japan has maintained its position as an innovative and technologically intensive economy, in line with its long tradition of being technologically developed and modernized (Table 1). The table also contains values of comparable income (GDP per capita - column 6). For clearer understanding, the Figure 1 which complements the table will, by means of graphic representation of these values, provide comparison by using income of Poland as the benchmark value - unit income measure (= 1).

Table 1 Comparative structure of competitiveness ranking of certain countries, with the business sophistication and innovation coefficient, compared to the income

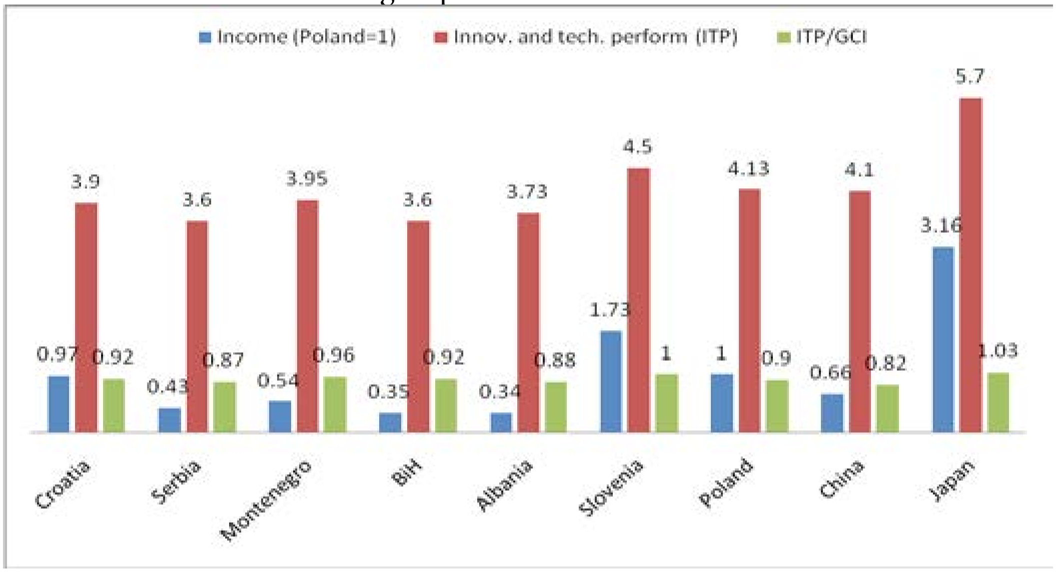
	(1) Gen. rank 2017	(2) Rank Techno readiness	(3) Business sophistication rank	(4) Innovation rank	(5) Average (2,3,4)	(6) 1/ Average (2,3,4)	Income per cap.
Croatia	74	72	82	106	94	0.78	12095.2
Serbia	78	48	110	95	102.5	0.82	5376.3
Montenegro	77	69	101	91	96	0.84	6628.6
BiH	103	81	115	123	119	0.86	4308.2
Albania	75	35	74	87	80.5	0.93	4203.4
Slovenia	48	47	41	35	38	1.26	21320
Poland	39	73	57	59	58	0.66	12350
China	28	15	33	28	30.5	0.91	8113
Japan	9	15	3	8	5.5	1.63	38717.3

Source: GCI Reports (WEF) for 2017/2018 and author's calculations

In addition to the income of each country, instead of general ranking, the respective ascending grade (from 1-7) of competitiveness according to selected competitiveness pillars (WEF) was used. The average grade for the 9th pillar - techno readiness; 10th pillar – business sophistication and 12th pillar - innovation, was provisionally named an assessment of innovation-technological performances (from 3.6 - BiH to 6.8 - Japan).
Coefficients of the average grades thus obtained that were aptly named as the "innovation-technological performance" (ITP); and Global Competitiveness Index (GCI) differ slightly in relation to the parameters in Table 1 and only in the case of Slovenia they reach 1, in the case of Japan 1.03 and in all other cases they range between 0.87 and 0.96. (Figure 1.)

The conclusion is as expected: the income brings about the innovation-technological performance of the economies. However, in the cases of their centrally planned political and economic heritage (the Balkan countries and Poland), this heritage leaves an impact on the somewhat weaker applicability of the achieved innovations, as well as to the poorer assessments of the existing "business sophistication" and "technological readiness". Again, Slovenia has, as the most developed country, distinguished itself as an example of how innovation can be used to improve general technological performance in a relatively short but sufficiently long period, but with a very stimulating institutional environment (EU membership for more than a decade).

Figure 1 Illustration of the income conditionality of innovation-technological performances for the group of selected countries



Source: GCI WEF 2017/2018, and author's calculations

The above finding almost completely fits into the qualitative assessments of the World Economic Forum and the OECD claiming in their own way that the benefits of applying new technologies and innovations do not spread fast enough in developing countries or in fast-growing big economies. Simply put, benefits from this sector in conditions present in the less developed countries with lower-income are relatively less compared to the conditions of long-term market development. For innovation and a knowledge-based economy, particular importance is attributed to the factor of institutions, according to which underdeveloped countries, recently established democracies and shallow-established reforms have been fairly poorly assessed.

RISKS OF INNOVATIVE ECONOMY

The development of technology, as well as of crafts and science, or put simply integration of useful knowledge and skills with scientific research, has brought new potential, but also enormous and terrible threats. They were particularly elaborated by Aldous Huxley (Brave New World, 1932), who in his vision of reproductive technology and "learning in a dream," drew attention to a vast dystopia of a knowledge-based economy (Huxley, 2009). He came to the conclusion that this could lead to the creation of a "new society" in which "a man is nothing and the system is everything". Sometime later, such concept was repeated by Alberto Mussolini in his fascist military-political concept by saying that "man is nothing and the state is everything" (Đukić 2014, pp. 28, 29). The totalitarianism of knowledge and technology remains a real threat and the subject of research not only of social psychology or culture, but also of human or social economy, as well as of industrial economy or labour economy.

RISKS OF ADAPTATION TO TECHNOLOGICAL CHANGES

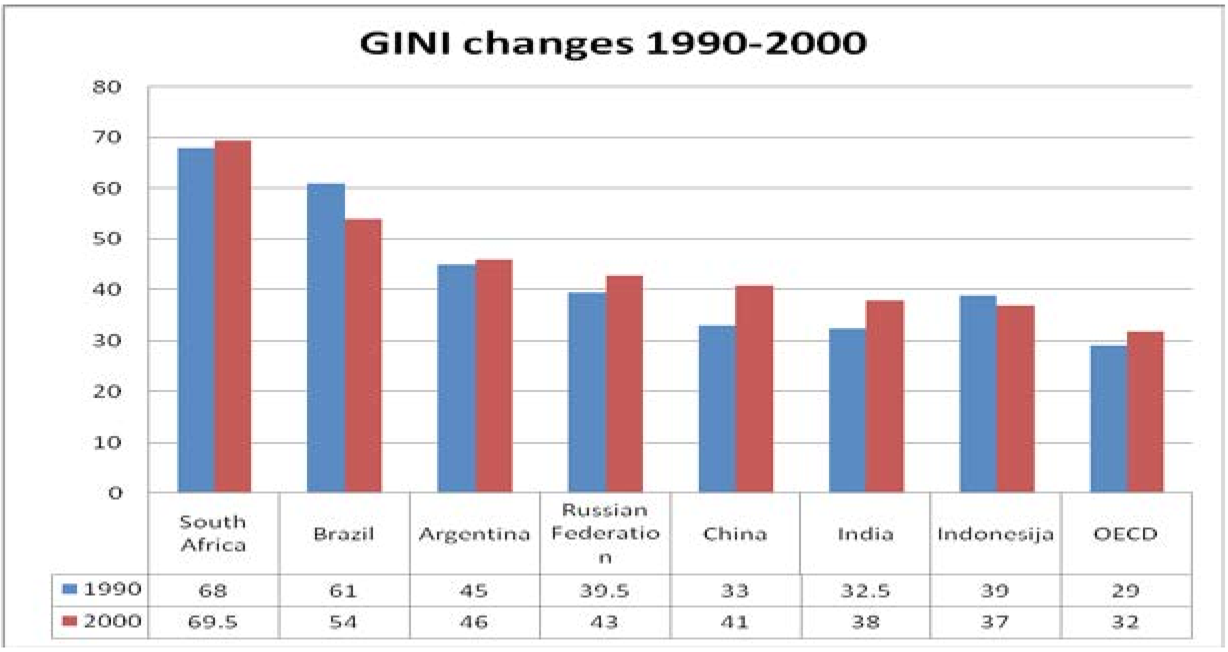
Technological changes have generated another risk. It is the pace that people can hardly adjust to. In 1972, Alvin Toffler pointed out the possibility of a revolutionary transition from an industrial to a "super-industrial society" that would bring "too rapid changes at too short intervals", whereas those changes would shock people unable to manage within them. Toffler's hypothesis is something that is already happening today, particularly in the perception of digital actions that cannot be sufficiently acquired by the older generations, which in some ways increases the difference in costs

and quality of life and the intergenerational gap. (Đukić 2014, p. 30)
Finally, today's findings on the increase of the risk of being inept to rapid technological changes are also found in the latest reports on global competitiveness of the World Economic Forum (WEF 2017/2018). Thus, in the introductory part of the Report, it is explicitly stated that today's technological changes are spreading so rapidly that their consequences are unpredictable, and the adjustment is becoming increasingly difficult and risky. According to the report, technological innovations have become an integral part of the practice of less developed and fast-growing economies, but they are not sufficiently rapidly commercialized in their current economic environment. Moreover, there is a great risk of losing jobs, as well as social stratification and an increase in inequality on this basis. (Schwab, Sala-i-Martín - ed., 2017, p. 12)

INCOME DIFFERENCES AND QUALITY OF GROWTH

Increasing the differences among the people both in terms of income and wealth is a process that can not be attributed exclusively to the innovative economy, but is closely related with all aspects of the new economy. It is natural that at a higher income level increases the income differences represented graphically as the well-known "bulge" of Lorenz's curve. However, the Lorenz curve is today increasingly distorted in almost every country of the world. Inequalities are increasing, among other things, as a result of innovation, technological exchange and expansion of international trade, which applies for nearly the entire world. The process of differentiation started very strongly, especially in the last decade of the XX century. Figure 2 graphically depicts comparable inequalities measured by the Gini coefficient, which occurred between 1990 and 2000. Inequalities in average income per individual country were slowly decreasing, with the main beneficiaries of such trend being China and India. However, the inequalities within national communities maintain constant increase, even in the situation where the GDP growth rate has been significantly reduced during the XXI century in most of the economies shown.

Figure 2 Increase of inequality in countries undergoing market reforms as well as in OECD economies



Source. OECD 2014

Inequality researchers throughout the world have found that nowadays for an individual to be accomplished on any plan, 80% depends on the economic strength and potential of the country he was born in, whereas only 20% depends on his personal abilities. Branko Milanović called such occurrence the residential rent (Milanović 2016, p. 230). In all cases, except in Brazil and Indonesia, income differences and inequalities have been drastically increased. The continuation of such a scenario was guaranteed for the entire period in the XXI to this day, except for the brief episodic decline at the time of the global recession 2009-2012.

INNOVATION AS A COMMODITY OR ENTREPRENEURSHIP POTENTIAL

ENTREPRENEURSHIP AND INNOVATION

The Austro-American economist Jozef Schumpeter is often mentioned in the literature as the pioneer of the innovation theory. In his work "Capitalism, Socialism and Democracy" from 1942, he convincingly and graphically discussed about innovation as a critical and crucial dimension of economic change. He also defined the entrepreneur as the carrier and the most important driver of innovation through the process of "creative destruction", which aims to create new values (Stošić 2013, pp. 1-3). Otherwise, the entrepreneurship theory was fundamentally established by Richard Cantillon who, in the 1930s very effectively demonstrated how the people take over initiative and create their own business/jobs on the market, by working for an unsecured salary (Cantillon, 1983, p. 56) Then the entrepreneurship theory was further very successfully developed by Jean-Baptiste Say in France, and particularly, promoted as the principle named "fourth factor of production" by Alfred Marshall (Marshall, 1987, pages 162,167 ..) only to finally have the works of Peter Drucker, through Schumpeter.

"Creative Destruction", which was first directly referred to by Schumpeter, was what Marx would have called a revolution of productive forces, and in the second half of the XX century it was referred to as scientific and technological revolutions. Is the 4th technological ICT-based revolution of today only one of stages of the latest technological revolution or a possible cardinal introduction to the new economy? What is the new economy in the first place, if not a product or a continuation of all the previous "new" economies?

INNOVATION ECONOMICS AND DEVELOPING COUNTRIES

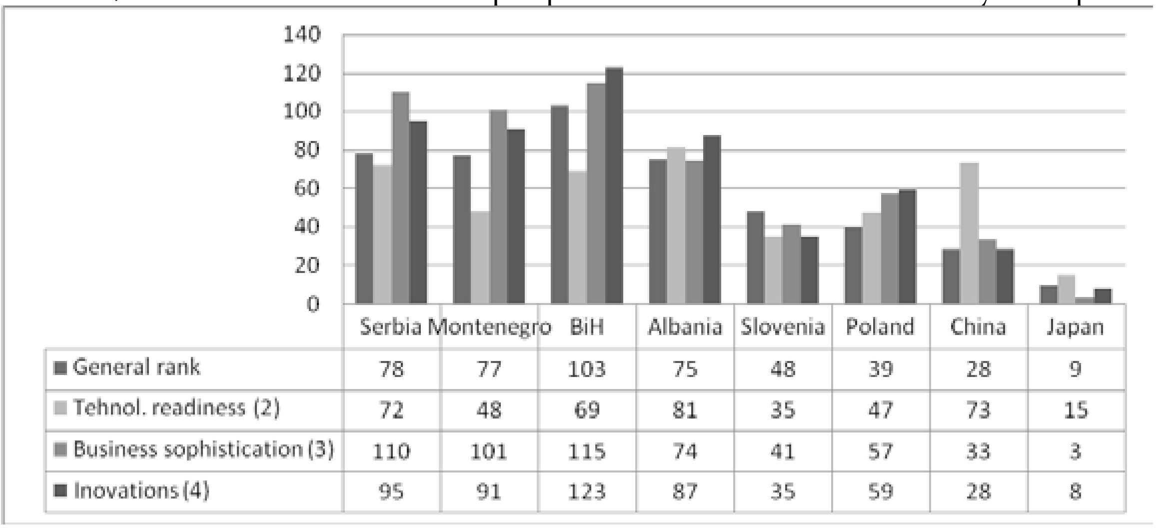
There are vast opportunities and associating advantages of innovative economies and dedicated technology systems or system sectors in many of today's economies. These advantages are manifested not only in the field of high and advanced technologies, but also in many other sectors. Practice has shown that fish export from Uganda, wine export from Argentina and Chile, as well as medicinal herbs export from India was greatly improved through innovations and with the extensive use of knowledge (OECD 2014).

In addition, many opportunities are provided in the sector of lower technologies, as well as in improving the quality of exports. Such situation was exploited by Malaysia for the production of palm oil and various palm oil-based products. This is where we come to the field of application of knowledge-based economy in agriculture. Such innovations are extremely relevant from a social point of view, as well as from an environmental point of view, as they enhance the growth and quality of life. The World Economic Forum is a global expert-scientific organization that studies and ranks competitiveness globally. (OECD 2014, p. 230).

It clearly shows that research and development nowadays have a greater impact on poverty reduction in comparison to large public investment. Namely, public investments are by their very nature inefficient due to the lack of entrepreneurial initiative and innovation activities, given the fact that the motives of participation in them are mainly of redistributive nature (the struggle over the common loot represented by the size and scope of public funds).

It is evident that research and development has a greater impact on poverty reduction than large public investments. This finding by the OECD researchers speaks sufficiently of the fact that innovations are elusive, as they keep occurring and spreading in an unrestrictive environment. This also applies to local innovation as well as innovation of the informal sector. Apart from the standard notion that the informal sector, by definition, is harmful, OECD researchers in developing countries state that they contribute to social inclusion in this case by demonstrating a growing impact on inclusive development. There are even agencies that regulate copy or reproductive rights for music or certain books, as well as of domestic local-made items to promote tourism in Indonesia, the countries of Africa and Latin America (OECD, 2015, pp. 86). Even so, the innovations in the informal sector are inclusively essential for the innovation economy and policies of developing countries and fast-growing economies.

Figure 3 Comparative Indicators of Global Competitiveness Index (GCI) according to WEF 2017/2018 which could define the perspectives of the innovative economy concept



	Serbia	Montenegro	BiH	Albania	Slovenia	Poland	China	Japan
General rank	78	77	103	75	48	39	28	9
Tehnol. readiness (2)	72	48	69	81	35	47	73	15
Business sophistication (3)	110	101	115	74	41	57	33	3
Inovations (4)	95	91	123	87	35	59	28	8

Source: WEF 2017/18

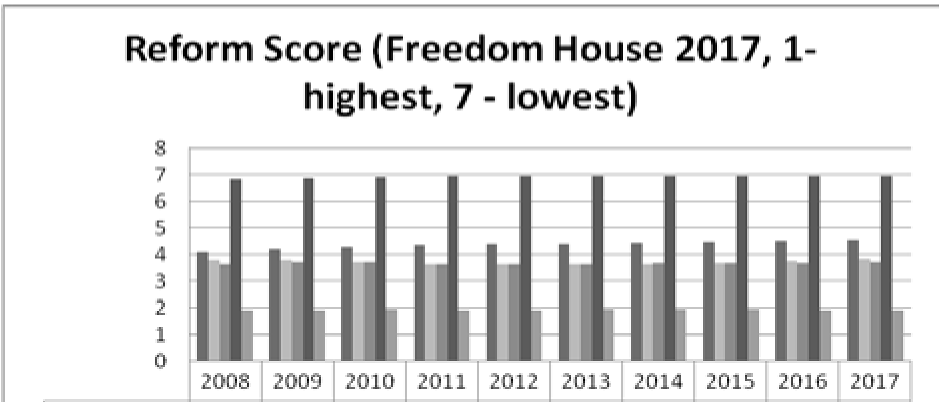
Based on the research of the target social challenges facing these countries and due to the rapid increase in inequalities and social differences, it is necessary that countries, peoples and individuals in the future focus on the social effects of innovation and knowledge through education policies and incentives for entrepreneurial innovations.

INNOVATIVE ECONOMY, REFORMS AND INCLUSIVE DEVELOPMENT

As for the reforms, most of them relate to the market and market structures. However, the assessment of reforms, as a rule, somewhat differs depending on whom they are made for. The US organisation Freedom House has, for its own purposes defined the reforms of general democratization, i.e. an indicator of a system of changes towards a new free (unrestricted) order. They are only partially useful for the purpose of this paper, but they should be mentioned nevertheless. Freedom House ranks the reform success rate by a score of 1 (for the most successful) to 7 (the weakest score). In a review of the status of all 29 economies in transition, the best rated are the (Baltic) countries in Northern Europe, Estonia being the most successful (1.93), whereas Uzbekistan has been awarded the lowest rank in 2017 (6.9). Interestingly, both paradigmatic countries were part of the former Soviet Union. Very good results of the reforms were achieved by most Central European countries, as well as Slovenia (from the former SFRY).

To summarize, countries of the Central Balkans, that is, the place of this event, in terms of promoting and developing democracy, were, as far as their overall transition process is concerned, assessed with average ratings ranging between 3 and 4. Only Bosnia and Herzegovina and Albania were rated lower, between 4 and 5. Namely, according to the ranking of the reform progress, Estonia is 1st, Slovenia 2nd, Croatia 11th, Serbia 12th. Montenegro 13th, Albania 14th. If the income per capita is calculated by purchasing power, then the indicators of economic development almost coincide with the ranks as provided in reforms (Figure 4).

Figure 4 Reform success score as per Freedom House for the group of selected transition countries



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
BiH	4.11	4.18	4.25	4.32	4.36	4.39	4.43	4.46	4.5	4.54
Serbia	3.79	3.79	3.71	3.64	3.64	3.64	3.64	3.68	3.75	3.82
Croatia	3.64	3.71	3.71	3.64	3.61	3.61	3.68	3.68	3.68	3.71
Uzbekistan	6.82	6.86	6.89	6.93	6.93	6.93	6.93	6.93	6.93	6.93
Estonia	1.93	1.93	1.96	1.93	1.93	1.96	1.96	1.96	1.93	1.93

Source: https://freedomhouse.org/report-types/nations-transit

Not even the WEF has refrained itself from dealing with the quality of growth and redefining the sustainability of the competitive position the WEF established itself. Therefore, the report for 2017/2018 mentiones the indicators of inclusive growth or development, for the first time. Inclusion is a category that has entered economy from the field of social psychology, and involves engaging in social processes. Thus, inclusive development is the one that enables faster inclusion of as many people as possible in economic activity, education or socio-political activity. Inclusiveness is the barrier for exclusivity - exclusion, omission, discrimination, corruption and renting. Human development or development with a "human face" has somewhat longer institutional and theoretical evolution than the late assessment of WEF (Carillo, 2005, Jovanović, Gavrilović 2014, p. 23). Although this is only the beginning of a, by the looks of it, exhausting and difficult research work, it is necessary to support WEF researchers in an attempt to determine how much benefit the broadest layers of society have from growth in the long and short term. Previous results, applied to more than 100 countries show that in 43% of cases, growth in assessed national cases did not positively affect inclusive sustainability. On the other hand, it has been shown that countries that did not stand out in dynamic development and high income show a tendency towards inclusive growth, and vice versa, many highly developed countries fail in achieving sufficient level of inclusive development. The first group of countries with a higher inclination towards inclusiveness includes Cambodia, the Czech Republic, New Zealand, the Republic of Korea, and Vietnam, whereas the second is comprised of Brazil, Ireland, Japan, Mexico, Nigeria, South Africa, United States (Schwab, Sala-i-Martin, 2017)

Initially, this sufficiently indicates of the necessity for a different, more complex view of the comparative "competitiveness" of the nations in today' changing world. The "social inclusive development" itself becomes a kind of social innovation, which is precious for the development of the concept and the theory of sustainable development (Đukić, Đukanović 2015).

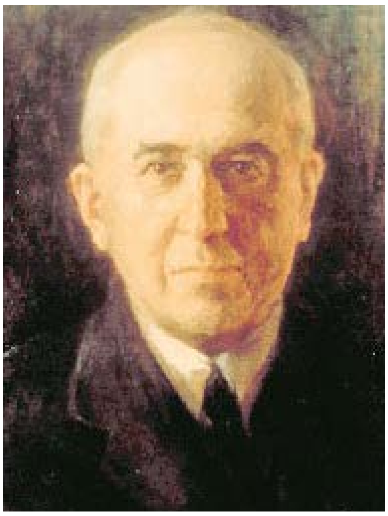
NEW ECONOMY: INNOVATION AND REFORMS OF TRANSITION COUNTRIES

Following the fall of the Berlin Wall in Europe and the whole world, the term “transition” (transition from administratively regulated economies to the market economy, political pluralism and the rule of law) became popular and widely used. In order to avoid misunderstandings about whether it is a matter of a post-socialist or any other transition, this term is often added to the term “countries undergoing reform”. However, in their broadest sense, reforms could also have been interpreted as the need for transformation, change of form and the essence of doing business. Of all the other keywords, expressions and categories at our gatherings, including this conference, why have the reforms been retained most of all? Reforms in their broadest sense are constantly present in the economic life of most of the world, due to technological innovations and cultural changes requiring the restructuring of the economy and society-state. After all, innovation is the biggest challenge for reforms. Nowadays, it is obvious that China, regardless of the monolithic “red” ideology and the official political-party monopoly, is the country undergoing radical reforms that stimulate entrepreneurship, innovation and a strong market initiative. Why is it that reforms really encourage innovation, and innovations cause reforms to be?

FUNCTIONAL INNOVATIVE ECONOMY REACHING: RECOMMENDATIONS

Due to the fact that innovative ideas and abilities are scattered across the world and that all they require to light up - is a spark. Secondly, the world is oriented towards innovations that know no borders, whether they may be ethnic, state, political, ideological, or even continental. If there had been no technological globalization, ever since the ancient times, the implementation of technical inventions and a series of discoveries and innovations would be of little use both in the past and today’s world. In Serbia, as well as across the Balkans, we have examples of three key personalities (not only) of Serbian scientific and technological history: Nikola Tesla, Mihajlo Pupin and Milutin Milanković, which in a certain way act as an illustration of the phenomenon of multinational and globalized technological history (Figure 4) . All three of them were ethnic Serbs, but were born in Austro-Hungary, acquiring knowledge and achieving scientific results across the capitals of Europe. Ultimately, the first two of them experienced the commercialization of their scientific results and their materialization through technical innovations and scientific institutions in the United States, whereas Milanković achieved success, but in Vienna.

Figure 4 Three of the greatest Serbian scientists and innovators: engineers Nikola Tesla, Mihajlo Pupin, and mathematician Milutin Milanković - all born in Austro-Hungary



Picture sources: Wikipedia

What is the point of the above? It is a matter of fact that the US began its rise to the top of global economies precisely through the entrepreneurial model of innovative economy. Probably the scientists from less developed countries will one day seek a place to verify their ideas in an Asian country, and then on other continents as well. The outflow of quality personnel from Serbia, as well as from the countries of the Central Balkans in general, is slowly shifting from western destinations to China. This is a natural consequence of uneven global development and for the purpose of balancing the process of "brain drain and brain gain" in the long run. It is necessary to provide strong and stable local institutions, an incentive international economic and political scene, as well as innovative industrial policy. The strategy of local and global climate action, as well as the policy of implementing the Paris Climate Agreement, despite (occasional obstructions and challenges) remains an area of great opportunities for such innovative joint projects (Klimenko, 2016)

SOCIAL, HUMANISTIC AND ENVIRONMENTAL CONTENT OF COMPETITIVENESS

It seemed that the prospect of global economic and technological progress had lost its soul, that is, until the outbreak of the global economic and financial crisis in 2008- 2012. Every progress was measured by the growth of global and national levels of GDP. It was as if no one was interested in the social and humanistic consequences of global economic and technological progress.

Today, ten years following the outbreak of the unexpected global economic crisis, many essential hidden facts and latent risks are coming to the forefront, both analytically and practically, even at the level of sustainability assessment and perspective of the global competitiveness index. The World Economic Forum still does not deviate from the 12-pillar model of competitiveness in the function of competitiveness indicators. However, competitiveness still includes the conditions to achieve growth in the long run. There are 12 of them. However, in its latest report, WEF says that at this moment it is important to divert attention to the wider social context of economic growth in the world, as well as to the human and environmental consequences and goals of economic progress. This is where certain indicators that tried to promote "green growth" or "green GDP " years ago in the EU, shyly come into play, precisely under the suspicion that GDP as an indicator partly hides the indicators and the impacts of economically unsustainable flows arising from the too intensive exploitation of natural resources, devastation and degradation of the ecosystem, the accumulation of greenhouse gases and the increase of social risks such as poverty, hunger, extreme inequalities, new diseases, and so on.

Innovative economics should in that sense be connected with the "green" or "circular" economy, for the purpose of a wider and complex issue of redefining the role of the "new economy" on a national and global scale. For example, one of the indicators of modernization of Green Innovation of technology is their purpose. Are technologies heading towards a peacetime direction, in the function of improving the lives of most people (social, cooperative and green innovation), or are they encouraging the challenges of warfare or "capturing the mind" of people (Czeslaw Milosz)? Do new technologies deserve the legality and legitimacy of sustainability, creation and humanism, or are they directed towards death, destruction through computer manipulations?

The situation is similar with innovations and technologies that bring health uncertainties and risks, and relate to extreme means of pleasure, animal fighting, new drugs or narcotics. The entire new technological content and innovations should be reassessed and transparently disassemble in theory, in order to qualify it as green, humane and socially acceptable on the one hand; or as "dirty", inhuman, destructive and socially suspicious (unacceptable) on the other hand, precisely for the sake of transparency of the type of those innovations and their economic utilisation.

CONCLUDING REMARKS AND RECCOMENDATIONS: INNOVATION CHALLENGES OF TODAY AND TOMORROW

GENERAL

The expansion and unpredictability of technological change provide opportunities for unprecedented changes. They occur due to the application of the convergence of the digital, physical and biological-technical dimensions of the processes characterized by modern technologies, which is often vaguely defined as the fourth technological revolution. This compaction of technologies has enormous potential as a source of growth, but the future of the process itself is uncertain. The key challenge is to free up the potential of innovation for growth, as well as for social well-being, that is, for a society that needs to reform national and global economic life, increase income and lead to structural transformations.

Innovative and creative (new) economy nowadays could be found everywhere about, not only in area of high technologies. Small countries have to ask for their chances for very useful, predominantly small innovations in manufacturing, agriculture, the public and private services, and everywhere around, even in public government. Innovations can be successfully stimulated by bettering (inclusive) institutions, legal state, democracy, cultural and education policies.

Concept of knowledge-based economy considers stable economic and legal environment and strong and stable institutions. Modern innovations are desperately needed to face the future of climate changes and other substantial challenges of the human race. "Green" growth and sustainable development could be supported and innovative entrepreneurship concept and practice.

REFORM AND POST-SOCIALISTIC ECONOMIES

Reforms in post-socialist countries have yielded uneven results. Many issues and omissions occurred due to their conception and implementation. Freedom House mentions huge differences, as well as the fact that the less developed half of the countries in transition are yet to reach the real GDP level from the time before the fall of the Berlin Wall. Some Balkan countries belong to this group, originating from the former Yugoslavia, such as Serbia, Bosnia and Herzegovina, Croatia and Montenegro. For example, Serbia and Croatia have reduced their share in global GDP throughout the XXI century because the global economy's growth rate was higher than the average growth rate in these countries[5].

This is a sufficient reason to achieve far more intense mutual knowledge-based and innovation-based collaborative projects focused on export promotion, security and environmental protection, i.e. regional sustainable development. Many examples show that positive cooperation in the fields of energy restructuring, utilisation of new renewable energy sources and energy efficiency is an excellent opportunity for collaboration between small and large economies - an example of innovative energy cooperation between Serbia and Russia (Джукич, Джуканович, 2016, p. 10-15) Many papers in recent years, as well as the texts published in this very journal, elaborated the urgent need for intensive regional cooperation of the countries of the Western Balkans, not only of the former SFRY, with a firmer economic innovation-based cooperation. This cooperation should primarily originate from the imposed needs, based on registered and increasingly frequent natural disasters, (particularly the flood wave of 2014 that hit Bosnia and Herzegovina, Serbia and Croatia, which we wrote about in the editorial of Volume 3 of this Journal (Đukić 2014). The regulation of common watersheds of the rivers Sava and Drina, the construction of joint flood and drought embankments, fire control and joint intentions in order to prevent and mitigate climate changes

[5]Thus, the average annual growth rate for the last two decades of 1996-2016 in the world was 2.9%, in Serbia 2.7%, in Croatia 2%, in Montenegro 2.44%. Simultaneously, the Chinese average growth rate was 9.2% (Đukić, 2018, p. 42).

could represent an enormous contribution to regional cooperation and sustainable development. Technological innovations, particularly those related to networked and smart systems in energy, transport, and ecosystem protection should be used on a regional level without pretensions of being “high.” It would be very useful to explore the consequences and climate change strategies of the Western Balkans region, as the respective positive examples already exist (Vugdelić - Chief Ed. (2016).

Therefore, the effects of future technologies are fairly unknown, as well as the policies and challenges of current technologies that illustrate the magnitude of shifts. It should also be noted that significant operating losses are expected in the technological transformation, particularly in the service provision sector. The key challenge is the tempo of change and transfer of labour intensive into capital- and innovation-intensive activities. The structure of occupations and the possibilities of engaging in a new technological reality have not yet been sufficiently synchronized. Knowledge workers that Drucker convincingly talked about could be of great help in conducting such synchronization. The innovative economy has gained momentum. In the time of new technologies, creating values for consumers to a greater extent than actually recorded by national statistics is advancement. Technologies are spreading rapidly with frequent turning points, but the process occurs in accordance with the principles of adaptation, continuous learning and the increasing role of artificial intelligence. Innovation could further lead to a better general welfare. It only needs a chance to do so.

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IMPORTANCE AND IMPACT OF FOREIGN INVESTMENT ON THE ECONOMIC DEVELOPMENT OF BOSNIA AND HERZEGOVINA

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SUMMARY

From the perspective of macroeconomic indicators, investment is a significant determinant of economic development as a whole, as well as the development of economic entities in the micro segment. Investments present an essential element of any economic policy, as their presence provides a platform, not only for economic development, but also create a basic condition for the stability of economic and social trends. Foreign direct investment plays an important role in the financing of the global economy, and the most common presenting the most important tool in financing the national economies of developing countries and countries in transition. Demand for foreign investment in the global market is large and therefore the states are directing significant activities in order to create a more favorable environment to attract investors. The paper pays special attention to direct investmens in financing the economy on a global scale, their importance for the development of the global economy and particulary screens the impact of foreign direct investment in the economic development of Bosnia and Herzegovina. The emphasis is placed on activities that have to be carried out in order to realize more investments. With the use of statistical and quantitative analysis, the paper shows that the inflow of foreign capital is fundamental prerequisite for generating and accelarating of economic development in general. The inflow of foreign capital has an exstraodinary positive impact on the economic development and increase of business activities in visably undeveloped and slow economic in Bosnia and Herzegovina.

Keywords: foreign investment, the global economy, economic development, knowledge and technology

INTRODUCTION

Foreign Investment (FI-Foreign Investment) is a form of investment in which foreign investor keeps the ownership rights, provides the control and management of the firm in which they invested the funds, in order to achieve long-term interests. These investments are the most important instrument of foreign capital inflow because they represent a direct inflow from abroad, i.e. direct inflow of the capital in the economic system of the host country.
Foreign investment, as a form of international capital mobility, represents an important contributor to more efficient activities in the economy and It provides faster exit to the international market. Evaluation of investment efficiency is the basis for making investment decisions from one country to another, which will consequently lead to improvement of the economy. Foreign investment is

the key development factor in the modern economy, and jointly with the trade, represents the most important leverage of an enterprise, organization of production, supplying goods and services on a global scale.

Foreign investment support the companies in organizing production on a global scale, providing an efficient supply of raw materials, energy, labor as the input, and facilitate the placement of products and services as the output in the most important markets in a profitable way. On the basis of such activities, the companies can use its advantages in technology, expertise, and economies of scale.

Developing countries having high state debt and unfavorable economic situation show huge interest in gaining as higher foreign investment as possible. It has been especially important after bank loans and various financial aid ceased to arrive in some countries. Countries in transition, aiming to integrate into the world economic system, can overcome negative economic tendencies with the help of international capital inflow.

Developed countries, faced with a financial crisis, have been also interested in an increased inflow of foreign capital, since the foreign investment is the most important element of development strategies in general.

It is not just the capital that comes with foreign direct investment from one country to another, but also the investment package containing new technologies, managerial skills and new markets. In addition, bearing higher risks, FDI is significantly increasing the opportunities for making profits. Foreign direct investment is autonomous transaction of long-term capital movements, motivated by economic interests with the profit at the first place.

Observing today's economic systems at the global market, we can notice that the economic systems, in order to accelerate their economic development compete to each other, aiming to attract foreign capital. In fact, the most significant competition is seen in the area of "greenfield" investments. It is important to elaborate, how and why are the countries competing for foreign direct investment, and on the other hand, why the other countries are the main investors of this type of investment.

In order to monitor investments, the following core analytic indicators related to foreign direct investment are examined: (1) Flows of foreign direct investment (FDI), which represents new investments during the observed period (usually one year period). They represent the position of the current account. Total flows are divided by instruments used for investment, and are as follows: owners capital (ownership in subsidiaries), and shares in subsidiaries and affiliated companies, re-invested earnings as part of retained earnings of investors that is not distributed; others investment of FDI, like the borrowing and lending of funds, including various financial instruments and trade credits between investing company and company which has capital inflow; (2) Stocks of foreign direct investment represent the value of investments at the end of monitored period. In balance sheets, the foreign direct investment is in the assets side and in the liabilities side if the investment is coming from the host country FDI stocks are divided into: equity capital and reinvested earnings; (3) Income of foreign direct investment is income summarized by direct investors during the period. It is divided into three categories: (a) dividends earned in the reporting period and the profits allocated to direct investor without deduction of income tax; (b) reinvested earnings; (c) interest on loans, i.e. interest earned on loans to subsidiaries, without deduction of income tax.

In addition, an important indicator is intensity of foreign direct investment, measured as a percentage of gross domestic product (the ratio of the average internal and external flows of foreign direct investment and GDP). Higher intensity indicator means more foreign investment in relation to the size of the economy.

One of the goals of this paper is to demonstrate that in developing countries acceleration of the economic development can be achieved with the use of instruments of foreign capital, and with the additional capital inflow from abroad. The purpose of foreign capital should be the achievement of higher investment rates, higher rates of national income, acceleration of economic development in comparison to the development which would be achieved by using only domestic capital.

The second objective of the research is, that different instruments of foreign capital inflow have different impacts on the macro-economic categories in global circumstances. In the paper the impact of FDI on economic development in BH economy has been analyzed. Also, the impact on: employment growth, budget revenues and export volume has been monitored. Foreign investment can cause negative effects on domestic companies, if foreign investors squeeze domestic producers from the market, and become monopolists. The damage may be made also to the payment balance of the host country due to the high outflow of investors' profits or because of large imports of inputs.

FOREIGN INVESTMENT AND EFFECTS OF ECONOMIC DEVELOPMENT

The role and importance of foreign direct investment for the national economy (Todaro M P & Smit S C 2006) was primarily in improving the key macroeconomic indicators. FDI is efficient form of usage of private savings in the process of funding economic development and in reducing the gap between the planned investment and the local savings. Secondly, it is significant contribution of foreign direct investment in overcoming the gap of foreign trade of host country. Thus, the foreign investment is efficiently covering discrepancy between planned revenues and taxes collected, and the expenditures volume in the budget. FDI is useful because it contributes to transfer of managerial and entrepreneurial experiences. Finally, FDI today represents the main channel for the transfer of new technology among countries.

Foreign direct investment can bring many advantages for foreign investors (Jovanovic & Gavrilovic P 2006) among which, the most important are: savings in transport costs (both, inputs and finished products), lower labor costs, available infrastructure, savings in customs costs and contribution on imported goods, closer position to the customers, the possibility of quick and efficient delivery with availability of information about preferences and possibility for fast adoption of products in accordance with market requirements.

In particular, it is necessary to analyze the relationship between investment and economic growth. This interdependence can be seen by measurement of macroeconomic aggregates, i.e. in growth rate, movement of investment, foreign exchange level and trends and other. Changes are related to economic developments at the national level, on the basis of which it is possible to assess the success of development policy. When the positive elements are on increase, there are positive structural changes. In periods of crises the negative changes are strengthening (slowing the growth and investment, increasing unemployment rate, increasing in deficits, etc.) (P Samuelson & Nordhaus W 1992) investments generate significant positive effects on the economy of the host country. Their impact is recorded in two points: the quantitative growth, measured by the balance and the total inflow measured by gross domestic product, exports and domestic investment: and qualitative through the transfer to the host country the investment, trade, technology and financial flows. To determine the effects of FDI on economic growth of the host country is not an easy task. There are a large number of variables, where the effects are associated with specifics of each country, sectors of the economy and investment. Variables can be viewed from two aspects: first, they are supplementing domestic factors of production and creating the conditions for new employment, and secondly they stimulate the development of the host country through technology transfer, manpower training, liaising with the local economy, and in enabling better presence of local companies at the world market.

The effects of FDI depend on the stage of economic development of the country, and these stages are divided in four phases (Dunning J 1982). In the first phase of development, the most important role is played by natural resources, and at this stage, no significant effects to the host country economy are visible. If the country has an economic development at the second phase, it will record an increase in domestic investment, while investing in public goods, communications and transport is present. The state in this phase, shifts its interest from natural resources to the production of labor-intensive goods, and the effects depend on the infrastructure and macroeconomic policy. The third phase covers the period when the development of innovation, knowledge management, organizational benefits, rationalization of production and investments are supported. All these variables have the effects on strengthening the competitiveness of local companies and appearance on new markets. The fourth stage is the highest stage of economic development and in this stage a lot of post-industrial service companies have been recorded. The products are direct services and cross-border connections and effects are becoming more intense in this phase. Effects of foreign direct investment on the economic development of the host country depend on strategy which the country has chosen: import substituting strategy or export developing strategy. Studies have shown that investments are extremely important for economic growth of host country, where we want to examine: Does the inflow of foreign direct investment increase or decrease the total investment volume in the host country?

If foreign direct investment enters into the sector in which there is competition from domestic companies, there is a competitive struggle whose consequences might be the delaying in investment and exit of certain domestic companies from the sector. This will lead to reduction of the total investment in the sector and thus in the entire economy. If the FDI enters the new sector (primary, secondary, tertiary) then the total investment in the country will be increased.

FOREIGN INVESTMENTS IN THE COUNTRIES OF THE EUROPEAN UNION

Total investments in the EU amounted slightly less than one-fifth (below 20%) of gross domestic product. The investment rate (I / Y) is stable in a long-term. The rate of investment in more developed EU countries is lower and ranges up to one sixth, while in the new Member States and less developed ones investment rate reaches up to one quarter of the output (Popović G 2009).

Table 1 shows gross domestic product at market prices in millions of national currencies for EU Member States and candidate countries for EU membership (Eurostat, March 2, 2018) and Table 2. Real GDP growth in the EU, 2006-2016 (% of changes compared to the previous year,% per year) (Eurostat, 2017)

Table 1 Gross domestic product at market prices; Current prices, million units of national currency (GDP and main aggregates - selected international annual data. Last update: 02/03/18; Source of data: Eurostat)

Geo \ Time	2010	2011	2012	2013	2014	2015	2016
EU (28 countries)	12,827,959.8	13,200,971.1	13,463,405.2	13,577,271.0	14,044,690.5	14,797,443.8	14,907,852.2
Euro area (19 countries)	9,547,583.5	9,799,884.1	9,837,425.9	9,934,799.5	10,157,598.4	10,515,138.9	10,788,818.3
Belgium	365,100.5	379,106.3	387,500.1	392,339.8	400,288.2	410,435.2	423,048.4
Bulgaria	74,771.3	80,759.0	82,040.4	82,166.1	83,634.3	88,571.3	94,129.9
Czech Republic	3,962,464.0	4,033,755.0	4,059,912.0	4,098,128.0	4,313,789.0	4,595,783.0	4,773,240.0
Denmark	1,810,926.0	1,846,854.0	1,895,002.0	1,929,677.0	1,981,165.0	2,027,108.0	2,065,962.0
Germany	2,580,060.0	2,703,120.0	2,758,260.0	2,826,240.0	2,932,470.0	3,043,650.0	3,144,050.0
Estonia	14,716.5	16,667.6	17,934.9	18,932.3	19,766.3	20,347.7	21,098.3
Ireland	167,583.2	171,939.2	175,561.1	180,298.3	194,537.2	262,037.4	275,567.1
Greece	226,031.4	207,028.9	191,203.9	180,654.3	178,656.5	176,312.0	174,199.3
Spain	1,080,935.0	1,070,449.0	1,039,815.0	1,025,693.0	1,037,820.0	1,079,998.0	1,118,522.0
France	1,998,481.0	2,059,284.0	2,086,929.0	2,115,256.0	2,147,609.0	2,194,243.0	2,228,857.0
Croatia	328,942.8	333,325.9	330,925.1	331,374.4	331,266.4	338,975.0	349,410.4
Italy	1,604,514.5	1,637,462.9	1,613,265.0	1,604,599.1	1,621,827.2	1,652,622.3	1,680,948.1
Cyprus	19,299.5	19,731.0	19,489.7	18,140.5	17,605.9	17,742.0	18,122.5
Latvia	17,937.9	20,302.8	21,885.6	22,831.5	23,681.5	24,353.1	24,926.7
Lithuania	28,027.7	31,275.3	33,348.5	34,959.6	36,568.3	37,426.6	38,668.3
Luxembourg	40,177.8	43,164.6	44,112.1	46,499.6	49,993.0	52,101.9	53,004.8
Hungary	27,224,599.0	28,304,938.0	28,781,064.0	30,247,077.0	32,591,713.0	34,324,110.0	35,420,320.0
Malta	6,599.5	6,836.2	7,160.6	7,638.5	8,449.1	9,266.1	9,926.6
Netherlands	631,512.0	642,929.0	645,164.0	652,748.0	663,008.0	683,457.0	702,641.0
Austria	295,896.6	310,128.7	318,653.0	323,910.2	333,062.6	344,493.2	353,296.9
Poland	1,445,298.0	1,566,824.0	1,629,425.0	1,656,895.0	1,719,769.0	1,799,392.0	1,858,637.0
Portugal	179,929.8	176,166.6	168,398.0	170,269.3	173,079.1	179,809.1	185,179.5
Romania	529,623.5	562,062.4	595,367.3	637,456.0	668,143.6	712,658.5	762,341.8
Slovenia	36,252.4	36,896.3	36,076.1	36,239.2	37,614.9	38,836.6	40,418.1
Slovakia	67,577.3	70,627.2	72,703.5	74,169.9	76,087.8	78,896.4	81,154.0
Finland	187,100.0	196,869.0	199,793.0	203,338.0	205,474.0	209,604.0	215,773.0
Sweden	3,519,994.0	3,656,577.0	3,684,800.0	3,769,909.0	3,936,840.0	4,199,860.0	4,404,802.0
United Kingdom	1,579,877.0	1,635,062.0	1,685,225.0	1,752,554.	1,837,062.0	1,888,737.0	1,963,311.0
Montenegro	3,125.1	3,264.8	3,181.5	3,362.5	3,457.9	3,624.7	
Serbia	3,067,210.2	3,407,563.2	3,584,235.8	3,876,403.4	3,908,469.6	4,043,467.8	4,261,927.5
Bosnia and Herzegovina	25,365.0	26,231.3	26,222.7	26,778.8	27,358.7	28,585.8	29,899.1
Former Yugoslav Republic of Macedonia, the	437,295.5	464,186.3	466,702.7	501,891.0	527,631.0	558,953.6	598,881.3
Albania	1,239,644.6	1,300,624.1	1,332,811.0	1,350,052.6	1,395,304.6	1,427,799.0	1,472,791.1
Turkey	1,160,014.0	1,394,477.2	1,569,672.1	1,809,713.1	2,044,465.9	2,338,647.5	2,608,525.7

Tabel 2 Real GDP growth in the EU, 2010-2016 (% change compared with the previous year; % per annum) (Eurostat 2017, Autor 2018)

Real GDP growth in the EU, 2010-2016, in % per annum (Eurostat 2017, Autor 2018)								
Geo\Time	2010	2011	2012	2013	2014	2015	2016	Average 2010-2016
EU (28 countries)	2.1	1.7	-0.5	0.2	1.6	2.2	2.5	1.40
Euro area (19 countrie	2.1	1.5	-0.9	-0.3	1.2	2.0	2.1	1.10
Belgium	2.7	1.8	0.1	-0.1	1.6	1.5	1.2	1.26
Bulgaria	1.3	1.9	0.0	0.9	1.3	3.6	2.4	1.63
Czech Republic	2.3	2.0	-0.8	-0.5	2.7	4.5	3.4	1.94
Denmark	1.9	1.3	0.2	0.9	1.7	1.6	1.3	1.27
Germany	4.1	3.7	0.5	0.5	1.6	1.7	1.9	2.00
Estonia	2.3	7.6	4.3	1.4	2.8	1.4	1.6	3.06
Ireland	2.00	0.00	-1.10	1.10	8.50	26.30	5.20	6.00
Greece	-5.5	-9.1	-7.3	-3.2	0.4	-0.2	0.0	-3.56
Spain	0.0	-1.0	-2.3	-1.7	1.4	3.2	3.2	0.40
France	2.00	2.10	0.20	0.60	0.90	1.10	1.20	1.16
Croatia	-1.70	-0.30	-2.20	-1.10	-0.50	1.60	2.90	-0.19
Italy	1.70	0.60	-2.80	-1.70	0.10	0.80	0.90	-0.06
Cyprus	1.3	0.3	-3.2	-0.6	-1.5	1.7	2.8	0.11
Latvia	-3.8	6.4	4.0	2.6	2.1	2.7	2.0	2.29
Lithuania	1.6	6.0	3.8	3.5	3.5	1.8	2.3	3.21
Luxembourg	4.9	2.5	-0.4	4.0	5.6	4.0	4.2	3.54
Hungary	0.7	1.7	-1.6	2.1	4.0	3.1	2.0	1.71
Malta	3.5	1.4	2.6	4.5	8.3	7.4	5.0	4.67
Netherlands	1.4	1.7	-1.1	-0.2	1.4	2.0	2.2	1.06
Austria	1.9	2.8	0.7	0.1	0.6	1.0	1.5	1.23
Poland	3.6	5.0	1.6	1.4	3.3	3.8	2.7	3.06
Portugal	1.9	-1.8	-4.0	-1.1	0.9	1.6	1.4	-0.16
Romania	-0.8	1.1	0.6	3.5	3.1	3.9	4.8	2.31
Slovenia	1.2	0.6	-2.7	-1.1	3.1	2.3	2.5	0.84
Slovakia	5.0	2.8	1.7	1.5	2.6	3.8	3.3	2.96
Finland	3.0	2.6	-1.4	-0.8	-0.6	0.3	1.4	0.64
Sweden	6.0	2.7	-0.3	1.2	2.6	4.1	3.2	2.79
United Kingdom	1.9	1.5	1.3	1.9	3.1	2.2	1.8	1.96
Iceland	-3.6	2.0	1.2	4.4	1.9	4.1	7.2	2.46
Norway	0.6	1.0	2.7	1.0	1.9	1.6	1.0	1.40
Switzerland	3.0	1.8	1.0	1.8	2.0	0.8		1.73
Montenegro			-2.7	3.5	1.8	3.4		1.50
Former Yugoslav Rep	3.4	2.3	-0.5	2.9	3.6	3.8	2.4	2.56
Albania	3.7	2.4	1.4	1.0	1.8	2.6		2.15
Serbia	0.6	1.5	-1.0	2.6	-1.8	0.8	2.8	0.79
Turkey	8.5	11.1	4.8	8.5	5.2	6.1		7.37
China (including Hong	10.6	9.5	7.9	7.8	7.3	6.9	8.3	8.33
Yapan	4.2	-0.1	1.5	2.0	0.3	1.2	1.0	1.44
United States	2.5	1.6	2.2	1.7	2.4	2.6	1.6	2.09
Source of Data:				Eurostat				
Last update:				14.02.2018				
Date of extraction:				01 Mar 2018 14:17:31 CET				
Hyperlink to the table:				http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=				

Within the EU, real GDP growth varied considerably, both over time and among EU Member States (see Table 1). After a contraction in all of the Member States except Poland in 2009, economic growth resumed in 23 of the Member States in 2010, a situation that was repeated in 2011. However, in 2012 this development was reversed, as just fewer than half (13) of the Member States reported economic expansion. In 2013, the majority of Member States again recorded growth, with the number recording a positive rate of change reaching 17 in 2013 and rising to 25 in 2014 and 27 in

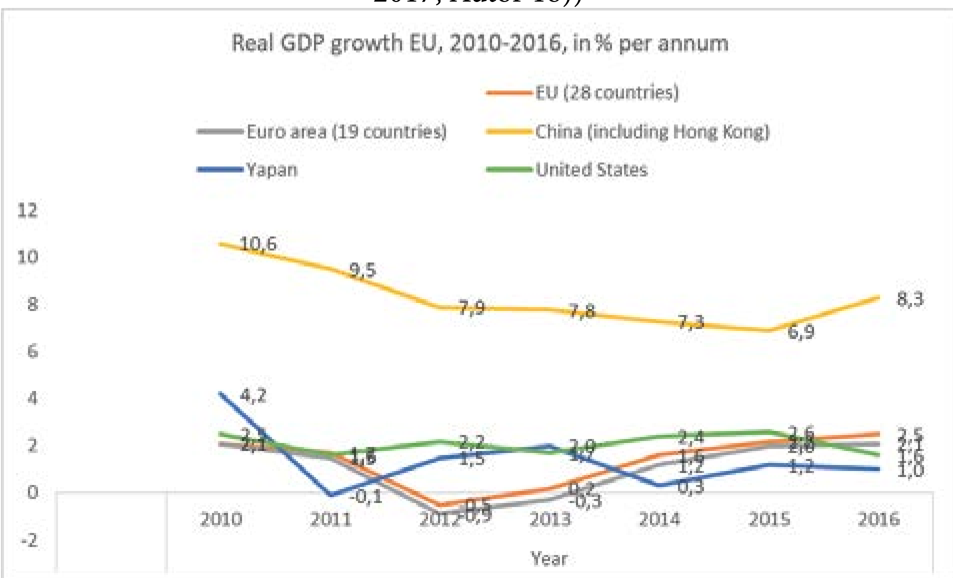
2015; the one Member State with a negative rate of change in 2015 was Greece which recorded a fall of 0.2 % after growth of 0.4 % in 2014 and five successive reductions in economic output during the period from 2010 to 2013. In 2016, for the first time since 2010, none of the Member States reported a fall in GDP, with 27 reporting growth and Greece recording no change.

The highest growth rates in 2016 were recorded in Ireland (5.2 %) and Malta (5.0 %), while the lowest rates — apart from the 0.0 % rate of change in Greece — were growth of 0.9 % in Italy and 1.2 % in France and Belgium.

Poland recorded positive rates of change throughout the period shown in Table 1, while Denmark, Germany, Estonia, France, Lithuania, Malta, Austria, Slovakia and the United Kingdom recorded their seventh consecutive positive annual rate of change in 2016; in other words their last negative annual rate of change was at the height of the crisis in 2009.

The effects of the global financial and economic crisis lowered the overall performance of the EU Member State economies when analyzed during the last decade. The average growth rates of the EU-28 and the euro area (EA-19) between 2010 and 2016 were 1,40 % per annum and 1,10 % per annum respectively (see Table 2). The highest growth, by this measure, between 2010 and 2016 was recorded for Ireland (average growth of 6,00% per annum), followed by Malta (4,67 %), Poland 3.06 %) and Slovakia (2,96 %). By contrast, the overall development of real GDP during the period from 2010 to 2016 in Greece, Italy, Croatia and Portugal was negative.

Figure 1 Real GDP growth, 2010-2016 (% change compared with the previous year) (Eurostat 2017, Autor 18))



The global financial and economic crisis resulted in a severe recession in the EU, Japan and the United States in 2009 (see Figure 1), followed by a recovery in 2010. The crisis was already apparent in 2008 when there had been a considerable reduction in the rate of increase for GDP in the EU-28 and this was followed by a fall in real GDP of 4.4 % in 2009. The recovery in the EU-28 saw the volume index of GDP (based on chain linked volumes) increase by 2.1 % in 2010 and there was a further gain of 1.7 % in 2011. Subsequently, GDP contracted 0.5 % in 2012 in real terms, before progressively larger positive rates of change were recorded in 2013 (0.2 %), 2014 (1.6 %) and 2015 (2.2 %). In the euro area (EA-19) the corresponding rates of change were very similar to those in the EU-28 through to 2010, while the growth recorded in 2011 was slightly weaker (1.5 %) and the contraction in 2012 was stronger (-0.9 %) and was sustained into 2013 (-0.3 %). In 2014 and 2015, real GDP growth in the euro area was somewhat weaker than that in the EU-28 as a whole.

The subject of our interest are flows of foreign direct investment and their impact on the changes of gross domestic product, as an important macroeconomic indicator. The share of investments at current market prices in GDP in 2005, 2010 and 2015 is shown in Table 3 for the EU zone.

Table 3 Investment at current market prices, 2005, 2010 and 2015 (% share of GDP) (Eurostat 2018, Autor 2018)

Investment at current market prices, 2005, 2010 and 2015 (% share of GDP) (Eurostat 2018)												
	Total investment			Public investment			Business investment			Household investment		
Geo\Time	2005	2010	2015	2005	2010	2015	2005	2010	2015	2005	2010	2015
EU (28 countries)	21,9	20,4	19,9	3,2	3,5	2,9	12,2	11,3	12,0	6,5	5,6	5,0
Euro area (EA-19)	22,4	20,9	20,0	3,1	3,4	2,7	12,2	11,5	12,0	7,0	6,0	5,2
Ireland	29,5	14,0	19,0	3,8	3,3	2,9	20,2	8,5	11,3	5,6	2,2	2,9
Norway	20,3	20,6	23,4	3,4	4,1	4,9	11,8	11,9	12,6	5,1	4,5	5,9
Switzerland	24,5	22,8	23,9	3,0	3,1	3,0	16,5	15,4	16,9	5,0	4,4	4,1
Serbia	20,1	18,6	17,2									

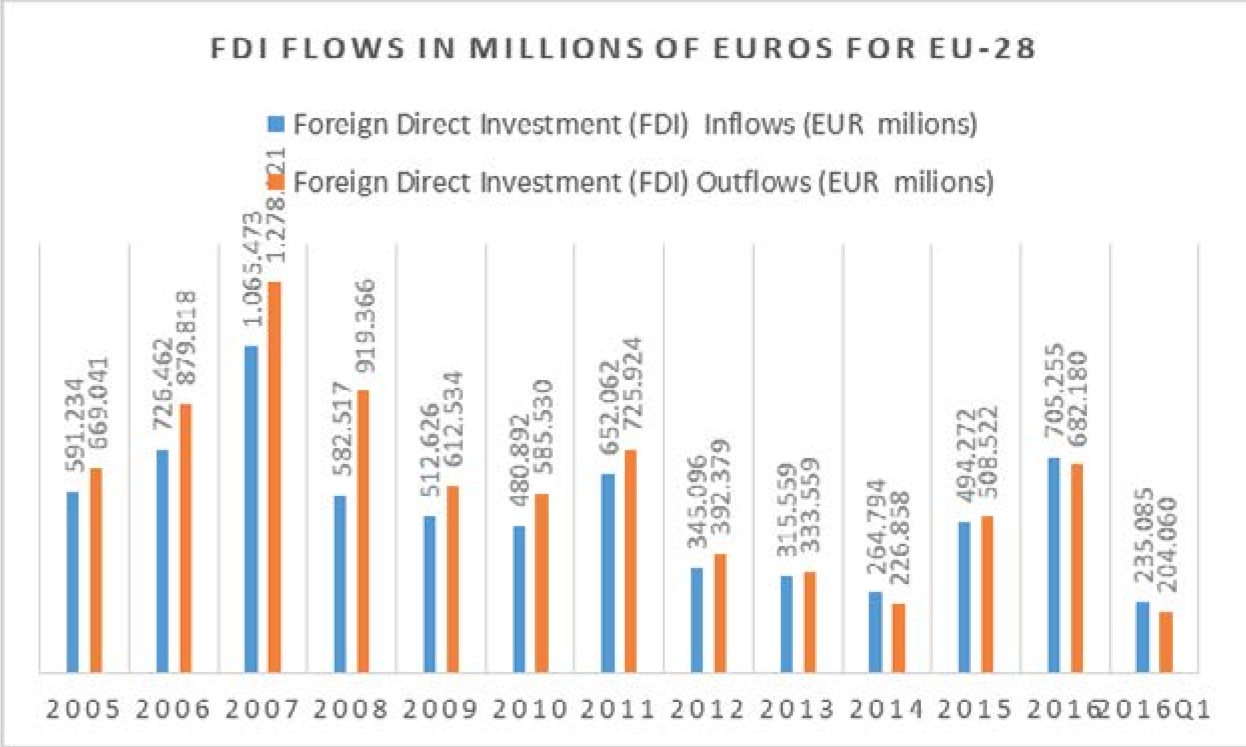
The vast majority of investment was made by the private sector, as can be seen from Table 3. In 2015, investment by businesses and households accounted for 17.0 % of the EU-28's GDP, whereas the equivalent figure for public sector investment was 2.9 %. Investment by the business sector was highest in Switzerland (16.9 %) and Norway (12,6 %). Investment by households (as a share of GDP) in 2015 was notably lower than in 2005 in EU (28 countries), Euro area (EA-19), Ireland and Switzerland, while it higher in Norway.

Table 4 presents the inflows and outflows of foreign direct investment in the period from 2004 to 2015, and data for the first quarter of 2016 for the EU, and the total FDI stock per year of the observed period (OECD 2016).

Table 4 FDI flows in millions of euros for EU (Eurostat 2017, European Union, OECD Foreign Direct Investment Statistics, https://knoema.com/OECDFDIS2017/oecd-foreign-direct-investment-statistics (OECD 2017).

YEAR	Foreign Direct Investment (FDI) **Inflows**	Foreign Direct Investment (FDI) **Outflows**	**Stock (total value) FDI** Inflow FDI	Outflow FDI
	EUR milions	EUR milions	EUR milions	EUR milions
2004	244.179	369.134	4.846,365	5.420,856
2005	591.234	669.041	5.690,696	6.305,140
2006	726.462	879.818	5.946,830	6.546,792
2007	1.065.473	1.278.121	7.536,334	8.138,913
2008	582.517	919.366	6.976,821	8.200,076
2009	512.626	612.534	7.644,430	9.589,730
2010	480.892	585.530	7.596,391	9.111,480
2011	652.062	725.924	7.716,407	9.370,997
2012	345.096	392.379	8.223,772	9.716,007
2013	315.559	333,559	8.789,142	10.397,848
2014	264.794	226.858		
2015	494.272	508.522		
2016	705.255*	612.180*		
2016 Q1	235.085	204.060		

Figure 2 FDI inflow and outflow in EU (Author 2018)



From Table 4 and the Figure 2, it can be seen, that inflows and outflows of foreign direct investment in the initial years of the period from 2005 to 2007, recorded a steadily increase. If, we take year 2005 as the base year, then the outflow of foreign direct investment in 2006 grew enormously, from 669,041 million to 879,818 million euros, while the inflow increased from 591,234 million to 726,462 euros, i.e. over 22,87%. The upward trend continued until the end of 2007. During 2008, a decline in flows, in the inflow and outflow, of foreign direct investment was recorded due to the global crisis.

Therefore, the crisis which was present at global financial markets has the reflection on the economy of the Union. Being caused by mismatch of financial and real sectors of the economy, its effects were manifested in the decline in aggregate demand, slowing growth, deflation and rising unemployment. Regardless of the contagion of the crisis from the US financial markets, the European Union still has a close relationship with the US as the largest foreign trade partner, with which it has realized huge traffic of goods, services and capital. On a daily basis, it is significantly higher than one billion euros. Likewise, the EU is continuously making efforts to: increase participation in world trade, achieve the growth of all forms of investment and innovation, and to make upgrade in entrepreneurship skills and to improve corporate social responsibility level.

It is indisputable that the EU countries, same as the most of the world economy, reduced investment activity during the financial crisis, especially outside its borders. Among others, by these measures they try to reduce the negative effects of the global economic crisis. Negative trend and big drop in foreign direct investment continued in 2009, in which the crisis escalated. Many of the world economies were temporarily closed because of concerns for internal economic situation. Similarly, in 2010 negative inflows and outflows of foreign direct investment were recorded.

Since 2007, for the first time in 2011, the EU 27 has noticed the recovery and growth of foreign direct investment. The growth was negligible and did not recover the overall level of investment, bearing in mind that foreign direct investment in 2007 was significantly higher, on the both sides, in inflows and outflows. In 2012, again the decrease of FDI flow was recorded in comparison to the previous year, due to the second wave of the global crisis and the specific financial and fiscal crisis, which includes the individual EU member states, especially Greece.

Flow of foreign direct investment vary each year and it has an increase in periods of growth, and

decrease in periods of recession. In the European Union, after a drop of 55% in 2008, foreign direct investment recovered in 2009 and then in the following years they continued to fall until 2011 (Eurostat, 2016).
Unlike foreign direct investment flow, which fluctuates over the year, the total stock of FDI per year is not decreased, but is constantly growing. That fact shows that EU countries are attractive for foreign investment.

INVESTIGATION OF THE IMPACT OF FOREIGN DIRECT INVESTMENT ON ECONOMIC DEVELOPMENT IN BOSNIA AND HERZEGOVINA

Bosnia and Herzegovina (BH) has set its FDI policies in the context of liberalization of the market, foreign trade and capital movements, combined with the privatization of state capital in the economy as the most important channel for attracting FDI. In the post-war conditions of economic recovery and transition in BH, the economy transition in the conditions of the Dayton Constitution, which gave the central state very limited powers, was to be restored in a very short period of time, and transferred the key development responsibilities to the entities and, in part, to the cantons in the Federation of BH.
Since FDIs are private-led investments based on a profit motive with varying variations and goals that drive them, their direction towards the country's development goals required, with the liberalization of the market and the overall economy, parallel creation of an incentive macroeconomic and business environment and the development of institutions capable of create and implement consistent macroeconomic, development and sectoral policies.
The current state of FDI in BH is reflected in the low volume and unfavorable structure of FDI, which have mostly entered the country through privatization. With its weakening, the FDI inflow is based on symbolic values, so the marginal effects of FDI decline, especially in the period after the global crisis hit the country.
The expected contribution of this paper is to initiate a new way of looking at the role of FDI in the development of BH and a new way to approach the creation of FDI public policies, in particular the FDI promotion policy. In essence, it is an attempt to point out the limited results in attracting FDI in BH in the conditions of weak state institutions and the exclusive functioning of market forces as the basis for neo-liberal access to the economy.

THEORETICAL AND EMPIRICAL ASPECTS OF FDI WHICH ONE IMPORTANT FOR FDI PROMOTION POLICY

Foreign direct investment (FDI) is defined as long-term interest based investments that reflect a lasting interest and control by a domestic resident of an economy in a company resident in another economy (OECD, 1996, in: WIR; 2007, 245). According to the International Monetary Fund (IMF), FDIs consist of the founding equity, reinvested profits and intra-corporate loans (WIR; 2007, 245-246). Transnational companies (TNCs) are companies that have a parent company and subsidiaries (subsidiaries) in their structure, with ownership over 10% in subsidiaries and in subsidiaries above 50% (WIR, 2007, 245). Although in many definitions it is pointed out that the TNCs are big powerful global companies, in our opinion, the growing FDI of medium and small companies around the world, including the emergence of born global companies, is seeking a redefinition of the term TNC. Therefore, in this work under the TNC, we will to mark all companies that make FDI, and in their structure there are global, regional or multinational companies, but according to their marketing focus.
Among the many theories of internationalization of production and FDI, we highlight the OLI theory as an acceptable form of explaining the aspects of FDI relevant to the FDI policy. The OLI theory of Dunning (1977, 1979, 2000) is based on the eclectic paradigm of foreign investments.

This theory explains FDI by three groups of factors: 1) the advantages of ownership over certain knowledge (human resources, R & D, know-how), tangible (equipment, capital, infrastructure) and intangible (patents, brands, licenses), or in the form of market competitive advantages; 2) location advantages relate to those location factors that facilitate the economic valorization of competitive advantages of the company outside the borders of the country of origin, and 3) the advantages of internalization are to unify all international TNC activities within a unique business network managed by the TNC's top.

When it comes to location benefits, they are different depending on the type of FDI. According to the motives for their taking FDIs are divided into four groups: 1) market-oriented FDIs (market seeking FDIs), 2) resource-oriented FDIs (resource seeking FDIs), 3) efficiently-oriented FDIs (efficiently seeking FDI), and 4) strategically oriented FDIs (strategic FDIs). In the context of various types of FDIs, lokacion advantages are expressed through: 1) country-specific determinants, which influence the creation of the advantages of the TNC subsidiary, 2) industry-specific determinants, which can be distinguished by their influence from those at the country level, and 3) firm-specific determinants that express the competitive power of the TNC and its subsidiary in a particular country.

These specificities have their own expression in different types of FDI according to the mode of realization. Acquisitions are a way to take over a well-established company in the target market of the TNC. Greenfield FDIs are a choice in case of establishing a new and more efficient TNC activity. Acquisitions were the basic channel of FDI inflows into transition countries (Demirbag et al., 2008). Brownfield FDIs are the kind of investment that initially relies on acquisitions, and then enters a deep restructuring phase, where extensive investments are made that have the character of a greenfield FDI. Most of the acquisitions of former state-owned enterprises in transition countries that have been successfully restructured have actually gone through this type of investment (Meyer and Estrin, 2001, 576-577).

Countries in transition are attracted by FDIs by the action of attractive factorspulling action factors that reflect the attractiveness of the business environment and the impact of push factors that offer potential investors specific investment projects. Bosnia and Herzegovina has attracted most of its FDI based on push factors through the privatization process, but the removal of deposits in the FDI inflow is associated with the activation of pull factors arising from the business environment offered to potential investors (Domazet et 2008,118-124).

Most of the studies conducted on the impact of FDI on the economic development of FDI recipient countries show positive results. Mehić (2010) proves that, with the traditional determinants of FDI, the quality of institutions has a positive impact on the FDI earnings in the countries of Southeast Europe. It also proves that FDIs have a positive and significant impact on economic growth and employment, and that the presence of the TNC in the region contributes to the increase in both exports and imports of countries in the region. In contrast, Mencinger (2003) found that in the period 1994-2001. in eight countries of Central and Eastern Europe, the effects of FDI on the GDP movement were negative, creating negative effects on the current account. The explanation for this author is that FDIs are realized through acquisitions based on mass privatization. Domazet (2003) finds that the subsidiaries of foreign TNCs in BiH in 2002 had a predominantly market motivation, ie they were oriented to the domestic market, generating imports for the domestic market and creating negative spillover effects on the balance of payments.

In addition to the undeniable recommendations for the promotion of FDI, there are votes against FDI as a way of reducing the independence of countries and on an uneven basis, the influence of TNCs and countries of origin of FDI on the country of the recipient of FDI is strengthened. Jacobsen (2011) suggests that economic nationalism, especially in countries in transition, in addition to justified demands for the conduct of appropriate industrial policies for the development of domestic manufacturing companies, often means lobbying for the maintenance of unproductive domestic enterprises, finding the culprit for their loss of position in the emergence of foreign enterprises and openness of the domestic economy. The authors argue that economic nationalism can lead to the gains of individual groups, but that social development losses may be higher due to FDI resistance, especially in cases where it is an FDI-based export-oriented production offering employment potential.

Table 5. shows the state and flows of FDI in Bosnia and Herzegovina from 2007 to 2016 in millions of EUR.

Table 5 The states and flows of FDI in Bosnia and Herzegovina 2007-2016. (in millions of EUR), (Sources:CBBH Bulletin and Panorama Necto (http://statistics.cbbh.ba:4444/Panorama/advanced_bs.htm)

Year	State of FDI at the end of the year by elements				Cash flow from income arising from FDI			Annual increment of FDI by elements				
	E+RD	IK	O	Sum	ID	TD	Difference	E	RD	IK	O	Sum
2007	3.308	198	153	3.660	277	147	130	1.027	130	30	44	1.231
2008	3.721	453	203	4.377	126	114	12	399	12	255	50	716
2009	3.811	739	255	4.806	-75	227	-302	392	-302	286	52	428
2010	3.813	922	275	5.012	59	164	-105	107	-105	183	20	205
2011	4.003	1.205	267	5.477	154	198	-44	234	-44	283	-8	465
2012	4.025	1.294	309	5.630	193	177	16	6	16	89	42	153
2013	4.087	1.254	295	5.637	188	137	51	11	51	-40	-14	8
2014	4.258	1.396	360	6.015	199	242	-43	214	-43	142	65	378
2015	4.501	1.407	431	6.329	263	180	83	160	83	11	71	314
2016	4.748	1.437	458	6.643	268	169	99	148	99	30	27	274
Total:					1.652	1.755	-103	2.698	-103	1.269	349	4.213

The situation and flows of FDI in Bosnia and Herzegovina 2007-2016. (in EUR million)

Note: Foreign Direct Investments (flows and stocks) are compiled in accordance with the most recent methodological standards and instructions of the International Monetary Fund (IMF) and Organization for Economic Cooperation and Development (OECD). Detailed methodological approach to compilation and dissemination of Direct Investments is presented in the IMF Balance of payments Manual, sixth edition and OECD Benchmark Definition of direct investments, forth edition. Implementation of new methodologies has resulted in changes as follows: - treatment of inter-company loans and other liabilities for financial intermediaries (transactions within this category, other capital, – withdrawals and repayments of debt – are excluded from Direct Investments, while these are included in category of Other Investments).
LEGEND: E = Founding stake (equity); RD = Reinvested earnings; IK = Intracompany loans; O = other; ID = Investment income (FDI profits); TD = Transferred profit
Foreign direct investment in BiH records a low level, a slow pace of growth and a deterioration in the investment structure. The cumulative value of FDI in BiH in 2016 was EUR 6,643 billion or 43.42% of the country's GDP. FDI per capita in the same year amounted to 2.494 EUR (CBBH, 2016). Compared with the FDI parameters of the countries in the neighborhood, which are not otherwise among the champions in attracting FDI, BiH lags behind Croatia (FDI 52.1% of GDP, or 5.690 EUR pc), Montenegro (FDI 109.5% of GDP), Serbia (FDI 67.4% of GDP and 3.342 EUR per pc) and Macedonia (FDI 45.3% of GDP, or 2.010 EUR pc).

CHOICE OF VARIABLES, DATA AND METHODOLOGY

Data include research for Bosnia and Herzegovina, which is available on an annual basis from 2007 to 2016 (Table 6.).

Table 6 Sample for research (CB BIH, Author 2018)

Year	PFDI(%BDP)	SR_BDPps	TRG (%BDP)	Interest (Ks)	Rid_BDP
2007	11,83	12,41	90	11,65	0,21
2008	5,37	13,18	92	11,65	0,25
2009	1,4	-0,03	72	9,41	0,25
2010	2,4	2,31	82	8,85	0,27
2011	2,7	3,48	91	8,89	0,19
2012	2,3	0,05	88	7,68	0,22
2013	1,5	2,24	88	7,63	0,25
2014	3	2,31	91	6,67	0,29
2015	2,1	4,73	87	5,62	0,32
2016	1,8	4,79	84	5,45	0,33

The relationship between foreign direct investment and its determinants is estimated by the following regression equation:

$$PFDI\_BDPit = \beta0 + \beta1*SR\_BDP\ psit + \beta2*TRG\_BDPit + \beta3*Rid\_BDPit + \beta4*Ksit + e \qquad (1)$$

where the variable is:

PFDI_BDPit, and represents the net inflow of foreign direct investment as a percentage of gross domestic product. This is the amount of fixed capital, reinvested profit, long-term capital and short-term capital as shown in the balance of payments. This series shows net foreign FDIs by foreign investors and is divided by GDP. Independent variables are all the rest.

SR_BDPpsit denotes the growth rate of real GDP per capita, which is a proxy variable for market size and growth. According to the theory and previous research, the expected sign of a GDP growth rate per capita should be positive, as a larger and more developed market offers more opportunities to foreign investors.

TRG_BDPit denotes the share of trade in GDP, which is a proxy variable for the degree of openness calculated as a sum of exports and imports as a share in GDP. For investors it is very important that the country is open and that there are no trade restrictions. It is therefore expected that greater openness will attract more foreign direct investment.

Rid_BDPit represents R & D expenditures as a percentage of GDP, which is a proxy variable for technology. Research and development is a good indicator of both technology and human capital. At the same time, research and development creates a new technology that reduces the technological gap to other countries. It is a signal to foreign investors that the host country has already reached the required level of human capital for the independent advancement of technology. It is believed that higher investment in research and development is attracting more foreign direct investment, as companies look for educated and high-quality workforce. However, opinions are divided.

Ks is the interest rate on borrowing money or loans. It includes short-term and mid-term financing needs of the private sector. This rate is normally different with the borrowers' creditworthiness and financing objectives. The terms and conditions attached to these rates vary by country. If interest rates on borrowed money are high in the country, a smaller inflow of foreign direct investment is expected, ie the negative sign of the coefficient with the variable Ks.

Table 7 Display of selected variables, explanation and source (Author 2018)

VARIABLE	DESCRIPTION	SOURCE	EXPECTED PRESENT
PFDI_BDP	Net inflow of foreign direct investment expressed in (%) of GDP	CB BH	Dependent variable
SR_BDPps	Growth rate of real GDP per capita (proxy variable for market size and growth)	CB BH	+
TRG_BDP	Share of trade in GDP (proxy variable for openness)	CB BH	+
Ks	Interest rate on loans	CB BH	-
Rid_BDP	R & D expenditure as a percentage of GDP (proxy variable for technology)	CB BH	+

Table 7. summarizes the variables in the model and shows the expected sign of the coefficients based on the theoretical discussion. However, not all variables are discussed and included due to the unavailability of data. I also used the same data sources, bearing in mind the different methodologies when comparing databases of different institutions.
In accordance with the problem, the subject and objectives of the research, and the hypotheses set, the specific methodology of this research work has been developed as follows.
To prove basic research hypotheses that read:
H1: Market growth has a significant impact on FDI inflows.
H2: The country's openness has a significant impact on FDI inflows.
H3: Investing in R & D has a significant impact on FDI inflows.
H4: Interest rate significantly influences FDI inflows.
The correlation analysis methods have preliminarily tested the existence of a connection in the movement of independent variables.

RESEARCH RESULTS

From Table 8. Descriptive statistics for the entire sample from 2007 to 2016 using the Statistic 10 programshows the number of observations for the selected variables, the average value of the selected variables and Standard Deviation (Author 2018).

Table 8 Descriptive statistics for the entire sample from 2007 to 2016 (Autor 2018)

VARIABLE	Descriptive statistics (Panel analysis data)				
	Valid N	Mean	Minimum	Maximum	Std.Dev.
PFDI(%BDP)	10	3,440	1,400	11,830	3,156119
SR(BDPps)	10	4,547	-0,030	13,180	4,643861
TRG(%BDP)	10	86,50	72,00	92,00	6,0046
Interest (Ks)	10	8,197	5,450	11,650	1,975028
Rid_BDP	10	0,258	0,190	0,330	0,045656

The average net FDI inflow is 3.44% of GDP, in the observed period with an average deviation from the arithmetic mean of 3.156%. The net inflow of foreign direct investment as a percentage of GDP ranges from 1.40% to 11.83%.
The average GDP growth per capita is 4.547%, in the observed period, with an average deviation from the arithmetic average of 4.6438%. The minimum value of the growth rate of GDP per capita was -0.030% and it refers to the growth rate in 2009, while the maximum growth rate was 13.18%, and it happened in 2016.
The share of trade in GDP on average is 86,5%, which leads us to conclude that in the observed period the inflow of foreign direct investments was lower than the amount of GDP. The minimum

value of this indicator is 72.00%, and the maximum value is 92.00%. The average deviation of the share of trade in GDP from the average is 6,046%.

It can be concluded that R & D expenditures are not a high expenditure of GDP. Bosnia and Herzegovina invests only 0.258% of GDP in research and development. The minimum investment value in R & D is 0.19% in 2010, while the maximum investment value is modest 0.33% of GDP in 2016.

The average interest rate on loans was 8.197%, the minimum amount was 5.45%, and the maximum was 11.65% in 2007. Namely, the Transition Process did not run smoothly, in 1996 there was a crisis in the banking sector that caused the currency crisis.

CORRELATION ANALYSIS

For the observed sample with the help of Statistics 10 programs, the author made a correlation matrix (Table 9.).

Table 9 Authors calculation with the help of Statistics 2010 programs (Author 2018)

VARIABLE	Correlation analysis					
	Std.Dev.	PFDI(%BDP)	SR(BDPps)	TRG(%BDP)	Interest (Ks)	Rid_BDP
PFDI(%BDP)	3,156119	1,000000				
SR(BDPps)	4,643861	0,626143	1,000000			
TRG(%BDP)	0,060046	0,750014*	0,480125	1,000000		
Interest (Ks)	1,975028	0,474166	0,152439	0,299696	1,000000	
Rid_BDP	0,045656	-0,349720	0,098466	-0,407415	-0,738493*	1,000000

From the correlation matrix it can be noticed that there is no statistically significant, strong connection between any two variables, which makes it possible to conclude that it is justified to use all selected variables in model testing. All correlation coefficients of 0,80 or more would suggest that these variables should be omitted from the model. However, in this example we see that there is no problem of multicolarity between the selected variables.

The absolute value of the correlation coefficient (code: r) indicates the strength of linear relationships among variables. What is r closer to zero, the connection is weaker, and what is r closer to the number one, the connection is stronger. Person correlation coefficient is based on a comparison of the actual impact of observed variables to one another in relation to the maximum possible impact of two variables for the samples with a maximum of 30 elements.

Standardized measure of the strength of the statistical link between the phenomenon presented in two quantitative variables is the correlation coefficient (Sosic I 1988). Since it is an arranged phenomena, the data can be displayed in the coordinate system. A set of these points is called a scatter diagram (Yan, X Su, X G 2009) from which one can see the dependence between variables. The correlation between phenomena can be positive and negative (Fox J 2008). In case of a positive linear correlation, if one variable is increasing corresponding linear increase in other variables will appear as well. If negative correlation is complete, sign r takes the value of -1.

Based on the above, the first application of the single linear regression model in this study can be expressed as follows:

GDP = f (FDI)

GDP - dependent variable,

FDI - an independent variable.

Data of the Central Bank of Bosnia and Herzegovina are used in the application of the single linear regression, i.e.: GDP = f (FDI).

In Table 10. lists Foreign direct investment flows and GDP, in millions of EUR and FDI share in% GDP.

Table 10 Required data for a unique linear regression model, in millions of EUROs (Central Bank of BH, 2017, Author 2018)

YEAR	Xi (FDI)	Growth (% FDI)	Yi (GDP)	Growth (% GDP)	FDI share in GDP (%)	XY	X^2	Y^2
2009	180	-73,68	12.700	-2,90	1.4	2.286.000	32.400	161.290.000
2010	307	70,56	13.000	2,36	2.4	3.991.000	94.249	169.000.000
2011	357	16,29	13.400	3,07	2.7	4.783.800	127.449	179.560.000
2012	307	-14,00	13.400	0,00	2.3	4.113.800	94.249	179.560.000
2013	208	-32,25	13.700	2,24	1.5	2.849.600	43.264	187.690.000
2014	415	99,52	14.000	2,19	3.0	5.810.000	172.225	196.000.000
2015	314	-24,34	14.600	4,29	2.1	4.584.400	98.596	213.160.000
2016	274	-12,74	15.300	4,79	1.8	4.192.200	75.076	234.090.000
2017 Q1-Q3	119	-	16.100	-	-	-	-	-
$\sum$	**2.362**	**-**	**110.100**	**-**	**-**	**32.610.800**	**737.508**	**1.520.350.000**

The diagram shows that a constant decline in foreign direct investment in Bosnia and Herzegovina was recorded in 2012, 2013, 2015 and 2016. A slight change for the better was in 2014, but after that year the trend of further inflow of foreign capital continued.
Analyzing the regression line for the dependent variable (GDP) which is shown as follows:
y = a + bx
For this research function of GDP is:
$BDP = a + bx = 12.999 + 2{,}586 \times FDI$

The coefficient of determination is calculated using the formula:
$$R^2 = \frac{a\sum y + b\sum xy - n\bar{y}^2}{\sum y^2 - n\,\bar{y}^2} = \frac{12.999 \times 110.100 + 2{,}586 \times 32.610.800 - 8 \times 13762{,}5^2}{1.520.350.000 - 8 \times 13762{,}5^2} = 0{,}053$$
Since the coefficient of determination is less than 1, we can conclude that the points are scattered around the line (y). That means that the higher the linear dependency is between X and Y, if the coefficient of determinations closer to 1, and vice versa.

The coefficient of correlation is calculated using the formula
$r = \sqrt{R^2} = \sqrt{0{,}053} = 0{,}23$

The absolute value of the correlation coefficient (r) indicates the strength of linear relationship between the variables. Value of r closer zero shows that the connection is weaker, and opposite, if closer to unit, the connection is stronger. The correlation in this research is positive, indicating that the linear increase in one variable corresponding to a linear increase in other variables.
Since the calculated correlation coefficient is 0.23, we can conclude that there is a weak $(0.20 \le |r| < 0.5$ w) impact of independent variable (FDI) on the dependent variable (GDP). The linear regression shows that the increase in foreign direct investment in the fixed assets of 1 million euros, leads to an increase in GDP in value of 2,586 million euros.

CONCLUSION

The foreign capital may affect economic development in three ways. First, it increases the domestic investment rates. To the extent that a country has a mismatch between savings and investment as a result of balance of payments deficit, the inflow of foreign capital can help boost investments in the country. Second, it increases business efficiency. The increase in productivity is resulting from the increase in efficiency, based on the transfer of experiences, new knowledge and new technologies that are brought in with foreign capital. Third, it stimulates the economic system and the business. The existence of efficient companies in the market can stimulate local competitors to innovate business in order to survive in the market. In this way, it increases the quality and diversity of local producers in a country that is the recipient of capital.

Acceleration of the economic development and the rapid pace of the development in Bosnia and Herzegovina is linked to the rate of accumulation. Accumulation is one of the main factors of development. The main problem of modern economic systems of developing countries is to ensure the mass and the rate of accumulation are sufficient to finance investments leading to economic development. The second goal is maximizing the efficiency of accumulation. The main issue of our country, which is preventing the development of the economy, is not that the economy is not able to produce, but that the fact that capital ends up in the hands of those social classes who use the capital in an unproductive manner.

Investments are a very important factor because they determine the speed of economic growth and development. There are other factors of the development such as: better and more efficient organization, better and more efficient use of production capacity, the higher level and quality of workforce education, on time application of new technologies and technical progress and so on. The basic criterion for determining the speed of development of the economic system is, apart from the increase in per capita income, is also the amount of investment together with other factors which are available means of achieving economic development for society as a whole.

Based on the survey results, the positive impact of foreign capital on economic development is proven by the statistical-quantitative analysis, where a positive correlation between FDI and GDP is recorded. Since the calculated correlation coefficient is 0.23, we can conclude that there is a weak ($0.20 \leq |r| < 0.5$) impact of FDI on the GDP. The linear regression shows that the increase in foreign direct investment in the fixed assets of 1 million euros, leads to an increase in GDP in value of 2,586 million euros.

However, a little correlation coefficient shows that foreign capital has an insignificant impact on the enabling and acceleration of the economic development in Bosnia and Herzegovina, but also that it is not the basic premise of the generation and acceleration of the economic development of Bosnia and Herzegovina. In addition, the economy of BH has no investment capacity, and must properly provide environment for the inflow of capital, which will be directed into those branches that will achieve the greatest benefit for the progress of the society as whole.

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INTERNATIONAL APPLICATION MODEL SHORT-LONG TERM BETWEEN GDP AND CONSUMPTION : CASE STUDY INDONESIA

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SUMMARY

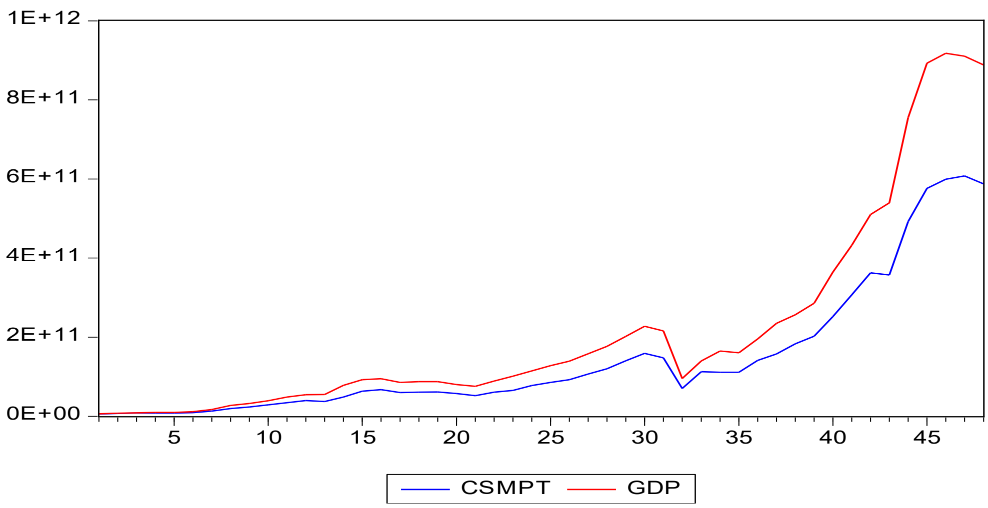
More recently, significant fluctuations in the Indonesian economy justify the need to pay more attention to this issue. In this case, the main purpose of this research is to know the relationship between two issues related to Indonesian macro economy called consumption and GDP for data period during 1967 until 2014. This study investigates the relationship between GDP variables and Indonesian consumption consumption variables using the test ARDL, cointegration and Granger causality. The result of the research can be concluded that, there is long-run equilibrium relationship between GDP and consumption with long-term ARDL model, 10% change of consumption will produce long-term change of 44% in GDP. It is not surprising that there is no short-run equilibrium relationship between GDP and consumption. 10% of consumption will result in a short-term ARDL model change of 95% in GDP. The variables and consumption of GDP are cointegrated in the long run significantly at lag interval 10, whereas the use of lag interval 1 and 5 is not credited in the long run. Using a cointegration test with lag interval 1, 5 and 10 indicates significant for all usage slowness. So it can be summarized in the context of GDP and coordinated short-term economic consumption for all the prevailing interval lags. concluded that long-term causality test results between GDP variables and significant consumption with time intervals 5 and 10. intervals 1, 15 and 20 have no long-term causality relationship between GDP variables and consumption variables. a short-term causal model. With lagging intervals of 1, 5, 10 and 15, there is a short-term causal relationship between the variable GDP and consumption. As for the use of delay interval 20 there is no causal relationship in the short term between the variable GDP and consumption in Indonesia.

Keywords: ARDL, cointegration, granger causality, GDP, consumption.

INTRODUCTION

During these years, a lot of researches have been conducted which focuse on the policies used by the Government, in both fiscal and monetary issues. Nevertheless, A small portion of the them are related to the issue of fiscal policy which mainly has the purpose of or in connection with the issue of the national economy in particular. economic problems in the country such as the onset of price hikes, shortages of the State budget and declining tax revenue have resulted in an increasing trend of government and the private sector debts. This issue has convinced the researchers to analysis it in more details. the majority of these studied aim to investigate how was the relationship between GDP and rate of consumption during 1967 to 2014 in the country. Accordingly, in a study, this relationship has been evaluated using the available database. according to following figure, it can be included that consumption had withnessed a growing trend by increace in GDP criteria.

Figure 1 GDP and consumption in Indonesia for the year 1967-2014



Source : Self Proceed

If the pore over the occurrence of consumption figures rise each year also on accompanied with the increase of the GDP every year too. Thus the author assumes that the two variables have a relationship that was going on explained in the study results. By using these two macroeconomic variables, expressed in actual value, expect to be able to see how the second relationship and result in this variable in the short-term and long-term, as well as on the expected can see if there is a dependency between macroeconomic variables in doing this research. This research will be divided into 5 sections, where section 1 is for introduction, part 2 for literature review, part 3 for research methods, part 4 for results research and part 5 for conclusion research that has been funded.

LITERATURE REVIEW

For literature pertaining to this study, the authors use as the basis of the literature as a basis for understanding the use of modeling in research methods that will be in use. One of them performed by Benazic, M. (2006) [1], Gray, C., et, al. (2007) [2], Rukelj, D. (2009) [3] Svaljek, S. et. Al (2009) [4]. The two researchers do a study related to GDP that exists in their country and relating to the fiscal policy in the activities of the economy. Most of the variables used by them in addition to GDP is an expenditure budget and expenses. The analysis model in use among others such as Granger method, model and vector error correction model of error correction. From the results of their research that, variables in use will have elevated to government revenue as well as have a negative impact on the real sector activity in their country, while government spending figures had a positive impact on the real sector economy. Other analysis in use by the author namely Hodrick-Prescott filter technique. The author identifies that a cycle happens one considered very sensitive on variable budget revenues and spending as well as against the macroeconomic variables are variables in the thorough.

Gross Domestic Product (GDP) / Gross Domestic Product (GDP) Definition, Types and approach Gross Domestic Product (GDP) is a calculation used by a country as the main measure for the activity of national economy, but basically the whole GDP measures the volume of production of a region (country) geographically. Meanwhile, according to Samuelson. & Nordhaus (2001) [5], Slavin (1999) [7] and Begg, et al (2001) [8] defines GDP as a means to measure the market value of the goods and services produced by the end of the resources that are within a country during a certain period, usually one year. GDP can also be used to study the economy over time or to compare several economies at a time.

According to Samuelson. & Nordhaus¬¬ (2001) [5], McEachern (2000: 147) [6], Slavin (1999) [7] and Begg, et al (2001) [8] There are two kinds of approaches used in the calculation of GDP, namely: 1. the expenditure approach, aggregating all aggregate spending on all final goods and services produced during a year. 2. The income approach, aggregating all the aggregate income received during the year by those who produce the output.

GDP BY EXPENDITURE APPROACH

According to Samuelson. & Nordhaus (2001) [5], McEachern (2000: 149) [6], Slavin (1999) [7] and Begg, et al (2001) [8] to understand the expenditure approach to GDP, we split expenses aggregated into four components, consumption, investment, government purchases, and net exports. We will discuss them one by one

1. Consumption, or more specifically private consumption expenditure, is the purchase of final goods and services by households for one year.
2. Investment, or, more specifically, gross private domestic investment, is spending on new capital goods and additional inventory.
3. Purchase of government, or more specifically government consumption and gross investment, including all levels of government spending on all goods and services, from street cleaning to purge the courtroom, from library books to pay the librarian. In the government's purchase does not include social security, welfare and unemployment insurance. Because these payments reflects the government grants to the recipient and do not reflect the impact of the government.
4. Net exports, equal to the value of exports of goods and services a country minus imports of goods and services the country. Net exports not only includes the value of trade in goods but also services.

In Samuelson. & Nordhaus (2001) [5], Slavin (1999) [7] and Begg, et al (2001) [8] approach to spending, aggregate state spending equal to the sum of consumption, C, investment I, government purchases, G, and net exports, the value of exports, X, deducting the value of imports, M, or (XM) the sum of these components generate aggregate spending, or GDP:

$C + I + G + (X\text{-}M)$ = Expenses aggregate = GDP

GDP BY INCOME APPROACH

According to Samuelson. & Nordhaus (2001) [5], McEachern (2000: 151) [6], Slavin (1999) [7] and Begg, et al (2001) [8] The aggregate income is equal to the sum of all earned income of the owner resources in the economy (because of the resources used in the production process). Double-entry bookkeeping system can ensure that the value of aggregate output equals aggregate income paid to the resources used in the production of such outputs: ie wages, interest, rents, and profits of production.

According to Mankiw (2005) [9], and McEachern (2000: 151) [6]. Aggregate expenditure = GDP is a finished product normally processed by several companies on his way to the consumer. Wooden table, for example, initially as raw wood, then cut by the first company, cut to fit the needs of furniture by a second company, created a table by a third company, and sold by the four companies. Double counting avoided by simply taking into account the market value of the counter at the time of sale to the end user or by calculating the value added at each stage of production. The added value of each company is the same with the selling price of the company is reduced by the amount paid on inputs other companies.
The added value of each phase reflects the return on the owner of the resource at the stage in question. Summation added value at all stages of production equal to the market value of final goods, and the sum of the entire value-added final goods and services is equal to the GDP by the income approach [19].

DATA AND RESEARCH TECHNIQUE ANALISYS

Author uses the data in this study is GDP and consumption Indonesia country, from the year 1967-2014.

ARDL ANALYSIS

In the method of this study the author makes the equation based on existing empirical literature, where the existence of a long-term relationship between GDP and consumption. where the gross domestic product and consumption in GDP and symbolizes with ELC. Data on the use of annual data is uploaded by the author through the website of the world bank on June 13, 2016. The first step the author will use test ARDL in the short and long term to know the relationship of the economic variable.

COINTEGRATION ANALYSIS

This cointegration method to the author proposes a model developed by Pesaran & Shin (1999) [10]. Using the approach of cointegration Johansen (1988) [11], or using the Johansen and Juselius (1990) [12] consider easier in understand and funded although ARDL method has many advantages compared to other such as cointegration methods Granger (1969) [13], Engle & Granger (1987) [14]. In research in writers ignores while Johansen cointegration techniques with large data samples, which could expect to make the validation process be accurate. If we see the ARDL method by using a simple equation, log-linear function in the long term will expect to have a relationship between variables in thoroughly.
However, in the data analysis, the writer is intentionally looking to the model of Narayan (2005), Narayan & Smith (2008), Narayan & Prasad (2008) [15], [16], [17] and are bound to the model Pesaran et al. (2001) [18], where a variable period of time in a thorough range of 30 or over. If there is a long-term relationship between variables in the model

CAUSALITY ANALYSIS

in their study, the relationship between Engle and Granger has been studied (1987) [14], The author did not do the test over Granger causality based error correction model. Same is the case with the test, test the Granger causality also in this study with model the long term and short term.

RESULT AND DISCUSSION

Analysis of the results of this research will be in the form of outlines in table 1 to table 6 :

ARDL MODEL LONG RUN GDP AND CONSUMPTION

ARDL model test of use for long term analysis, at the got results of the relationship between GDP and consumption variables for a meticulous data as follows:

Table 1 ARDL Model Long run GDP and consumption in Indonesia for the year 1967-2014

Dependent Variable: GDP(-1)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-2)	0.445209	0.112365	3.962166	0.0003
CSMPT(-1)	1.508347	0.038512	39.16600	0.0000
CSMPT(-2)	-0.649933	0.177236	-3.667052	0.0007
C	5.390008	2.510009	0.215011	0.8309
@TREND	-2.660008	1.570008	-1.696484	0.0976
R-squared	0.998766	Mean dependent var		2.090011
Adjusted R-squared	0.998643	S.D. dependent var		2.430011
S.E. of regression	8.960009	Sum squared resid		3.210021
Durbin-Watson stat	1.787825	Long-run variance		4.450019

Source : Self Proceed

The long run value of coefficient is positive (4.450019), as required, and is not significant. Importantly, the long-run coefficients from the ARDL equation are reported, with their standard errors, t-statistics, and p-values. First, not surprisingly, there's a long-run equilibrium relationship between the GDP and the consumption with ARDL long run model. Second, there is a relatively quick adjustment in the GDP when the consumption changes. Third, a 10% change in the consumptions will result in a long-run change of 44% in the GDP.

ARDL MODEL SHORT RUN GDP AND CONSUMPTION

Here, ARDL test has been used for the the short-term Analysis and the results is shown in the following table.

Table 2 ARDL Model short run GDP and consumption in indonesia for the year 1967-2014

Dependent Variable: _GDP(-1)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
_GDP(-2)	-0.063131	0.098076	-0.643691	0.5234
_CSMPT(-1)	1.480463	0.035796	41.35793	0.0000
_CSMPT(-2)	0.226323	0.146239	1.547627	0.1296
C	9.150008	1.950009	0.469012	0.6416
@TREND	-80789154	80840215	-0.999368	0.3236
R-squared	0.956290	Mean dependent var		2.010010
Adjusted R-squared	0.951919	S.D. dependent var		4.550010
S.E. of regression	9.980009	Sum squared resid		3.980021
Durbin-Watson stat	1.717751	Long-run variance		3.320019

Source : Self Proceed

Not the same as the long term coefficient value analysis, in the short-term analysis model using ARDL model is positive (3.320019), as needed, and not significant. Note, short-term coefficients of the ARDL equation are reported, with standard errors, t-statistics, and p values. First, it is not surprising, if there is no short-run equilibrium relationship between GDP and consumption. Secondly, there is a relatively quick adjustment of the GDP when the consumption changes. (Remember that the data is observed every year.). Third, a change in consumption of 10% will result in a long-term change of 95% in GDP.

COINTEGRATION MODEL LONG RUN GDP AND CONSUMPTION

In a second analysis with cointegration test, the same as the previous analysis. With cointegration is the analysis of long term and short term in accordance with the equation in to draw by the author on table 3 and 4.

Table 3 Cointegration Model Long run GDP and consumption in Indonesia for the year 1967-2014

Lags interval (in first differences): 1 to 1				
		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.310246	19.71586	15.49471	0.0109
At most 1	0.055581	2.630505	3.841466	0.1048
Lags interval (in first differences): 1 to 5				
		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.295077	14.92359	15.49471	0.0608
At most 1	0.005640	0.237554	3.841466	0.6260
Lags interval (in first differences): 1 to 10				
		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.478634	31.79177	15.49471	0.0001
At most 1 *	0.187739	7.693531	3.841466	0.0055

Source : Self Proceed

Table 3 shows long-term cointegration test results for GDP variables and consumption with cointegration using lags of intervals 1, 5 and 10. The results in the table above show GDP and consumption variables cointegrated in the long term significantly at lags interval 10, whereas the use of interval lags 1 and 5 are not mutually credited in the long run.

COINTEGRATION MODEL SHORT RUN GDP AND CONSUMPTION

Display the following results for the analysis of the short-term test with cointegration.

Table 4 Cointegration Model short run GDP and consumption in Indonesia for the year 1967-2014

Lags interval (in first differences): 1 to 1				
		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.665932	65.23861	15.49471	0.0000
At most 1 *	0.275171	14.80373	3.841466	0.0001
Lags interval (in first differences): 1 to 5				
		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.370146	25.28477	15.49471	0.0012
At most 1 *	0.130425	5.869537	3.841466	0.0154
Lags interval (in first differences): 1 to 10				
		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.258275	17.39057	15.49471	0.0256
At most 1 *	0.157380	6.335837	3.841466	0.0118

Source : Self Proceed

Table 4 above describes for short-term cointegration test results on GDP and consumption variables. Using cointegration tests with lags 1, 5 and 10 interval shows significant for all usage slowness. So it can be summarized in the context of GDP and economic consumption in the short term cointegrate for all interval lags that apply.

CAUSALITY MODEL LONG RUN GDP AND CONSUMPTION

The following test results of causality for GDP and consumption variables on long-term and short term.

Table 5 Causality model long run GDP and consumption in Indonesia for the year 1967-2014

Pairwise Granger Causality Tests			
Lags: 1			
Null Hypothesis:	Obs	F-Statistic	Prob.
GDP does not Granger Cause CSMPT	47	0.02413	0.8773
CSMPT does not Granger Cause GDP		0.50830	0.4796
Lags: 5			
Null Hypothesis:	Obs	F-Statistic	Prob.
GDP does not Granger Cause CSMPT	43	6.37635	0.0003
CSMPT does not Granger Cause GDP		6.77051	0.0002
Lags: 10			
Null Hypothesis:	Obs	F-Statistic	Prob.
GDP does not Granger Cause CSMPT	38	3.95192	0.0063
CSMPT does not Granger Cause GDP		3.29590	0.0149
Lags: 15			
Null Hypothesis:	Obs	F-Statistic	Prob.

GDP does not Granger Cause CSMPT	33	2.19929	0.3569
CSMPT does not Granger Cause GDP		2.52045	0.3206
Lags: 20			
Null Hypothesis:	Obs	F-Statistic	Prob.
GDP does not Granger Cause CSMPT	28	NA	NA
CSMPT does not Granger Cause GDP		NA	NA

Source : Self Proceed

From Table 5 above it can be concluded that long-term causality test results between GDP variables and significant consumption with time interval 5 and 10. When using lag interval 1, 15 and 20 there is no long-term causality relationship between GDP variables and consumption .

CAUSALITY MODEL SHORT RUN GDP AND CONSUMPTION

How about a short-term relationship of causality.

Table 6 Causality model short run GDP and consumption in Indonesia for the year 1967-2014

Pairwise Granger Causality Tests			
Lags: 1			
Null Hypothesis:	Obs	F-Statistic	Prob.
_GDP does not Granger Cause _CSMPT	47	10.4233	0.0024
_CSMPT does not Granger Cause _GDP		5.15595	0.0281
Lags: 5			
Null Hypothesis:	Obs	F-Statistic	Prob.
_GDP does not Granger Cause _CSMPT	43	4.08852	0.0055
_CSMPT does not Granger Cause _GDP		4.09612	0.0055
Lags: 10			
Null Hypothesis:	Obs	F-Statistic	Prob.
_GDP does not Granger Cause _CSMPT	38	2.35351	0.0579
_CSMPT does not Granger Cause _GDP		2.24223	0.0686
Lags: 15			
Null Hypothesis:	Obs	F-Statistic	Prob.
_GDP does not Granger Cause _CSMPT	33	2.17610	0.3598
_CSMPT does not Granger Cause _GDP		2.20757	0.3559
Lags: 20			
Null Hypothesis:	Obs	F-Statistic	Prob.
_GDP does not Granger Cause _CSMPT	28	NA	NA
_CSMPT does not Granger Cause _GDP		NA	NA

Source : Self Proceed

In table 6 above presented the test results for the causality of the model with the short term. Using lags 1, 5, 10 and 15 intervals, there is a short-term causal relationship between the variable GDP and consumption. As for the use of delay interval 20 there is no causal relationship in the short term between the variable GDP and consumption in Indonesia.

CONCLUSION

This study identifies the relationship between GDP and annual consumption economics variables from 1967 to 2014 using ARDL, Cointegration and Causality granger analysis. not surprisingly, there is a long-run equilibrium relationship between GDP and consumption with a long-term ARDL model, a 10% change in consumption will result in long-term change of 44% in GDP. It is not surprising that there is no short-run equilibrium relationship between GDP and consumption. 10% of consumption will result in a short-term change of ARDL model of 95% in GDP. GDP variables and consumption are cointegrated in the long run significantly at lag interval 10, whereas the use of lags 1 and 5 intervals is not credited in the long run. Using a cointegration test with lag interval 1, 5 and 10 indicates significant for all usage slowness. So it can be summarized in the context of GDP and short term economic consumption that is cointegrated for all the prevailing interval lags. concludes that long-term causality test results between GDP variables and significant consumption with time intervals 5 and 10. intervals 1, 15 and 20 have no long-term causality relationship between GDP and consumption variables. causal model with short term. With lagging intervals of 1, 5, 10 and 15, there is a short-term causal relationship between the variable GDP and consumption. As for the use of delay interval 20 there is no causal relationship in the short term between the variable GDP and consumption in Indonesia.

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VALUE OF THE FIRM IN CAPITAL STRUCTURE PERSPECTIVE (Case study of tourism companies in IndonesiaStock Exchange)

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SUMMARY

This study aims to examine whether profitability, firm size, institutional ownership, growth affect the capital structure and whether profitability, firm size, institutional ownership, growth affect the value of the company through the capital structure. The sample used in this research is the tourism industry sector companies listed in Indonesia Stock Exchange 2007-2014 period, which has complete financial report and published in Indonesian Capital Market Directory (ICMD) as many as 19 companies. The data collected were analyzed using Path Analysis. Path analysis obtained that Return on Equity (ROE), Institutional Ownership (KIS), Growth Assets (GA) and Debt Asset Ratio (DAR) is the direction or positive with Value of the Firm (PRICE) where every increase ROE, KIS and GA followed by a rise in PRICE. On the other hand Firm Size (SIZE) has a negative relation to PRICE where every increase of SIZE is followed by decrease of PRICE.

Keywords: Capital Structure, Value of the Firm, and Path Analysis.

INTRODUCTION

Increased tourism sector tourism and investment destinations make this sector one of the sectors that can increase state revenues, job creation, business development and infrastructure. Based on United Nation World Tourism Organization (UNWTO) data in 2014 despite the global crisis has occurred several times but the number of international tourists travel continues to show a positive growth, the 1950 world tourist movement reached 25 million people, continues to increase to 278 million people in 1980 and 528 million people in 1995 and doubled in 2014 by 1138 million people. Economically activity of Tourism gives multiplayer effect to other business field. When an increase in tourist visits will affect the transport sector, both land, sea and air. On the other hand the tourist visit will increase the occupancy rate of the hotel, the income of the people in the tourist attraction, foreign exchange of the State (from the visits of foreign tourists), merchant souvenir (SME) Restaurant and so on.

The growth of the tourism industry sector in Indonesia is currently quite increasing along with the increase of foreign tourist arrivals and the increasing movement of domestic tourists. The number of foreign tourist arrivals in 2007 - 2013 increased from 5,505 million in 2007 to 8,802 million people in 2013 as well as 222.39 million tourists and 228.39 million tourist travelers in 2013 and in 2013 at 248 million person as can be seen in table 1 below:

Table 1 Increase of foreign tourists and Indonesian tourists in Indonesia (In millions)

Years	Foreign Tourists	Growth	Indonesian Tourists	Growth
2006	4,871	-	204,55	-
2007	5,505	13%	222,39	8,72%
2008	6,234	13%	225,04	1,19%
2009	6,323	1%	229,73	2,08%
2010	7,002	11%	234,38	2,02%
2011	7,649	9%	236,75	1,01%
2012	8,044	5%	245,29	3,61%
2013	8,802	9%	248,00	1,10%

Source: Minister of Tourism of Indonesia (2013)

The development of foreign tourists visit and the movement of Indonesian tourists in Indonesia during the period of course will have an impact on the revenue of the tourism industry sector in the form of increased occupancy of the hotel and the number of passenger flights which of course also affects the investment interest in this sector.
Growth of foreign tourists visit and the movement of Indonesian tourists in Indonesia is also an impact on the development of investment, especially in the tourism industry sector. Data related to investment in this sector as obtained from Foreign Development Investment (FDI) and Domestic Development Investment (DDI) from 2006-2012 can be seen in table 2 below:

Table 2 Investment Growths in Indonesian Tourism Sector

Year	FDI (USDMIL)	DDI (USD MIL)	TOTAL (USD MIL)	% Growth
2006	111,5	18,0	129,5	-
2007	136,4	12,7	149,1	15,17 %
2008	156,9	23,8	180,7	21,18 %
2009	306,5	35,7	342,2	89,32 %
2010	346,4	39,0	351,1	2,60 %
2011	242,2	39,4	279,8	-20.31%
2012	786,3	101,5	869,8	210.86%

Source: Indonesian Investment Coordinating Board (2012)

Another indicator of the development of tourism industry sector can be seen from the increase of companies listing on the Indonesia Stock Exchange (IDX) for the last 10 years. The development of the listed tourism industry sector continues to increase, from 12 companies listed on the Indonesia Stock Exchange (BEI) up to 2003 to 20 companies by the end of 2013, this means experiencing a growth rate of 67% of the total number of companies in 2003.
Investors set up a company to maximize profits so that the company can maintain its survival, keep growing and a promising return for its owners so as to increase prosperity. at least there are three things that the purpose of the establishment of a company, among others: first to achieve maximum profits, both want to prosper the company owner or the shareholders, and third to maximize the value of the company.
The value of a company is a certain condition that has been achieved by a company as a picture of public confidence in the company after through a process of activity for several years, ie since the company was established until now. Investors' exposure to their investment is to obtain the greatest return with certain risks. This expectation will actually happen if the investor has a very good ability in assessing the company's performance and sensitive to the financial condition of a country and the global economy. Investors 'and prospective investors' confidence in the prospect

of the company is important for the issuer, the more potential investors who believe in the issuer, the desire to invest in the issuer is expected to increase. By looking at the value of the company, investors and potential investors will be able to measure how the prospects ability companies generate return so for investors are expected to provide prosperity, while for potential investors will be a consideration to make an investment. How investors and potential investors measure Value of the Firm can be done with various approaches. There are two analyzes that are always used by investors and potential investors to measure the value of the company for investment decisions, namely fundamental analysis and technical analysis. Besides, the company's value can also be measured from several approaches such as earnings approach, cash flow approach, dividend approach, asset approach, stock price approach, and Economic Value Added (EVA) approach.

In an effort to generate maximum return, the company needs adequate funding to support its operations. To meet the financing needs of the company can be selected alternative sources of funds from internal (own capital) in the form of share capital and retained earnings and external sources of funds (foreign capital) obtained from debt. Comparison of the amount of foreign capital with its own capital used by the company is called the capital structure. The amount of capital structure is an important thing that must be considered by the company because good bad capital structure will have a direct effect on the financial position of the company that will ultimately affect the value of the company. Companies can minimize the amount of risk derived from the debt, namely by optimizing the company's capital derived from external that is fully used to finance the company so as to increase the company's own profits. Therefore, in the utilization must be efficient so that it can make it more optimal. Optimal capital structure is capital structure that can minimize average capital cost and maximize Value of the Firm. Capital structure can be influenced by several factors including: profitability, size, asset growth, sales growth, interest rate, stability of earnings, asset structure, risk level of assets, amount of capital needed, capital market condition, management nature, companies, and so on.

LITERATURE REVIEW

VALUE OF THE FIRM

Corporate value is an important concept for investors, as it is an important indicator of how the market perceives the company as a whole. The market value of the public is determined by the stock market price. The stock market price reflects the potential of the company in the future or the overall investor's assessment of its own capital owned by a particular company. Value of the Firm can be reflected through the stock price. The higher the share price means the shareholder's prosperity will increase. The market price also shows the value of the company. Basically the stock price is calculated from the present value of the dividend to be received, so the higher is also the value of the company related to the purpose of the company itself that is maximizing shareholder wealth.

The financial ratios used by investors to know the market value of the company. These ratios can provide an indication for management regarding investor appraisal of past company performance and prospects in the future. There are several ratios that are considered to provide the best information is Tobin's Q. Tobin's Q provides an overview of the fundamental aspects / and the extent to which the market assesses the company from various aspects seen by outsiders including investors. Thus Tobin's Q is a more rigorous measure of how effectively management makes use of economic resources. It is often difficult to determine whether high Tobin's Q reflects the superiority of management or the benefits of having a patent Brealy and Myers (2003) say that companies with high Tobin's Q values typically have a very strong corporate brand image. While companies that have a value of Tobin's Q low is generally in a highly competitive industry or a small starting industry.

CAPITAL STRUCTURE

Capital structure theory is the basis of conceptual argumentation to explain the difference of debt ratio in this empirical study: static trade-off theory, agency theory, asymmetric information theory and signal theory. The static trade-off theory described by Jensen and Meckling (1976) describes the relationship between wealth or shareholders' wealth and the expenditure or expenditure of managers in a Cartesian graph as shown in Figure 4 The letter "F" represents the expenditure of managers in the form of luxury (non-pecuniary -benefits), while the symbol "V" on the other hand represents the value of the company and the wealth of the owners. When viewed from the picture, then at point F111 the insiders have a company or share of 1-2x (showing the company owned by outsiders).

In Static Trade off Theory or Balancing Theory, there are 4 (four) main sources of fund: (i) debt, (ii) preferred stock, (iii) ordinary shares and (iv) retained earnings. Each of these financing sources requires different compensation and different forms of engagement with respect to the risks attached to it. A proportional combination of these financing sources is expected to provide what is called the cost of capital, which serves as the cost of rate in investment decisions. The next question is: is it possible to combine these financing sources optimally for optimal capital cost?

The capital structure refers to the different options companies use to finance their capital (Saleem et al., 2013). The Company strives to maintain an optimal capital structure by balancing costs and benefits with varying degrees of leverage in order to maximize corporate value (Cheng et al., 2010). Antwi et al. (2012) concluded that the variable of capital structure does affect the value of the company. The existence of a capital structure contributes a lot in determining the market value of a firm.

Research by Ahmed et al., (2010) states that the capital structure is influenced by profitability, growth, and assets structure. Profitability is a company's ability to earn profits. Based on the conclusions, profitability has significant opposite relationship to capital structure. This is related to the pecking order theory that the company prioritizes the use of retained earnings because it is the cheapest financing (Ramlall, 2009). Research Saleem et al. (2013) states different results that profitability has a positive effect on capital structure. However Rafique (2011) states that profitability is not found any significant relationship with the capital structure. High profitability shows good prospect of company so it responded positively by investor and impacted to increase Value of the Firm. Growth (growth) of companies have a negative and significant effect on capital structure. Rapid growth rates, tend to require more external funds. Another statement regarding the absence of a significant relationship between growth and capital structure. The growth of the company can also affect the change of corporate value that is high growth rate; corporate image in the eyes of the investor is considered good and will increase the value of the company. Assets structure or asset structure affects company flexibility in determining external funding alternatives. The asset structure based on the tangibility of total assets ratio represents the proportion of fixed assets to total assets (Liu and Ren, 2009). A company that has a large amount of fixed assets tends to use its own capital more than foreign capital. The opposite results of research are expressed by Frank and Goyal (2007) that capital structure is positively influenced by the structure of assets, because firms tend to increase leverage when they have more fixed assets. However Wardani (2010) found no significant association of asset structure with capital structure.

MATERIALS AND METHODS

This research was conducted at a tourism industry sector company listed on Indonesia Stock Exchange (BEI), which published its financial report and has been audited from 2007 until 2014. The central location of the company's administration is spread in Indonesian territory but the data needed in this research can be accessed via the internet on its Indonesia Stock Exchange website at Indonesia Capital Market Directory (ICMD).

The type of data used in this study is to use quantitative data, which are stated in numbers and are secondary data or indirect data. The data sources used in this study are from Indonesia Capital Market Directory (ICMD) published in 2007 until 2014. In the form of annual report (annual report) for companies engaged in the tourism industry sector listed in Indonesia Capital Market. The data collection procedure in this study is to collect data of audited financial reports (annual report) issued by Indonesia Capital Market Directory (ICMD) for companies engaged in the tourism industry sector listed on the Indonesia Stock Exchange. Data are collected by time dimension and time sequence and are cross sectional and time series or also called panel data.

The population used in this study is the tourism industry sector companies listed in Indonesia Stock Exchange period 2007-2014 period that has complete financial report and published in Indonesian Capital Market Directory (ICMD). There are 20 companies listed on BEI but 1 of them is PT Bukit Uluwatu Villa (PT.BUVA) must be removed from the sample because it is not eligible. This is due to the company's new IPO on the Indonesia Stock Exchange in 2010 so that data 2007 - 2009 cannot be found.

This research uses path analysis to know and analyze the influence of exogenous variables on endogenous variables. Path analysis was developed with the aim of explaining the direct and indirect consequences of the variable set, as the cause variable, against a set of other variables that are the result variables. The path diagram model used based on the relationship paradigm between variables can be described as follows:

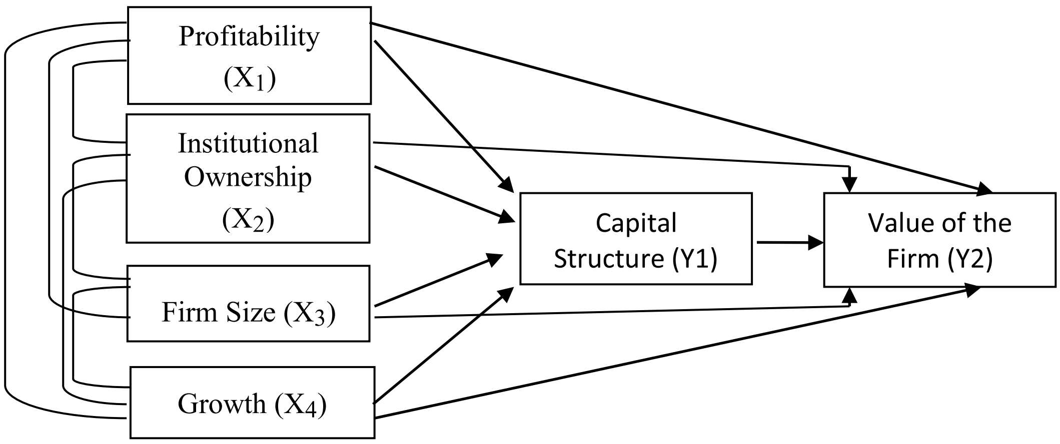

Figure 1 Path Analysis Model

RESULTS AND DISCUSSION

The research variables analyzed in this research are: Profitability proxy with Return On Equity (ROE), Institutional Ownership (KIS), Company Size (SIZE), Company growth proxies by Growth Asset (GA), Capital structure proxies by Debt asset Ratio (DAR) and Value of the Firm which is proxies with share price (Price). The descriptive analysis can be seen in table 3 below:

Table 3 Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	SD
PRICE	152	50.00	5700.00	715.64	896.81298
ROE	152	-158.40	143.18	8.5788	25.39108
KIS	152	18.67	97.27	74.8129	19.08934
SIZE	152	9.24	16.08	12.4695	1.72950
GA	152	-62.65	705.02	17.8926	73.78980
DAR	152	0.02	4.06	0.5010	.44756

Source: authors' calculation based on data from Indonesia Capital Market Directory (ICMD).

From table 3 it shows that the amount of data used in this study amounts to 152 data obtained from the financial report data for the tourism industry companies listed on the BEI in the period 2007-2014, using the panel of samples taken from 19 firms with a year of observation of 8 years.
Value of the Firm data of 152 with minimum value 50 and maximum value 5700 and average value 715.64 while the standard deviation value of 896.81. This shows that the condition of the Price data is very fluctuating because the difference between the maximum data with the minimum data is large enough where the standard deviation value is greater than the average value of Price. This shows that Price variable data is not normally distributed.
Data Return On Equity (ROE) of 152 with a minimum value of -58.40 and a maximum value of 143.18 and an average value of 8.5788 while the standard deviation of 25.3910. This shows that ROE data condition is very fluctuate because the difference between maximum data and minimum data is big enough where the standard deviation value is greater than ROE average value. This shows that the ROE variable data is not normally distributed.
Institutional Ownership Data is 152 with minimum value 18.67 and maximum value 97,27 and average value 74,8129 while deviation standard value equal to 19,089. This shows that KIS data condition is very fluctuate because the difference between maximum data with minimum data is big enough but deviation standard value is smaller than the average value of KIS. This shows that KIS variable data is normally distributed.
Size variable of company with amount of data 152 has minimum value equal to 9,24 and maximum value 16,08 value average 12,4695 with standard deviation 1,7295. The data fluctuation varies and the range of values between the minimum and maximum values is not too large because the standard deviation value is less than the average value, indicating that the firm size variable is normally distributed.
Company growth variable with total data of 152 samples has a minimum value of -62.65 and a maximum value of 705.02 and an average value of 17.8926 with a standard deviation of 73.7898. The data are very volatile and the range of values of these variables is large because the standard deviation is greater than the average value, indicating that the GA variable is not normally distributed.
The Debt Asset Ratio (DAR) variable with a total of 152 data has a minimum value of 0.02 and a maximum value of 4.06 and an average value of 0.5010 with a standard deviation of 0.44756. Fluctuations vary and the range of values between the minimum and the maximum values is not too large as indicated by the standard deviation value less than the average value. This shows that the DAR variable is normally distributed.

THE INFLUENCE OF COMPANY PROFITABILITY, COMPANY GROWTH, COMPANY SIZE AND COMPANY GROWTH ON CORPORATE VALUE THROUGH CAPITAL STRUCTURE

THE EFFECT OF PROFITABILITY ON CORPORATE VALUE

Testing the variable profitability of the company to the value of the Company positive and significant results and it can be concluded that the variable profitability of the company have a significant positive effect on the value of companies in the tourism industry sector listed on the Stock Exchange in 2007-2014. This means that increased profitability of the company will be followed by increased Value of the Firm. Company Profitability is the company's ability to generate profits and measure the level of operational efficiency and efficiency in using its assets (Chen, 2004). This result proved to accommodate the hypothesis, which states Profitability of company, Company growth, Company size and Company Growth on Value of the Firm.
Companies that have large corporate profitability and increase each year tend to be interested by investors. Investors consider a large profit company will generate a large return as well. The

company's size ratio with positive trends indicates the company's better prospects and will be captured by investors as a positive signal from the company. The better the company's profitability growth means the prospect of the company in the future is rated better, it means the better the value of the company in the eyes of investors. If the company's ability to generate profits increases, then the stock price will also increase. The rising stock price reflects a good corporate value for investors. Shareholder value will increase if the value of the company increases, which is marked by high return of investment to shareholders in dividend and the level of return of investment to shareholder, depends on the company's performance profit.

The results of this research are in line with the signaling theory that companies will do every thing best to give an idea to the company owner about the current state of the company. So it is clearer verification of signal theory to the result of this research. In the context of signal theory, the optimal development of corporate profits is a picture of future developments and prospects of the company. Different behavior of capital market actors makes this easily visible. Companies that tend to perform well will be rewarded by investors who are very fond of a return on profits in the form of dividends, so that capital market players or investors like this will try very much to get shares from companies that are performing well. The increase in demand, which then raises the stock price of the company and makes the value of the company's shares in the market increases.

The results of this research are supported by Hermuningsih (2013), which states that firm size has a positive and significant impact on firm value. However, the results of this study differ from the results of research Choudary (2013), which states the size of the company have no significant effect on the value of the company.

INFLUENCE OF INSTITUTIONAL OWNERSHIP OF COMPANY TO VALUE OF THE FIRM

The result of testing of the influence of institutional ownership of Company to Corporate Value shows positive and significant. These results indicate that the institutional ownership variables have a significant positive effect on the value of the Company in the tourism industry sector listed on the BEI in 2007 - 2014. This means that any addition of institutional ownership will have an impact on the value of the company.

Institutional ownership is the proportion of share ownership by the end of the year owned by the institution, such as insurance, banks or other institutions. Institutional ownership affects the value of the company, where the greater ownership by financial institutions the greater the power of voice and the drive to optimize the value of the company, Vernimmen (2009). Institutional ownership has important meaning in monitoring management. The existence of institutional ownership will encourage more optimal supervision. With institutional ownership believed to be able to monitor management in financial decision-making, the greater the institutional ownership the more efficient the utilization of company assets and is expected to also act as a deterrent to waste management. The higher institutional ownership will reduce the opportunistic behavior of managers who can reduce the agency cost which is expected to increase the value of the company. Given the effective supervision by institutional investors, it also has an impact on the increase in corporate value, as stated by Slovin and Sushka (1993) the value of the company can increase if the institution is able to be an effective monitoring tool. Institutional ownership is measured by dividing the number of shares owned by the institution by the number of shares outstanding. A high supervisory mechanism will minimize possible misappropriation of management resulting in a decrease in corporate value. In addition, through positive efforts, institutional investors will seek to increase the value of the companies they own.

THE INFLUENCE OF COMPANY SIZE ON CORPORATE VALUE

Testing the influence of Company Size on Corporate Value shows that firm size variables do not affect the value of companies in the tourism industry sector listed on the BEI in 2007 - 2014. Empirical facts of this study prove that the hypothesis that the size of the company affects the value of the company as stated in the hypothesis is unacceptable.
Company size influence to Value of the Firm because company having big size shows company progressed, and expected to give better return for investor higher. This will be responded positively by investors and make the company's stock price increase so that will increase the value of the company. The larger the company, the larger the required external fund, on the contrary, the smaller the company the fewer external funds the company needs. In addition, the size of the company will be a preliminary description for the creditors in determining their attitude on the disbursement of loan funds that will be used by companies in funding their new projects. From the management side, the large amount of assets will provide ease in controlling the company will increase the value of the company.
But Simon Herbert (1959), states that managers have a tendency to behave opportunistically by playing the funds invested by investors by finding a level appropriate for the growth of the company because they pay more attention to the assurance of ownership than to maximize the value of the firm to the holders stock. It is evident in the company's tourism industry sector that the size of the company is deemed not to have an important influence on the development of stock prices by investors. Therefore, according to investor, the company's size does not provide guarantee in terms of increasing return for shareholders and predicted by investors to look at other factors that are more influential on stock prices such as company performance (profitability proxies by ROE). The results of this study are in line with research conducted by Choudary (2013) and Debby, et al (2014).

THE INFLUENCE OF CORPORATE GROWTH ON CORPORATE VALUE

The company growth variable from the result of empirical test does not significantly affect the value of the company in the tourism industry sector listed on the BEI in 2007 - 2014. The results of this study indicate that hypothesis which states that the growth of companies proxied with growth asset cannot be proven. This fact shows that investors in the tourism industry sector companies do not view asset growth as a measure to assess the company as a basis for consideration of share purchase. In general, companies that have rapid growth often have to increase their fixed assets; the company's growth opportunities also cannot determine the behavior of tourism companies in Indonesia over its capital structure policy. Stakeholders in tourism companies in Indonesia prefer the level of profitability and positional importance within the company. Stakeholders are still prioritizing short-term benefits for both the company and for the company owner. Thus, firms with high growth rates need more funds in the future and also hold more profits. So growing companies usually do not divide earnings as dividends but are better used for expansion.
The results of this study are supported by the research of Choudary (2013) which stated that the company's growth does not affect the company's value, but not in line with Hermuningsih (2013), which states the company's growth has a positive and significant impact on the value of the company.

EFFECT OF CAPITAL STRUCTURE ON CORPORATE VALUE

The influence of the company's growth on firm value from the test result shows the result is not significant so Capital Structure has no significant effect on the value of the Company in the tourism industry sector listed on the BEI in 2007 - 2014. In order to generate maximum return, the company needs adequate funding to support operations. However Jensen and Meckling (1976) argues that a company with substantial free cash flows tends to adopt investment projects with a negative net present value. The amount of capital structure is an important thing that must be considered by the company because good bad capital structure will have a direct effect on the financial position of the company that will ultimately affect the value of the company. Therefore, in the utilization must be efficient so that it can make it more optimal. The optimal capital structure is the capital structure that can minimize the average capital cost and maximize the value of the company. Based on the trade-off theory, if the capital structure position is above the optimal capital structure target, then any increase of debt will decrease the value of the company. Capital structure is key to improving productivity and company performance. Capital structure theory explains that the company's funding policy in determining capital structure aims to optimize the value of the company. However, in the position of the results of this study cannot support the theory. This can be stated as for the stakeholders in the company is not important about how the position of debt to assets or equity of the company. With prices as a proxy of firm value, then the market indicator becomes very important in determining the value of the company.

The results of this study are supported by the results of Ogbulu & Emeni, (2012) and Choudary (2013), reports that capital structure has no significant effect on firm value. However, the results of this study are not supported by Chowdhury and Chowdhury (2010), Cheng et. al. (2012), Hermuningsih (2013), Qureshi (2006) indicating that the capital structure has a positive and significant impact on firm value.

Influence of company size, Company growth, Company Size and Company Growth on Value of the Firm through Capital Structure.

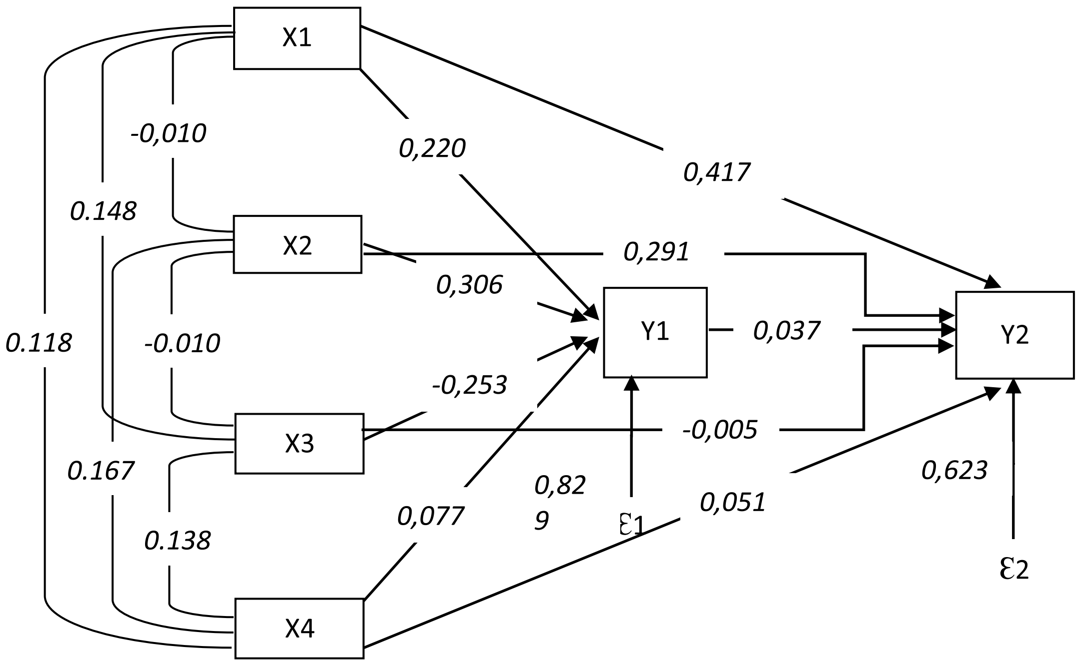

Figure 1 Path Analysis Result

Based on table 4. the test of path analysis obtained by the constant value of -92,018 indicates that if the independent variable of firm size, institutional ownership, firm size, company growth and capital structure are assumed to be zero then the value of Value of the Firm is -92,018. The coefficient b1 of 11.263 indicates that an increase in firm size of 1% will be followed by an increase in firm value of 1126% assuming all other independent variables are zero. The coefficient b2 of 5,815 indicates that the increase of 1% company growth variable will be followed by a 581% increase in firm value assuming all other independent variables are zero. The coefficient b3 of - 0.875 indicates that the increase of 1% firm size variables will be followed by a decrease in corporate value of 87.5% assuming all other independent variables are zero. The coefficient b4 of 0.717 indicates that the increase of 1% growth assets variable will be followed by the increase of the Value of the Firm of 71.70% assuming all other independent variables are zero. The coefficient b5 of 49,682 indicates that the 1% capital structure variable increase will be followed by the increase of firm value 4968% assuming all other independent variables are zero.

Tabel 4 Result of Hypothesis Testing

		Unstandardized Coefficients		Standardized Coefficients		
	Model	B	Std. Error	Beta	t	Sig.
1	(Constant)	-92.018	187.559		-0.491	0.624
	ROE (X_1)	11.263	1.986	0.417	5.671	0.000
	KIS (X_2)	5.815	1.506	0.291	3.862	0.000
	Size (X_3)	-0.875	13.749	-0.005	-0.064	0.949
	GA (X_4)	0.717	1.017	0.051	0.705	0.482
	DAR (Y_1)	49.682	104.418	0.037	0.476	0.635

Source: authors' calculation based on data from Indonesia Capital Market Directory (ICMD).

Furthermore, the direct, indirect and total influence of exogenous variables on endogenous variables as shown in table 5 can be explained as follows:

Tabel 5 Direct and Indirect Effect Between Variable

	Direct Effect		Direct Effect
$X_1 \rightarrow Y_1$	0,220	$X_1 \rightarrow Y_2$	0,417
$X_2 \rightarrow Y_1$	0,306	$X_2 \rightarrow Y_2$	0,291
$X_3 \rightarrow Y_1$	-0,253	$X_3 \rightarrow Y_2$	-0,005
$X_4 \rightarrow Y_1$	0,077	$X_4 \rightarrow Y_2$	0,051
		$Y_1 \rightarrow Y_2$	0,037
	Indirect Effect		Indirect Effect
$X_1 \rightarrow Y_1 \rightarrow Y_2$	0,00814	$X_1 \rightarrow Y_1 + X_1 \rightarrow Y_2$	0,454
$X_2 \rightarrow Y_1 \rightarrow Y_2$	0,011322	$X_2 \rightarrow Y_1 + X_2 \rightarrow Y_2$	0,343
$X_3 \rightarrow Y_1 \rightarrow Y_2$	0,0138	$X_3 \rightarrow Y_1 + X_3 \rightarrow Y_2$	-0,216
$X_4 \rightarrow Y_1 \rightarrow Y_2$	0,002849	$X_4 \rightarrow Y_1 + X_4 \rightarrow Y_2$	0,108

Source: authors' calculation based on data from Indonesia Capital Market Directory (ICMD).

Profitability variable directly affects the Value of the Firm of 0.417. While the total influence of profitability variables on Value of the Firm is 0.454. This shows that the capital structure variable can be an intervening variable that mediates the relationship between profitability and firm value because the total value of influence is greater than the value of the direct impact of profitability on firm value (0.454> 0.417). Capital structure can be an intervening variable the relationship between profitability with firm value. Capital structure can not mediate the relationship between profitability with corporate value,

The institutional ownership variable directly affects the firm's value of 0.291. While the total effect of institutional ownership of the firm value is 0.343. This shows that the capital structure variable can be an intervening variable on the relationship between institutional ownership and firm value because the total value of influence is greater than the value of direct influence of institutional ownership on firm value (0.343> 0.291)

Variable size of the company directly affects the value of the company of -0.005.Sedangkan total influence of firm size to the value of the company -0.216. This shows that the variable of capital structure can mediate the relationship between firm size and firm value because the total value of influence is greater than the value of direct influence of firm size to firm value (-0.216> - 0.005)

Corporate growth variable has direct effect to Value of the Firm of 0.051 while total influence through capital structure is 0,108. It shows that capital structure variable can be intervening variable that mediate relationship between company growth and firm value because total value of influence of company growth to Value of the Firm is bigger than the value of the direct influence of company growth on firm value (0.108> 0.051.

This result states that the capital structure can be an intervening variable the relationship between growth opportunities with firm value. Capital structure can mediate the relationship between sales growths with the value of the company.

CONCLUSSION AND RECOMMENDATION

Return On Equity, Institutional Ownership, Growth Assets and Debt Asset Ratio is direction or positive with Value of the Firm where every increase of Return on Equity, Institutional Ownership, Growth Assets followed by the increase in Value of the Firm. On the other hand Firm Size has a negative correlation to Value of the Firm where every increase of Firm Size is followed by impairment of Value of the Firm. Partial test by using t-test on profitability variable, institutional ownership, company growth and company size to Capital Structure influence each independent variable to dependent variable can be explained as follows: Return on Equity have significant effect to Debt Asset Ratio The variable of institutional ownership has a significant effect on Debt Asset Ratio, Growth Assets variable has no significant effect on Debt Asset Ratio, Firm Size has significant effect to Debt Asset Ratio listed on BEI 2007 - 2014.

Return On Equity, Institutional Ownership, Growth Assets and Debt Asset Ratio is direction or positive with Value of the Firm where every increase of Return on Equity, Institutional Ownership, Growth Assets are followed by a rise in Value of the Firm. On the other hand Firm Size has a negative relation to Value of the Firm where every increase of Firm Size is followed by decrease of Value of the Firm. Partial test by using t test indicate that: Return on Equity have significant influence to Value of the Firm, Institutional Ownership have significant influence to Value of the Firm, Growth Assets variable has no significant effect to Value of the Firm, Firm Size effect on Value of the Firm in tourism industry sector company listed on BEI 2007 - 2014.

Path analysis obtained that the profitability proxies with Return On Equity, Institutional Ownership, Growth Assets and Debt Asset Ratio is the direction or positive with Value of the Firm where every increase Return on Equity, Institutional Ownership, Growth Assets followed followed by a rise in Value of the Firm. On the other hand Firm Size has a negative relation to Value of the Firm where every increase of Firm Size is followed by decrease of Value of the Firm.

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COMPETITIVENESS AND DEVELOPMENT OF LOCAL COMMUNITIES IN THE REPUBLIC OF SRPSKA

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SUMMARY

There is no universal model of local economic development. Development strategies vary from country to country, city to city, and depend on the level of development, political system, development potential, social values, available resources, etc. Republic of Srpska faces with significant differences in the level of development of its territory. Local communities in the Republic of Srpska are increasingly facing with several obligations - providing support to business, creating a favorable business environment for attracting investment and providing an adequate infrastructure. The biggest problems that most of municipalities in the Republic of Srpska encounter are reflected in the emptying of cities, the departure of young people, low average wages and high unemployment rates. They are trying to solve these problems by attracting investments. However, it is very important to say that an effective investment policy must be based on the creation of new enterprises with capital-intensive production. The average wage level in local communities of the Republic of Srpska is low, due to the fact that most of the investments have a labor-intensive character. The subject and aim of this paper is to determine the competitiveness and level of development of local communities in the Republic of Srpska. Municipal competitiveness will be higher if it has a positive trade balance, higher average wages, high natural increase, low unemployment rate and positive migration. Higher natural increase, favorable trade balance and low unemployment rate are in direct correlation with the degree of local development. The results of the research have shown that the key problems of underdeveloped municipalities in the Republic of Srpska are demographic aging, population migration, underdeveloped infrastructure, high unemployment rates, low average wages, low level of investment, low export activity, weak institutional capacities, etc.

Keywords: unemployment, investment, migration, competitiveness, development strategy

INTRODUCTION

The concept of local community means a set of institutions by which citizens directly or indirectly, through elected representatives, manage certain public affairs, in their own interests and in accordance with the existing legal system. Local community represents the highest level of the local government autonomy in relation to the central government in performing local affairs. It includes the citizens¢ right to elect representatives in local assemblies, mayors, as well as the freedom to appoint elected officials and other local authorities. (Begović et al. 2006).

Variable economic and social conditions cause the creation of inequalities in the development of certain areas - regions and localities. Insufficiently developed areas usually give a small contribution to the country's economic development and its international competitiveness. That is why each country must implement an adequate regional politics that will harmonize and improve the living conditions of the whole territory.

The overall socio-economic development of the SFRY in the period after the Second World War included the economic growth, growth of the living standard, the prolonged life span, the reduction in mortality, the increase in the number of educated population, the increase in employment, etc. During that period, there was a current issue of regional development, throughout the whole country, so the development plans mainly were referring to the development of undeveloped areas and more balanced territorial development. Bosnia and Herzegovina, Macedonia, Montenegro, Kosovo and Metohija were considered as economically underdeveloped republics. There was almost no industry in this area. Mostly, there were small companies dealing with processing of wood or agricultural products. Hydropower potentials and minerals were not used, traffic was not developed, unemployment was on high level, etc. The state tried to carry out certain activities in order to reduce the differences in the level of development of its territory. So, it established the Fund for the underdeveloped and the Fund for financing the increasing employment, which were collecting domestic and foreign capital and directed it to project financing. Although the situation of the undeveloped areas, in relation to the developed ones, was significantly improved after the break-up of the SFRY, certain inequalities in material and social development between the republics, as well as within them, have been inherited.

Today, the situation in Bosnia and Herzegovina is such that there is a big gap between developed and undeveloped local communities. Small, undeveloped municipalities are mostly closed, poor and dependent on transfers from higher levels of government - entities and cantons.

A theritory of Republic of Srpska has 63 local communities - 56 municipalities and 7 cities. Local communities have different socio-economic parameters - the number of inhabitants and their basic characteristics, the area and characteristics of the territory, the availability of natural resources, the degree of development, the availability of infrastructure, etc. It has 33 undeveloped municipalities. Nineteen of them are significantly underdeveloped. There are great differences between rural and urban areas.

The paper will start with an overview of the current research of local community and the way it is defined by different authors. Then, it will be made a SWOT analysis of the current state of local communities in the Republic of Srpska, in order to find out on which forces and chances should be based its further development, as well as the weaknesses that need to be minimized and the threats that need to be avoided. After that, a detailed analysis of the development of local communities will show how many local communities are different in several basic parameters - population, birth rate, mortality rate, migration rate, natural increase, number of employees, number of persons seeking employment, average net salary, level of import and export.

LITERATURE REVIEW

Access to the study of local community implies multidisciplinarity, because it is necessary to well know politics, economics, sociology, history, etc. to be able to study of the system of local community. As a discipline, the local community deals with the knowledge that includes all three levels of generality, because it is partly a fundamental scientific discipline, and at the same time develops the knowledge of the middle level of the generality - comparative systems on which most principles and norms are reviewed and verified. Also, empirical analysis represents a very important level, without which the local community could not be studied and understood (Batley and Stoker, 1991; Bennet, 1990; Sellers, 2002).

King (1992) and Walzer (1995) consider that primary issues that local community deal with, refers to development and meeting the general needs of the community through a system of local public services. In their opinion, this is primarily about communal affairs, spatial planning, construction, education, health care, culture, ecology, security and, of course, encouraging local economic development and strengthening entrepreneurial management.

Peters (1998) consider that method of comparison is the most important for local government research. He thinks that the advantages of this method are in the great cognitive potential arising from the comparison of institutions, institutes, relationships and processes in different countries. It is used to perform some general theoretical knowledge. In these processes method of synthesis, deduction and generalization are used.

Economic factors have largely shaped cities through the choice of location of a settlement, the way and dynamics of development, infrastructure and appearance (Sullivan, 1990). According to David Osborne (1992), the city and market are categories of a similar set of values and sizes. Osborn thinks that cities are like markets, because they represent wide and complex aggregations of people and institutions in which everyone constantly makes decisions and influences the behavior of others through information and incentives. Also, contemporary local government has the participation of citizens and their constant initiative, control and participation, exatly as one of its most important qualities (Geissel, 2009).

By analyzing different definitions of the local community, Pusić (1963) came up with five elements that constitute an assumption for the constitution and functioning of the local community: space, people, needs, common activities, with the aim of meeting common needs and interests. An mutually interaction creates a value-based upgrade that gives cohesion and stability to the local community. Pusic interprets local community as a process, and observes its elements through their unity and interaction, which allows the systematization of basic assumptions for the constitution of local communities.

Bartik (2003) observes local community as an important segment of the state. He believes that citizens expect the republic authorities to achieve two basic goals - reducing unemployment and raising living standards - but they expect the same thing from the local authorities, too.

Reiss (1959) views the local community through the prism of people's interrelations and thinks that it is created because people live and take care of themselves in a limited space. Besides, community works to meet common needs through various forms of social action. Bander (1959) defines the local community as a set of subsystems such as family, schools, churches and businesses in a particular territory. Šuvar (1973) thinks that when a legal-political and systemic institution is formed in one or more connected settlements, then it acquires the status of a local community and constitutes itself in the form of a municipality as a basic local community.

SWOT ANALYSIS OF THE REPUBLIC OF SRPSKA

The SWOT analysis shows the current state of the local communities in the Republic of Srpska. It provides an overview of the most important factors that influence local development. Factors are divided into strengths and weaknesses, as internal factors, and chances and threats as environmental factors that can not be influenced.

The development of local communities should be based on established forces from the SWOT analysis, i.e. on the development strategies of municipalities, on resources and natural resources, as well as on the good cooperation of all levels of government in the Republic of Srpska. Strengthening municipal competitiveness and development can also be achieved through the withdrawal of funds from IPA funds, creating a good business environment by obtaining appropriate certificates (BFC certificate - Business Friendly Certificate), as well as more actively involving public-private partnerships in the implementation of strategic and operational goals.

On the other hand, the main weaknesses and threats are manifested through the lack of capable and trained personnel for the preparation and implementation of development projects and major differences in the level of development of municipalities. The biggest problem that almost all municipalities in the RS are faced with is the departure of young people and the population in general abroad and in bigger cities in Bosnia and Herzegovina and in the surrounding. Also, the acute problem of municipalities and the biggest brake on the implementation of development projects is the chronic lack of financial resources.

Table 1 SWOT analysis of the development of municipalities in RS

STRENGHTS	WEAKNESSES
most municipalities adopted development strategies and programs	excessive orientation to seek help from higher levels of government
commitment to the implementation of the decentralization process	lack of experts to prepare and implement development projects
the wealth of natural resources for potential investors	marked differences in size, level of development and capacity of local governments
good cooperation between the key actors - the National Assembly, the Government, the Ministry of Administration and Local Government, municipalities	inconsistency of development priorities of local governments with the priorities in the development strategy of RS
willingness of local governments to improve their competitiveness	oversized and inefficient municipal administration
OPPORTUNITIES	**THREATS**
active participation of local government in the process of EU integration	demographic depopulation of rural areas
project approach with funds from pre-accession IPA funds and the RS Development Fund	lack of financial resources required for implementation of the delegated competence
creating a stimulating local business environment	lack of awareness of the population on projects of interest for local government
public-private partnership as a model for better utilization of resources and higher income of local government	inherited unresolved property-legal relations that limit economic development and resource management
strengthening mutual cooperation of local governments on joint projects	insufficient readiness to reconcile the interests of the republic and local authorities, local authorities and local communities, citizens and local authorities
strengthening of good relations between local and republic institutions in the field of strategic planning	

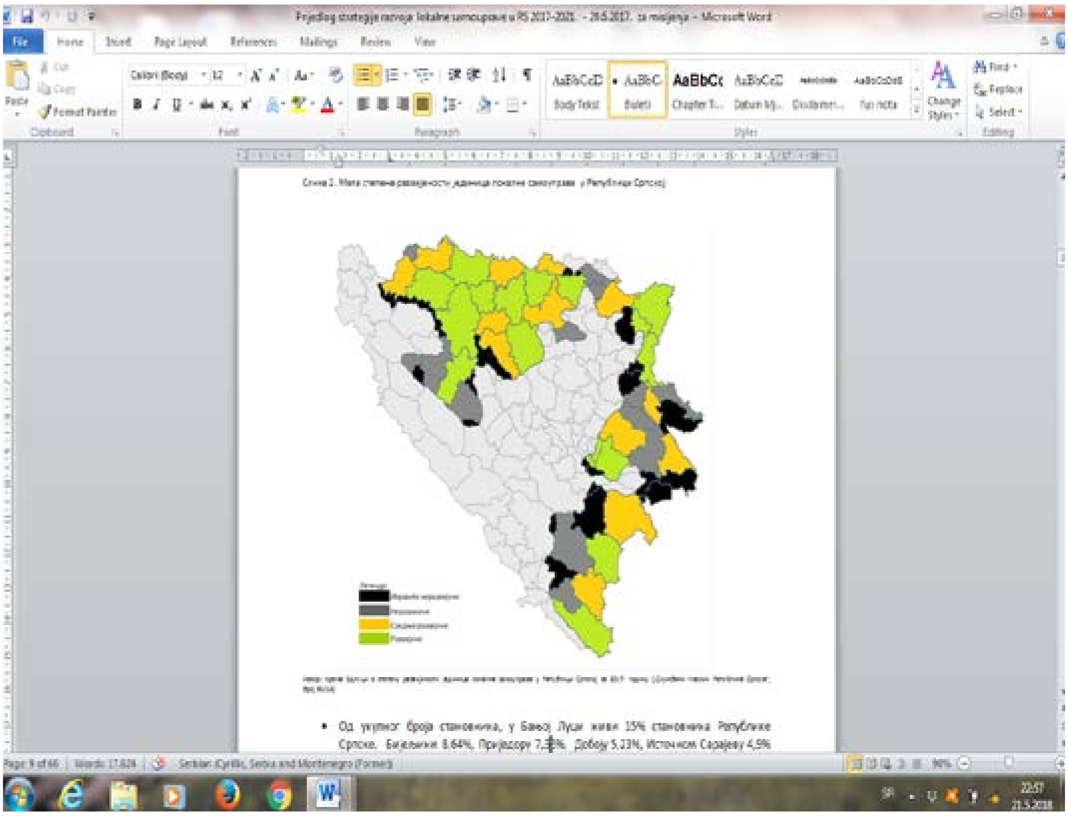
Source: Author's calculation

A conclusion that can be drawn from this analysis is that the local government should provide a stable system of financing, effective enforcement of responsibilities, transparency, citizen participation in decision-making and quality management of scarce resources. The implementation of these activities, at the level of local governments, greatly contributes to the balanced development of the RS.

ANALYSIS OF LOCAL COMMUNITIES DEVELOPMENT OF THE REPUBLIC OF SRPSKA

On Picture no. 1 it can be seen that, according to data from 2017, there are 18 developed, 12 middle-developed, 14 underdeveloped and 19 extremely underdeveloped units of local governments in RS. The most developed is considered the City of Banja Luka.

Picture 1 Development of municipalities in Republika Srpska



Source: Prijedlog strategije razvoja lokalne samouprave u RS 2017-2021, 2017.

Demographic changes are very important for planning local economic development, because the population is a very important sector that participates in the process of production and also in the process of consumption of products and services. Reducing the number of inhabitants will also reduce economic activity in a given territory

Of the total population of the Republic of Srpska in Banja Luka lives 15%, 8.64% in Bijeljina, Prijedor, 7.35%, Doboj 5.23%, East Sarajevo 4.9%, while only 0.01% of the population lives in Drvar and 0.02% in Eastern Mostar. From Table no. 2 it is evident that the number of inhabitants is highest in the developed, and the lowest in heavily underdeveloped municipalities. 68.9% of the population is populated in developed municipalities, while only 6.85% live in 19 extremely underdeveloped municipalities. The average number of inhabitants in the developed municipality is 44,798, and in the significantly underdeveloped it is 10 times less, ie 4,219 inhabitants. These data are sufficient evidence of uneven distribution of population by municipalities and cities. Underdeveloped areas characterized by low population density, continuous decrease of population and migration to more urban areas.

Table 2 Overview of the population of RS by municipalities

Type of local municipalities according to development	Number of inhabitants	Number of municipalities	Average number of inhabitants in municipalities
Developed	806.365	18	44.798
Middle-developed	172.422	12	14.369
Underdeveloped	111.387	14	7.956
Heavily underdeveloped	80.168	19	4.219
Total	1.170.342	63	18.577

Source: Author's calculation according to the 2013 census

The average population density of RS is 53.85 inhabitants per square kilometer. The largest density of settlements we have in East Ilidza, East New Sarajevo, Zvornik and Banja Luka, and the smallest is in Eastern Drvar, Petrovac, Istočni Mostar and Kalinovik. Positive migration balances are recorded in Banja Luka, Bijeljina, Trebinje, Istočno Sarajevo, Laktaši, while most other municipalities record a negative migration balance. The reason for the frequent migration of rural population to urban areas lies in the larger labor market and the process of industrialization.
One of the demographic characteristics of the Republic of Serbian is a negative birth rate in all municipalities, with the exception of Banja Luka. The general rate of natural growth in 2015 was negative and was -4%. When looking at the population, the biggest decline is recorded in developed and mid-sized municipalities, as they have the highest population. Regarding to the rate of natural growth, the largest percentage of population decline is characterized by underdeveloped and highly underdeveloped municipalities. The reason for negative natural growth is a very low birth rate (less than 10%) and a generally stable mortality rate of 9-11%. The highest rate of birth is East New Sarajevo (11.24%), Trebinje (9.44%) and Banja Luka (9.07%), and the lowest Pelagic (0.35%), Donji Žabar (0.76%) and Kalinovik (0.93%). Krupa na Uni (22.12%) and Petrovac (18.26%) and the lowest Cajnice (7.68%), New Gorazde (7.36%) and Vukosavlje (7.27%) recorded the highest rate of mortality.
Migration balance for the entire RS in 2015 amounted to 168 people. The reason for this is that most young people leave in search of employment and better living conditions. The largest population inflow was in middle-developed municipalities.

Table 3 Demographic trends of the RS population per municipalities in 2015

Type of local municipalities according to development	Natality		Mortality		Natural growth		Migration balance
	Number	Average rate	Number	Average rate	Number	Average rate	
Developed	7.069	7,34 %	10.190	9,22 %	-3.121	-3,86 %	-900
Middle-developed	1.313	6,10 %	2.447	11,06 %	-1.134	-4,95 %	2.133
Underdeveloped	597	4,22 %	1.475	11,30 %	-878	-7,07 %	-314
Heavily underdeveloped	378	3,36 %	947	10,15 %	-587	-6,79 %	-751
Total	9.357	6,60 %	15.059	10,6 %	-5.720	-4,00 %	168

Source: Author's calculation acording to Prijedlog strategije razvoja lokalne samouprave u RS 2017-2021, 2017.

Most municipalities are characterized by a high and rising unemployment rate, with a large share of long-term unemployment and youth unemployment. According to data from 2016, 26.18% of the total number of employed persons were in Banja Luka, 8.21% in Bijeljina, 5.93% in Eastern Sarajevo, 5.37% in Prijedor. Also, the largest number of people looking for employment is located in these cities. (Prijedlog strategije razvoja lokalne samouprave u RS 2017-2021, 2017). The largest number of employees (approximately 90%) is located in developed and medium developed municipalities, which is natural, since they are mainly concerned larger cities, with a larger volume of economic activities. About 80% of those who are actively seeking employment are also located in this area. In all four observed categories, the number of employed increased in 2016 compared to 2015.

In the Republic of Srpska there are large differences in the average salary per municipality. Thus, the average net salary in RS in 2016 was KM 836. At the same time, the highest average wage was in Stanari municipality (BAM 1.142), and the lowest in Kupres 404 KM. It is seen that one municipality generates about 30% of the average salary over the RS level, while the other achieves almost 50% lower than that. When it comes to fluctuation of average net salary per type of municipality, it can be seen that it does not deviate much from the average RS salary.

Table 4 Number of employees and average net salaries in RS per municipalities

Type of local municipalities according to development	Employees		Persons looking for a job (2016)	Average net salary	
	2015.	2016.		2015.	2016.
Developed	187.874	193.790	84.638	810,5	816,0
Middle-developed	33.015	33.793	23.160	792,5	804,5
Underdeveloped	16.541	16.722	16.519	710,0	716,0
Heavily underdeveloped	8.545	9.000	12.124	754,5	760,0
Total	245.975	253.305	136.441	831,0	836,0

Source: Author's calculation acording to Prijedlog strategije razvoja lokalne samouprave u RS 2017-2021, 2017.

In the total export realized in 2015, Banja Luka participated with 15.9%, Derventa with 9.4% and Zvornik with 9.2%. In total imports Banja Luka participated with 37.7%, Bijeljina with 10.9%, Laktaši with 8.3%. The volume of foreign trade exchanges grows year after year, and the coverage of imports by export is also increasing. The largest volume of imports and exports is realized in developed municipalities (70% of exports and 85% of RS imports). By contrast, the extremely underdeveloped municipalities have an average of 1-3% of RS exports, or 0.5-0.9% of RS imports.

Table 5 Export and import in RS per municipalities in 000 KM

Type of local municipalities according to development	2015.		2016.	
	Export	Import	Export	Import
Developed	1.850.424	3.697.275	2.022.004	3.746.692
Middle-developed	539.174	467.304	561.692	482.844
Underdeveloped	173.112	139.750	190.693	131.402
Heavily underdeveloped	43.275	24.622	80.843	38.437
Unallocated	3.792	2.274	1.444	1.316
Total	2.609.777	4.331.225	2.856.676	4.400.691

Source: Author's calculation acording to Prijedlog strategije razvoja lokalne samouprave u RS 2017-2021, 2017.

There is a low level of investment in the Republika Srpska, both domestic and foreign. The reason for this is certainly a weak investment image of the country, lack of base infrastructure and human resources in underdeveloped areas. Insufficient infrastructure development refers to poor road network, electricity and water supply issues in some areas. Inadequately developed municipalities have not developed any service activity - there is a shortage of health facilities, schools, shops, etc.

One of the major shortcomings when it comes to the development of municipalities in RS is certainly the weak institutional capacity. This is primarily related to inefficiency in the work of local government, the lack of quality staff, poor mechanisms for inter-municipal cooperation, lack of planning documents for certain parts of the country.

To solve the problem of uneven development of local government in the RS it is necessary to attract domestic and foreign investment in underdeveloped areas. In order to achieve this, it is necessary to improve the business environment, administrative procedures, retraining and educating the population, create capital intensive production rather than labor intensive production.

CONCLUSION

Republic of Srpska has very pronounced differences in the development of municipalities located in its territory. Emphasizing the importance of developed and medium-developed municipalities, by local and state authorities, only deepen these differences. Underdeveloped areas are increasingly faced with negative natural growth, low employment, small and declining population, low rates of imports and exports, and so on.

Developed and medium developed municipalities proved to be the most competitive in all observed indicators - have the highest number of inhabitants, the majority of the working population, the largest volume of foreign trade, the highest average salary, the highest rate of natural population growth, ie the lowest negative. As the brightest example among developed municipalities, we can mention the City of Banja Luka.

The basic task of the macroeconomic policy of Republic of Srpska is to promote economic development through appropriate regulation and proper channeling of financial resources with a goal to raising living standards in less developed areas and preventing their demographic discharge. We need a clear policy and plan also, which will lead to a better use of natural resources in underdeveloped areas.

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ECOLOGICAL DEVELOPMENT IMPACT ON TOURISM IN PAVLODAR REGION

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SUMMARY

This article analyses the current environmental aspects and the mechanisms of environmental regulation in Kazakhstan with specific emphasis of Pavlodar Region for the development of tourism. The study showed that the environmental situation in Pavlodar Region requires the adoption of a number of activities and legal regulation for improvement and development of tourism. The improvement of tourism is very important for the regional budget and for the overall economic development of the area. It is argued that for the effective management and the development of the tourism industry, the existing taxation system that is the Tax Code of the Republic of Kazakhstan requires some amendments, sustainable development measures should put into the practice with the introduction of technological systems that based upon the use solar and wind energy, and "Green Economy" strategy should be implemented into the practical life and monitored effectively.

Keywords: Pavlodar Region, tourism, ecology, pollutants, taxation.

INTRODUCTION

Pavlodar Region is an industrial and economically developed region of north-eastern part of Kazakhstan. The region's rich deposits of minerals, favorable geographical position, large reserves of water, the presence of a developed industrial and social infrastructure, and the high technological potential makes it very strategic area. In this connection, the region produces 62.5% of coal,74% of ferroalloys and 100% raw aluminum of Kazakhstan (INVEST IN KAZAKHSTAN). The region also is the main producer of electricity and thermal energy of gasoline.

On the other hand, as a result of the aforementioned intense production sitesPavlodar Region is also subject of pollution.There is no doubt that any modern society may endanger it's future by polluting it's environment. Therefore sustainable development and environmental issues are two interrelated topics that should be deal with the utmost attention. The process of industrialization, which started in Kazakhstan in 2010, led to a structural reorganization of the national economy and became one of key drivers of the economic growth. There is no doubt that at the core of the any economic activity there is production and production is connected with the environment. Most of the production processes have negative impactson the environment. However, for the prosperity of future generations, it is necessary to preserve environmental stability. One of the most important

foundations for ensuring sustainable development is the construction of an effective system of environmental management and environmental protection (KURMANGALIYEV2011).
The use of nature is one of the most complex objects of management. In modern societies, the development that pollutes and destroys the environment will be meaningless (GAPONOV2004).
There are two main modern approaches regarding to managing the equilibrium of ecological and economic systems, namely neo-Classical and neo-Keynasian approaches. In neo-Classical approach there is an economic mechanism based on a system of taxes, payments, etc., built into market relations, which maintains the quality of the environment by the invisible hand of the market. Neoclassical approaches suggest the full compensation to be paid for the economic damage to the environment. In other words, it is relied on the simple principle that the one who pollutespays for the damage.
The second main approach is the neo-Keynesian approach. In the neo-Keynesian approach, the tools of state regulation on the environment are used through the implementation of environmental programs, impact assessment of the environmental projects, and the introduction and regulation of economic instruments. This approach includes scientifically based planning of the amount of costs for environmental protection and rational use of resources to maintain the stability of economic development.
The experiencesin the other parts of the world have shown that there are four possibilities of government intervention in the free market in order to preventpollution and reduce the costs of the resources. These could be summarized as follows (GAPONOV 2004).

1. Direct government regulation and punishment for exceeding the established state standards.
2. Charges from manufacturers as payment for emitted pollution and use of resources.
3. Introduction of a market for rights to pollution and use of resources;
4. Subsidizing environmental protection measures.

According to the Environmental Code of the Republic of Kazakhstan, the types of mechanisms for the economic regulation of environmental protection and nature management are categorized under seven subtitles (ECOLOGICAL RULE REPUBLIC OF KAZAKHSTAN 2007, 212):

1. Planning and financing of environmental protection measures.
2. Payment for emissions into the environment.
3. Payment for the use of certain types of natural resources.
4. Economic incentives for environmental protection.
5. Market mechanisms for managing emissions into the environment.
6. Environmental insurance.
7. Economic evaluation of damage to the environment.

In order to improve the environmental management in Kazakhstan, there are requirement for economic regulation of environmental protection, assessment of economic damage, effective use of mechanisms for the economic regulation of environmental protection and nature management. Being similar to the other parts of Kazakhstan, the environmental situation in the region stands as an important indicator in attracting tourist flows. Tourism is one of the largest high-yielding and most dynamic sectors of the world economy. According to the World Tourism and Travel Council (WTTC)tourism sector employs more than 260 million people all around the world which means every tenth employee in the world is working in this sector. Tourism incomes are not limited with inter-sector revenues. It also has a huge impact on key sectors of the economy, such as transport, communications, trade, construction, agriculture, consumer goods production among many others. In other words, it acts as an accelerator of socio-economic development (BALATSKY et KHALDEEV 1973).

Deriving from these points, article is organized as follows. Initially, the brief literature review is focuses on tourism and pollution. This is followed by the methodology section that is section three. Section four analyzes the ecological situation of Pavlodar Region including the results of the SWOT analysis.Following the SWOT analysis, the sixth section evaluates recommendations for the solution of the environmental problems in Pavlodar Region. The final section that is section six is the conclusion part of the articlewhich the main arguments are summarized and important findings of the research are re-presented.

LITERATURE REVIEW

Tourism is a global phenomenon in the modern world economy. Its mass character is a source of active influence on culture, economics, politics, and the social sphere. In other words, the development of tourism is not restricted with economic activity but also it is a socio-economic phenomenon that combines the market aspects of economic ties and the social goals of the development of society.
The World Tourism and Travel Council (WTTC) postulates tourism as one of the largest and most dynamic industries of the modern world economy. Tourism sector contribution to world GDP is 10.3% and it creates at least 260 million jobs at all around the world. Furthermore, tourism is a source of investment in key areas such as transport and communications, trade, construction, agro-industrial complex, production of consumer goods and many others, acting as a catalyst for social and economic development (OVCHAROV 2013, 253).
Tourism industry includes passenger transport (air, water, road, rail) with its extensive network of technical and specialized services so called "secondary" tourism industries. These secondary industries include transport engineering and automotive industry, fuel industry, capital and road construction, souvenir industry, food industry, many branches of agriculture (BALABANOV 2003).
Similarly, Kabushkin(2002, 39) considers the tourism industry as a combination of industries in various sectors of the economy, cultural institutions, education and science. Tourism provides the creation of a material and technical base for broad economy; training the workforce and the production, marketing and consumption of tourism products based on the use of natural resources, material and spiritual values of society (BIRZHAKOV 2007).
Bogolyubov and Orlovskaya (2005, 300) also noted that tourism sector have connection with other sectors including improvement of pricing; expansion of advertising activities; scientific research; attraction of investments; interaction with other companies; relations with government bodies. Therefore, it is evident that the tourism industry is one of the few sectors of the economy that has the strongest multiplier effect and has a direct impact on many other sectors of the economy. Tourism is able to exert an active influence on the economy of the region.
In this connection, the growing importance of tourism has great influence on the economy of a particular region. For instance, the development of tourism plays an important role in raising the level of education, solving social problems, improving the health care system, and introducing new means of disseminating information (YAFAROV2006). Stating in different words, the development of tourism contributes to the international specialization of a region.
All these factors make tourism one of the priorities of a national economy. This is also valid in greater extend for Pavlodar Region in Kazakhstan. Tourism as a sphere of economic activity has of great importance for the country and it could directly contribute to Kazakhstan and Pavlodar Region in many ways including:

1. Tourism has become one of the leading sectors of the Kazakh economy. It is becoming a pioneer in the development of new job areas, accelerating the development of infrastructure and hotel construction, and stimulating the production of different sectors that are catalyst for the accelerated development of the national economy. As mentioned above, the rapid development

of tourism contributes to the development of other sectors of the economy: trade, transport, consumer services, production of consumer goods, agriculture, construction and others (MOROZOVA etMOROZOV 2010, 136). Therefore, it is not wrong to argue that tourism has a multiplier effect on growth of the national income along with the employmentand development of local infrastructure that directly contribute to the living standards of the local population.

2. Being similar with many other developing countries, tourism is among the most profitable sectors of the Kazakh economy. Tourism income has become an effective source of receiving foreign currency. By this way it brings a high level of efficiency and a rapid return on investment. As a result of this process, tourism could contribute to a mechanism for the redistribution of national income in favor of regions specializing in tourism.
3. Tourism acts as an effective means of protecting nature and cultural heritage, since it is these elements that form the basis of its point of tourist attraction. In this connection, tourism contributes to the preservation of folk crafts and national culture of regions as in the case of Pavlodar Region (MOROZOV et al 2014, 320).

Without a doubt there is a direct connection with tourism and environmental issues as environmental pollution could directly hinder tourism incomes. As noted byLazarević(2017, 137) tourism is more dependent on the environment than any other economic sector. Environment and tourism are interconnected because only a clean and unpolluted environment can be a good base for successful tourism and only in well protected areas tourism can be systematically developed to create economic and social benefits (LAZAREVIĆ2017,138).

Balatsky and Khaldeev (1973) argue that environmental pollution is very important because it brings extra coststo the state budgets. According to them extra bargain of these costs should not be underestimated because they include vast variety of additional costs such as air pollution that has negative consequences not only on economic but also in social life. At the same vein Hoffmann (1985)also puts forward that many industries related with polluting industries brings additional costs to the national economies of the developing countries.

Khachaturov (1982)grouped the costs of the pollution to the national economies into the two categories. The first category outlines the direct losses of the national economy from the destruction of natural resources. The second category refers to loss in the incomes of society due to the deterioration of the quality of natural resources because of the environmental pollution.Balatsky (1984) also defined economic damage as actual and possible losses, caused by the pollution of the environment, expressed in value terms or additional costs to compensate for these losses.

Finally, Mamyrov, Tonkopiy and Upushev (2003) state that to evaluate environmental costs alone could be misleading. Instead, it is necessary to take into account both environmental costs and costs for compensation of damage, including lost profit in the form of unearned income. Similarly, Golub and Strukova (1995)define the economic damage from pollution of the natural environment as a monetary assessment of the negative changes in the main natural properties under the influence of pollution. According to Golub and Strukova, deteriorating environmental changes negatively affect the life conditions of people both socially and economically that further enhances the costs of the pollution than calculated.

METHODOLOGY

The purpose of this study is to develop practical recommendations for improving the ecological situation and tourism in Pavlodar Region.The data was collected from statistical indicators of the Committee on Statistics of the Ministry of National Economy of Kazakhstan, the Department of Natural Resources and Environmental Management of Pavlodar region. Thereforethis research is based upon the original and primary sources in the form of data from official websites of specialized institutions and authorities of Kazakhstan and Pavlodar Region.

The objectives of the study could be summarized as follow:

1. To conduct an analysis of the environmental situation in Pavlodar Region.
2. To consider the impact of the ecological situation in the region on the development of tourism.
3. To develop proposals in order to address environmental problems and the development of tourism in Pavlodar Region.

For the proper characterization of environmental problems in accordance with scientific research, this study used thecomparative, statistical, and the SWOT analysis. By using the SWOT method, arguably it is possible to establish lines of communication between the strengths and weaknesses that are inherent in a certain system along with external threats and opportunities.

ANALYSIS OF THE ECOLOGICAL SITUATION IN PAVLODAR REGION

The economy of Kazakhstan is the largest economy in Central Asia and the second post-Soviet economy after Russian Federation. The Republic of Kazakhstan has rich mineral resources, extensive agricultural lands, qualified personnel, and significant industrial potential. Extractive industries continue to drive the economy of Kazakhstan and the country's growth. Having said this it is worth mentioning that the country is also actively developing diversification strategies. For instance, large industrial facilities are built which lead to a deterioration of the ecology of Kazakhstan as a whole. The pollution in Kazakhstan differs significantly depending on the intensity and structure of pollution, the density of concentration of emission sources, and the composition of components, types of production activities, and specialization of regions. According to Tonkopiy (2000) a great variety of natural and economic conditions of the country is caused by its vast territory that requires a regional approach on solving the environmental problems.

In this respect, Pavlodar Region is a large industrial region with the richest mineral and raw materials base in the country.Large deposits of coal, non-ferrous and rare metals, common salt, building materials are concentrated in the region. The regions' strategic and favorable location connectsit with other states and regions of Kazakhstan along the South-Siberian and Central Siberian railroads, automobile, aviation, pipeline and river modes of transport (HOFFMAN 2005). The region also has a great potential for different aspects of tourism. Sights of the region include natural, archaeological, historical, architectural monuments, and religious constructions.There are also numerous natural water resources in the region, including the Bayanaul State National Natural Park, Zhasybay, Toraygyr, Sabyndykol and Birzhankollakes, whose conditions require special attention due to threat of the pollution made particularly in the Summer season.

Health tourism represents one of the most popular directions of tourism in the world where tourists spend 150% more than other tourists (DRACHEVA, ZABAEV et ISMAYEV 2005, 576). In this respect, Pavlodar Region enjoys rich potential in terms of health tourism. For instance, the natural salty lake Maralda is well known for the mineralized silt mud giving the improving and rejuvenating effect (ZHAKUPOV et ATASOY 2015).Similarly, Kalatuz salty lake is famous for recreation areas. Also, the effectiveness of the therapeutic mud in the health resort of Sanatorium Moyildy is very famous not only in Kazakhstan but also in the neighboring countries.

Tosumup, therichnaturalandresourcepotential of area, existence of the developed production and social infrastructure, high scientific and technical potential, and its location between Central Asia and Siberia draw close attention of industrial is tsandbusinessmen (ARYNOVA2012).

As demonstrated in the Table 1 below, Pavlodar Region is one of the most economically developed regions in Kazakhstan, which has strategic importance for the whole country.

Table 1 The main economic indicators of Pavlodar Region

№	Years	Gross regional product GRP (mln. tenge)	Population, thousands of people	Volume of industrial production (mln. Tenge)
1	2006	441 811,8	744,9	351 389
2	2007	591 977,8	746,5	464 111
3	2008	862 422,1	742,3	714 344
4	2009	862840,7	744,4	550 941
5	2010	1031878,6	746,2	843 970
6	2011	1 520 492,6	746,6	964 739
7	2012	1 520 575,9	748,0	1 202 392
8	2013	1 758 133,5	752,8	1 334 756
9	2014	1 746 774,4	755,7	1 110 598
10	2015	1 827 764,6	758,5	1 044 224

Source:www.stat.gov.kz

The Gross Regional Product (GRP) is a generalizing indicator of the region's economic activity, characterizing the production of goods and services. The volume of the gross regional product of Pavlodar Region for the year 2015 was 1,827,764.6 million tenge.The share of this ratio in the GRP of Kazakhstanin2015 was 4.5%. Between 2006 to 2015 there is a tendency to increase in the GRP. Also the population of the region increased to 758.5 thousand people in 2015.

The bulk of the GRP in the region is coming from the industrial sector.Domination in the structure of the GRP of industrial production also determines the resource and raw materials orientation of the region. The volume of industrial production in 2015 in comparison with 2006 increased by 692,835 million tenge or with an alternative definition almost three times. The development of industry is triggered by the intensification of investment activity within the framework of the State Program on Forced Industrial and Innovative Development of Kazakhstan for the periods of 2010-2014 and 2015-2019.

On the other hand, as a negative implication of large industrial sectors such as energy, ferrous and non-ferrous metallurgy, mining, oil refining and chemical industry, Pavlodar Region is subject to high technogenic pollution. This is simply because the production process of these industries is accompanied by large emissions of pollutants into the atmosphere.Needless to say that all these have an adverse effect on the health and social activities of the local population.

Table 2 Indicators of pollutant emissions in Pavlodar Region

No	Years	Total pollutants released into the atmosphere, thousand tons	Captured and neutralized pollutants, thousand tons	As a percentage of total discharged pollutants from stationary sources
1	2006	583	11 991,4	95,4
2	2007	575	12 323,6	95,5
3	2008	597	13 167,0	95,7
4	2009	561	12 863,3	95,8
5	2010	573	13 435,3	95,9
6	2011	632,2	14 261,2	95,8
7	2012	675,9	15 487,0	95,8
8	2013	650,4	17 327,5	96,4
9	2014	610,2	15 104,9	96,1
10	2015	553	13 724,3	96,1

Source: www.stat.gov.kz

The Table 2 indicates the pollutant emissions in Pavlodar Region between 2006 and 2015. Emissions of pollutants in the atmosphere are understood as the entry of polluting substances into the atmosphere. It includes substances from both stationary and mobile sources of emissions. All pollutants entering the atmospheric air are taken into accountboth after the passage of dust and gas treatment plants that is a result of incomplete collection and purification on organized sources of pollution. These pollutants are also not purificatedfrom the organized and the unorganized pollution sources.

As can be seen from the Table 2, in 2012the greatest emissions of pollutants with 95.8% are the pollutants discharged from stationary sources.Most of these are caught and rendered harmless. However, the main sources of the atmospheric pollution in Pavlodar Region are the Category I enterprises of environmental hazard which form 85-86% of the total mass of emissions. This category includes thermal and electric stations operating on high-ash coals and the gross emissions. The share of formation of gross emissions of other large nature users of a similar category varies in the zone of 10%. The remaining 4% of emissions is formed as a result of economic activity of enterprises of the II, III, IV category of environmental hazard.In this respect it is necessary to note that the annual emissions of pollutants into the air are growingbecause of the users of this category alongwith the growth of production and the number of newly opened production facilities and plots.

Table 3 Emissions of the most common atmospheric pollutants that depart from stationary sources by the Pavlodar Region

Years	Total pollutants released into the atmosphere, thousandtons	including:		Gaseou sand liquid substances, including:		
		solids	Gaseousand liquid substances	Sulfurousan hydride	oxides of nitrogen	Carbonmonoxide
2006	583	251	332	211	68	29
2007	575	240	335	215	69	28
2008	591	246	351	222	72	30
2009	561	220	341	216	61	31
2010	573	206	367	231	75	34
2011	632	196	436	276	81	53
2012	676	180,0	496	291	97	75
2013	650	153,0	497	283	105	85
2014	610	136	474	266	103	79
2015	553	122	431	244	174	77

Source: www.stat.gov.kz

As could be seen in the Table 3, half of the total volume of atmospheric emissions of sulfur dioxide falls on non-ferrous metallurgy enterprises. The fuel industry and ferrous metallurgy are the main air pollutants of carbon monoxide emissions. Electricity companies emit nitrogen oxides, solids and sulfur dioxide into the atmosphere.

Table 4 Expenses on the Environmental Protection

Years	Investments aimed at protecting the environment and rational nature management, (mln.tenge)	Current costs on environmental protection (mln. tenge)	Expenses for capital repairs of production funds for environmental protection (mln. tenge)
2006	1 986,4	5 967,1	495,0
2007	2 872,8	6 857,6	722,9
2008	7 689,7	11 254,8	3351,1
2009	3 271,8	17 750,1	597,8
2010	11 379,6	12 250,8	845,7
2011	10 412,0	17 152,4	1 147,2
2012	14 551,8	17 926,5	3 879,9
2013	8 454,0	15 689,7	4 078,3
2014	12 408,2	16 265, 8	5 556
2015	7 661,0	16 696, 01	24 357, 04

Source: www.stat.gov.kz

In 2015, investments aimed at protecting the environment and rational nature management in Pavlodar Region amounted to 7,661.0 million tenge.That also means it increased by 5674.6 million tenge in comparison with 2006, but did not reach to the 2012 level. On the other hand in 2015 the current costs for environmental protection of enterprises and organizations of all forms of ownership in the region amounted to 16,696.01 million tenge, which is almost three times more than in 2006.

Table 5 Total volume of provided tourist services and its contribution to the economy of Pavlodar Region.

No	Years	Gross regional product (GRP) mln. Tenge	Volume of performed Works and services in the field of tourism, Mln.tenge	Share in GRP%	The number of visitors served	The number of employees employed in tourism sector
1	2006	441 811,8	702,9	0,16	98350	730
2	2007	591 977,8	665,8	0,11	95105	900
3	2008	862 422,1	832,7	0,09	111 981	895
4	2009	862840,7	962, 8	0,11	83 006	1 167
5	2010	1031878,6	1 247,4	0,12	98 756	829
6	2011	1 520 492,6	1 637, 6	0,11	119 247	917
7	2012	1 520 575,9	1 808,2	0,12	124 273	848
8	2013	1 758 133,5	1 450,7	0,08	94 174	843
9	2014	1 746 774,4	1 612,3	0,09	105 544	918
10	2015	1 827 764,6	1 550,5	0,08	110456	870

Source: Republic of Kazakhstan Official Statistics Institute. Available at:www.stat.gov.kz

As could be seen from the Table 6, the volume of work performed and services in tourism amounted to 1 550.5 million tenge in 2015. This number is much higher than 2006 by 874.6 million tenge. Similarly the share in GRP raised by 0.08%, and there is also an increase in the number of served visitors in 2015 compared to 2006 by 12,106 people. In this connection, the number of employees employed in tourism amounted to 870 people in 2015 according to the official statistics.

In the structure of current costs, it is necessary to protect and use the water resources rationally, to protect the atmospheric air, to protect the land from pollution of production and consumption wastes, and to reclaim land as much as possible.The cost of capital repairs of the main production assets for environmental protection in 2015 amounted to KZT 24,357.04 million. Out of the total amount, the funds were used for capital repairs, for the repair of facilities and installations for the protection of atmospheric air, and for the protection and rational use of water resources.

The main problems associated with waste disposal are a low level of processing and utilization of industrial wastes from the large users of the region.One other problem is the usage of oldtechnologies and inadequate level of utilization of rock piles of the mining industry. Under the current situation in the region, domestic waste management leads to dangerous pollution of the environment. Also,the irrational use of natural resources and related economic damage threat the health of the local population.

There are also problems of solid waste disposals and landfills in the region. The problem of spontaneous landfills remains one of the most criticalenvironmental problems in the region, despite periodic sanitary cleaning.In most cases, landfills do not meet the requirements of sanitary regulations and environmental standards for burial. Recycling of solid domestic waste and using them as secondary raw materials is practically not possible because there is no waste processing factories.

In order to identify the most important environmental problems and propose the solutions that could overcome these problems, a SWOTanalysis of the environment of Pavlodar Region is carried out in Table 5.

Table 6 SWOT analysis of the environment in Pavlodar Region

Strengths: 1. The leading region in Kazakhstan in terms of mineral and raw materials. 2. The Bayanaul State National Nature Park is located in the region. 3. State programs that contribute to the development of the region are effectively implementing in the region. 4. Many big industrial enterprises comply with environmental protection measures. 5. In order to protect the environment, the costs of the activities in the region are increased.	Weaknesses: 1. An unfavorable ecological situation. 2. Large amounts of emissions rise to the atmosphere belong to the enterprises of heat power engineering, metallurgy,and coal mining industry. 3. Imperfection of legislation in the field of environmental payments. 4. The processing and recycling of production wastes is not sufficiently developed. 5. Thelack of waste processing factories.
Opportunities: 1. Using the other countries experiences in environmental protection including processing of production waste. 2 The use of natural objects forth development of tourism.	Threats: 1. Negative impact of emissions of pollutants on the environment and public health. 2 The impact of the global economic crisis that reduce the solvency of enterprises on environmental payments.

This analysis demonstrates that despite the investments directed to the environmental protection and the work and management of state authorities in the area, the environmental situation in the region requires the implementation of certain measures in order to improve it. In this regard, the development of measures should address reducing emissions of harmful substances into the atmosphere.This problem is one of the most urgent contemporary problems not only in Pavlodar Region, but also in whole Kazakhstan.

RECOMMENDATIONS FOR THE SOLUTION OF THE ENVIRONMENTAL PROBLEMS IN PAVLODAR REGION

In order to solve the environmental problems in Pavlodar Region, first of all sustainable development measures should put into the practice. This requires a resource-saving program-targeted approach for the use of natural resources.In order to achieve this, artificially created means of production should replace the use of natural resources. In this connection, the introduction of technological systems that based upon the use solar and wind energy is essential.

The next stage is the ecologization of the economy. Ecologization of the economy is not anew problem. At the contemporary times, this is realized through the transition to a green economy. In 2013, the government developed and adopted the concept on transferring to "Green Economy." Its basic goal is to provide reliable, adequate and accessible energy resources for substantial social, economic, and ecologically stable growth of the country (BEKNIYAZOVA et al 2016, 602). It puts clear guidelines for building a stable and efficient economy model based on the country's transition to the "green path" of development (GOLUB 1995). For this purpose, nine working groups have been formed by the Presidential Council including (BEKNIYAZOVA et al 2016, 603):

1. Decrease in the air pollution.
2. Training and forming ecological culture of the population.
3. Energy conservation and increase in Energy Efficiency.
4. Eco-systems management.
5. Water resources management.
6. Development of agriculture.
7. Wastes management.
8. Development of electric power including renewable resources of energy

Therefore, for the effective solution of the environmental problems in Pavlodar Region "Green Economy" strategy should be implemented into the practical life and monitored effectively.

Education and advocacy within the waste management system are among the most important issues in the perspective of the resource management system. In addition, for implementation of the strategic goals, specific methods of environmental management should be defined. Economic methods of management of nature consist of prices, tariffs, payments, penalties, bonuses, economic incentive funds, loans, etc.

Article 101 of the Environmental Code of Kazakhstan provides payment for emissions to the environment. The payment is established by the tax legislation of Kazakhstan. According to the Paragraph 4 of Article 1 of the Environmental Code the emissions into the environment that is subject to payment defined as emissions, discharges of pollutants, disposal of industrial waste, consumption in the environment, and the harmful physical effects.

Emission standards are established separately for each ingredient in accordance with the Decree of the Government of Kazakhstan No. 557 of 30.06.2007 "On approval of the list of pollutants and waste types for which emission standards are established". In the Chapter 1 Article 16 of this list the standards aredeclared for other pollutants.These standards are defined as first and second class of hazard compounds for the sanitary and hygienic standards of Kazakhstan. In this list the maximum permissible concentrations and approximatesafe exposure levels in the atmospheric air of populated areas are also established.

On the basis of Paragraph 2 of Article 475 of the Tax Code, the nature users of the region make payments on 16 ingredients. On the other hand,for the substances varying in an amount from 35 to 50, no payment is made to the state budget (KHUILIP 2007).Therefore, it is necessary to amend the Tax Code of Kazakhstan

with the inclusion of all the substances to taxation.
In modern conditions, these changes would affect the operation of the enterprises that pollute the air. These enterprises should report to the fiscal authorities on the targeted use of funds for the pollution of the environment. Hence, there would be more revenue for the state that could be used for the environment. The required funds may accumulate from the environmental fund of the enterprises that pollute the environment.The funds collected by the government could be used for modernization, technical re-equipment, and eco-innovation. In consequence, as a result of changes in the taxation and the development of the funds coming from the enterprises, environmental sustainability in the region could be satisfied that would automatically lead the development of tourism.

CONCLUSION

One of the most important directions of economic growth in a market economy is the search for adaptation of the opportunities for development and improving production efficiency. This efficiencyshould be based on rational nature management and environmental protection. In order to maintain an environmentally sustainable future, careful monitoring of the natural environment, rationing and prevention of industrial emissions, development, and introduction of waste-free and resource-saving technologies, and the application of environmentally less harmful technologies and industries are needed.
For incomplete mandatory payments for emissions to the environment, it is necessary to amend the Tax Code of Kazakhstan and include substances to the list of pollutants and waste types for taxation.By this way the funds could be raised to be used for modernization and technical re-equipment.
In order to solve problems related to the management of production and consumption waste, it is suggested that environmental legislation in the field of waste management should be improved, low-waste production should be introduced, the used waste components should be recycled and a waste processing factory should be built.
There is little doubt that solving the above problems will improve the ecological situation in Pavlodar Region along with enhancing region's potential for tourism development.Tourism is one of the most promising sectors of the Kazakhstan economy. The experiences of the leading countries all around the world demonstrate that the development of tourism directly contributes to the well-being of the populationthrough income generation, the creation of jobs, and reducing the level of poverty.
Based on the analysis of the current state of the environmental situation in the region, there is a need for investment and research for the 'greening' of the tourism industry.Arguably, this should be part of the country's transition to the "Green Economy" as well.The transition to a "Green Economy"could allow Kazakhstan to achieve its goal of becoming among the top 30 most developed countries in the world. In other words, green economyis one of the most important tools for ensuring sustainable development of the country.
In this connection, one of the key projects of Kazakhstan at the contemporary times is the holding of the international exhibition EXPO-2017 on the theme of "Energy of the Future" in Astana. The initiative of organizing such a large-scale event in the capital of Kazakhstan under the initiative of President Nazarbayev demonstrates the commitment of the country to sustainable development and energy. EXPO-2017 is a new stage in the economic, social and cultural life of Astana in particular and Kazakhstan in general. EXPO exhibitions are the most prestigious and authoritative exhibition venues in the world that are visited by millions of tourists all around the world.
With this project, energy-efficient design and energy storage will start to be used soon.By this way it is aimed to reduce energy consumption by 60 percent. With the replacement of the street system of batteries to the maximum capture of solar energy,there will be significant energy saving especially in the colder months. Not only the heating costs will be reduced but also the comfort of the residents and the ergonomics of the open space will be improved. Furthermore, the holding of EXPO-2017 became an additional stimulus for the economy and the development of the infrastructure both in the capital and within the whole country.

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THE EFFECT OF ALLOWANCE FOR BAD DEBT LOSS TO THE LEVEL OF PROFITABILITY (Case Study in Local Bank Indonesia)

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SUMMARY

Local Bank (BPR) as one of the financial institutions in Indonesia in carrying out its activities collecting funds from the public in the form of savings and deposits and channeling back the funds collected through the provision of credit. This study aims to determine, describe and explain the Effect of Allowance for Bad Debt to the Level of Profitability in Subang BPR of Pabuaran Branch. The method used is descriptive method, and testing of the data - the data studied. The data used is data from the financial statements of PD BPR Subang of Pabuaran Branch in 2012 to 2015 with a monthly ratio reports. Any increase in the value of allowance for bad debt (X) of 1% would cause a rise in the value of profitability level in terms of the comparison of operating cost with operating income (Y) of 0.333% and vice versa. The conclusion is the level of allowance for bad debt does not significantly affect the level of profitability as measured by the comparison of operating expenses to operating income.

Keyword: Community Bank, Allowance for Bad Debt, Profitability.

INTRODUCTION

The financial crisis that hit Indonesia in mid-1977 brought a devastating impact on the banking sector in Indonesia. The decline of banking sector due to the economic crisis forced the government to liquidate the bank - a bank that is considered unhealthy and unfit for operation. This has resulted in a crisis of public confidence in the banking industry.
The enactment of the new Law No. 10 of 1998 concerning amendment to the Law No. 7 of 1992 on banking which isworseis due to the rising interest rates and rising NPL (Non Performing Loan) of conventional banks.
The ratio of non-performing loans became the problems faced by the banking sector due to the condition of the domestic economy that is not yet stable and the strengthening of US dollar. Until January 2015, gross NPL ratio of banking sector reached 2.28 percent and is oriented to reach 3 percent if the performance of the real sector continues to hit. OJK has noted a number of sectors experiencing a decline in loan quality, the construction sector has recorded the highest NPL of 5 percent followed by large trade and retail sectors at 3.4 percent.Mining and quarrying sector recorded the highest increase of NPL by 150 basis points to 2.4 percent. Other sector that recorded an increase is the processing industry to 1.9 percent. Meanwhile, transportation, storage and

telecommunication sector recorded an increase of NPL by 90 bps to 3 percent. (Nooraddeen: 2012) Viewing Indonesian banking indicator figures, the indicator ofOperational Efficiency Ratio (BOPO) is still very high. This figure is still stable in the range of 75 percent, far from the average ASEAN countries in the range of 60 percent. It shows that the operation of the Indonesian banks is far from efficient(Eltivia, 2013).

The financial performance of bank is one measure of the success over the health of bank. One of financial performances of bank be seen on the size of Operational Efficiency Ratio (BOPO). The smaller the BOPO ratio owned by the bank, the greater the profit level achieved and the better the bank's position in terms of cost management and revenue generated. The level of profitability of banks will become one of the benchmark for customers in trusting their funds to be stored in a bank, because it reflects how far the ability of management to gain profit. Allowance of debt elimination established to cover the risks resulting from the non-acceptance of all or part of the loans given. The greater debt that is not the costs used for loss provisioning accounts.

One of the benefits achieved bythe bank is caused by the success rate of the bank's operation. When the banking products are problematic, the bank's performance in gaining profitability will be disrupted, even if this continues,the health of bank will be threatened.

Anticipating the risk of loss that may occur as a result of loan channeling and to suppress the percentage of increaseddebtloss, the bank is required to establish allowance for debt loss. This is in accordance with the Decree of Directors of Bank Indonesia No.31/148/KEP/DIR dated November 12, 1998 concerning the establishment of Allowance for Possible Loss on Earning Assets (PPAP). The provision states that banks are required to establish allowance for possible loss on earning assets in the form of general allowance vs specific allowance.

The impact of the large amount of allowance for debt loss has been felt by almost all banks in Indonesia. Each bank must consider how to anticipate bad debtso as not to interfere with the health and sustainability of its operation. Bankis also required to have written guidelines regarding the establishment of allowance for possible loss on earning assets and write-offs of disqualified assets.

From the explanation above, the authoris interested in doing research in the field of banking, especially regarding "THE EFFECT OF ALLOWANCE FOR BAD DEBT LOSS TO THE LEVEL OF PROFITABILITY IN BPR SUBANG BRANCH PABUARAN".

LITERATURE REVIEW

ACCOUNTING PERSPECTIVE THEORY

Accounting is a service activity, where its function is to provide quantitative information, especially information regarding the financial position and company performance results, which are intended to be useful in making economic decisions (in making a choice among various alternatives exist) (Erivan, 2009:15).

Accounting is the process of identifying, measuring and reporting economic information to allow for assessment and a clear and unequivocal decision for those who use the information, according to the American Accounting Association (AAA).

According to the Decree of the Minister of Finance of the Republic of Indonesia (No. 476 KMK.01 1991), Financial Accounting is a process of collecting, recording, analyzing, summarizing, classification and reporting of financial transactions from an economic entity to provide financial information for the report users that is useful for decision-making.

Term Definition

Bank accounting is the accounting process of bank aims for the interest of recording, analyzing, and interpreting of financial data in order to meet the needs of various parties. The financial statement of the bank must be in accordance with the accounting principles that have been widely accepted or bookkeeping techniques, posting, and recording all transactions made in the operation of a bank (Francis, 2013).

Indonesian banking aims to support the implementation of national development in order to improve equity. According to the Law No. 10 of 1998 about banking, the types of banks are grouped into; first Commercial Bank is the bank that conducting its business conventionally and or based on Sharia principles which in its activities provide services in payment traffic. Second is Community Bank, it is a bank that conducting its business conventionally and or based on Sharia Principles which in its activities do not provide services in payment traffic.

In this study, we discuss about loan, debt and profitability related to rural banks,the explanation about the loan and debt is as follows. The definition of credit based on Banking Law No. 10 of 1998 concerning change of Act 7 of 1992, is, "credit is the provision of money or equivalent receivables under contracts or agreement of lending between banks and other parties who require the borrower to pay off the debts after a certain period of time with interest."

Based on the above understanding, it can be explained that the loan or financing can be either cash or debt whose values aremeasured by money and the agreement between the bank (loanor) to customer (debtor). The rights and obligations of each party are contained in the loan agreement, including the period and interest set together, and sanctions if the debtor violates the agreements that have been made.

The difference between the loan granted by the bank based on the conventional financing provided by banks based on Islamic principles is situated on the expected profit. For conventional principles-based banks, the profit is earned through the interest while for profit sharing principles-based banks, the profit is in the form of rewards or profit sharing.

Another term in this study is debt,debt is one type of accounting transactions dealing with the debt of consumers owed on a person, a company, or organization for goods and services that have been given to the consumer. Debt arises because of the loan sales to other companies.

Other debtis generally classified and reported separately in the balance sheet. For example,interest receivable, dividend receivable (debt from investee as a result of investments), tax receivable (company's debtto governmens in the form of restitution or refund of an overpayment of tax), and debt to the employees (Hery, 2009:265).

Last is the profitability. Profitability is one indicator for customers and investors in determining the bank to be selected. From this level of profitability, the valuation will be seen from the level of profit achieved bank management. For banks, the level of profitability will be measuring the extent of the bank's success in implementing its business operation and can estimate how long the business continuity of the bank (Going concern).

Profitability is the ability of the company to make a profit in relation to sales, total assets and own capital (Sartono, 2001).

Profitability is important to measure the level of business efficiency achieved by the company (bank) concerned. The ability of banks to earn profits is not quite to be measured by total revenue earned, but it also must be associated with the amount of funds invested and how much the cost used in the realization of such profits (AgusSartono, 2001).There are two important elements to determine the rate of profit (profitability) of a banking business, the first, income and expenses (Rusydiana, 2015) The ratio is used to measure the profitability of each company will be different from one another but basically there are three things to note with this profitability ratio that is;

1. *Return On Total Assets*

   a. *Gross Yield On Total Assets* $= \dfrac{\textit{Operating Income}}{\textit{Total Assets}}$

The above formula is to measure the ability of management to generate income for the bank from the management of the assets owned by the bank concerned.

   b. *Net Income On Total Assets* $= \dfrac{\textit{Net Income}}{\textit{Total Assets}}$

METHODS

The research method is a scientific way to get data with a specific purpose and usefulness (Sugiyono, 2014). The stages or steps in the research began with the outlining of the problem arouse in this study. After limiting and formulatingthe problem, the purpose and objective as well as the significance of the study were determined so that research direction were clear and focused to the issues to be studied. The next step was theory underlying the research and preparation of the thesis related to variables to be studied either from books or journals related to the matter to be studied.
The next stage was the observation to the study site, it was intended to collect data. The necessary data in this study were in the form of annual data from the balance sheet, income statement, and statement of the bank health. Data were obtained in three ways: first calculatingand analyzing the company's annual data that have been taken, the second was to make observations on the development of the company and the third was to hold interviews to the company directly.
After all the data were collected, it would be processed in Chapter IV.The method used in this study was descriptive method namely a research aimed to describe, analyze and draw conclusions about the state of the object under study based on the facts and the data obtained.In accordance with the title of this study, "The Effect of Allowance for Bad Debt Loss to the Level ff Profitability," there are two types of study variables, namely:

INDEPENDENT VARIABLE

Independent variable isthe variable that explains and affects other variables that are not independent(Sugiyono, 2014:58). Based on the above title, the independent variable is: Allowance for Bad Debt Loss (X). The allowance for debt loss is the allowance established to cover possible loss arising from the investment of funds into earning assets (Bastian danSuharjono, 2006).
Measurement of the percentage of Allowance for Bad Debt Loss is:

$$\frac{\textit{The established allowance for bad debt loss}}{\textit{Total credit granted}}\ x\ 100\%$$

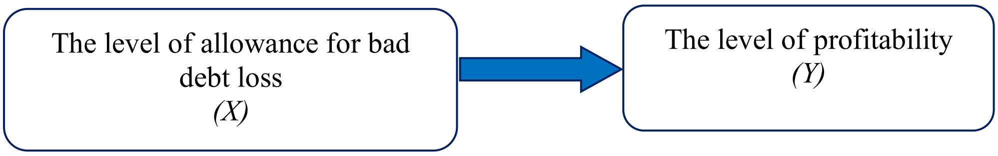
DEPENDENT VARIABLE

The dependent variable is often referred to as the output variable and the affected variable. The dependent variable is the variable that is affected or resulted from independent variables (Mishra, 2010). The dependent variable is the variable that is affected by other variables that are independent. Based on the above title, the dependent variable is the level of profitability (Y). Profitability is the ability of the company to make a profit in relation to sales, total assets and own capital (AgusSartono, 2010:122).
Measurement of the percentage level of profitability with Operational Efficiency Ratio (BOPO) is:

$$\frac{\textit{Total operating expense}}{\textit{Total operating revenue}}\ x\ 100\%$$

The relationship of both variables is described as follows:

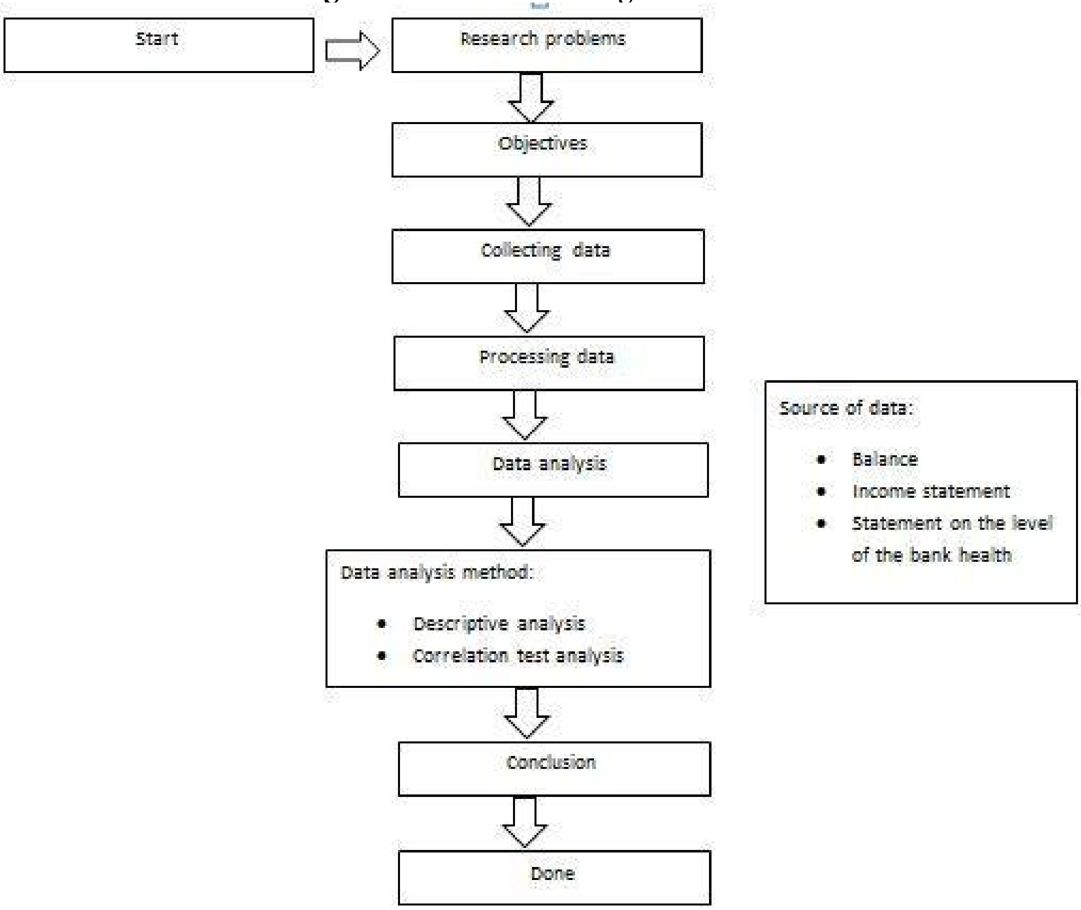
Figure 3.2 Research Model



Mathematically, the relationship of both variables is: Y = f(X)
Where : X= The level of allowance for bad debt loss, Y= The level of profitability

The research unit studied by the author was a financial report on the level of allowance of debt loss and the level of profitability in the Regional Company of Community Bank of Subang of Pabuaran Branch that was located at the District Office Complex of PabuaranSubang. Regional Company of Community Bank of Subang is local government-owned company that was founded in 2006 by having 12 (twelve) branches and one head office. The research design described as follows:

Figure 3.1 Research Design Flowchart



Data collecting technique was done by interview, questionnaire, and observation. The analytical method used in this study was regression analysis. The hypothesis testing was done using a significance level of (0) = α = (0.05). This figure represents a level of significance that was commonly used and was considered appropriate for the study of social sciences and considered strong enough to represent the relationship between the variables studied.

DESCRIPTIVE STATISTICAL TEST

Descriptive analysis is an analysis used to discuss the quantitative data. This analysis discusses on how the effect of allowance for bad debt loss to the level of profitability, with the following formula:
How the calculation of the allowance for debtloss given to the amount of loan granted is carried out by the banking company using the formula:

$$X = \frac{\text{Allowance for debt loss granted}}{\text{Total credit granted}}$$

As for the criteria for the classification of the allowance for debt loss based S.K. B.I 31 / KEP / DIR is as follows:

- Current of at least 1%
- Special mention of at least 5%
- Substandard of at least 15%
- Doubtful of at least 50%
- Loss of at least 100%

How to calculate the profitability of with Operational Efficiency Ratio (BOPO) is:

$$Y = \frac{Operational\ expense}{Operational\ revenue} x\ 100\%$$

The criteria used for the classification of profitability level assessed through BOPO ratio according IrhamFahmi in the book "Introduction to Banking Theory and Applications" (Sugiyono, 2014:196) are as follows: "Bank Indonesia does not impose strict rules against this ratio as far asthe bank does not suffer loss in the future."

SIMPLE LINEAR REGRESSION ANALYSIS

Regression analysis is used to study the relationships that exist between the variables so that from the relationship obtained, we can estimate the price of one variable when the price of other variables is unknown.
The regression equation according to the two variables above can be obtained by the stages as follows:

- Regression equation $Y=a+bx$
  X = The estimated variable value ofX (Allowance for Possible Losses on Earning Assets)
  Y = Variable valueof Y (Level Profitability)
- Determining the coefficient value of a and b using the following formula:

$$a = \frac{(\sum y)(\sum x^2)-(\sum x)(\sum xy)}{n\sum x^2-(\sum x)^2} b = \frac{n\sum xy-[\sum x(\sum y)]}{n\sum x^2-(\sum x)^2}$$

Where:
X: Independent variables
Y: Dependent variables
a : Constanta
b: Linear regression coefficient

COEFFICIENT OF DETERMINATION ANALYSIS

To determine the effect of variable X to variable Y, then the value of coefficient (r) is squared (r^2). r^2 value or coefficient of determination shows the model variable of Y to be influenced by variable X. Thus the interpretation of the coefficient of determination is if the coefficient or correlation between the two variables X and Y is equal to r, then 100% r^2 variation of variable X is affected by variations in the variable Y. This determination test can only be done if there is a significant relationship between the two variables above. The coefficient of determination can be searched using the formula:

$$KD = r^2 \text{x } 100\%$$

Where:
KD :Coefficient of determination
r^2: Squared coefficient or correlation

T-TEST

To test whether a variable ofcorrelation coefficient(r) is significant or not,testingusing t-test is done with the stages as follows:
- Express Ho and Ha

Ho: r = 0. There is no effect between the level of allowance for bad debt to the level of profitability
Ha: r ≠ 0 There is effect between the level of allowance for bad debt to the level of profitability
- Statistical test

Assuming that X and Y come from normally distributed population, the significant test of the value of r is done using a significant t-test with the statistic student formula as follows:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Where:
t: Coefficient value with degrees of freedom n-2
r: Pearson coefficient value
n: The amount of observed samples
The value of t_{result} from the calculation is the compared with t value on t_{table} with degrees of freedom n-2 with the criteria as follows:
1) If the value t_{count}<value t_{table}, then H_o is accepted, H_a is rejected
2) If the value t_{count} <value t_{table} ,then H_o is accepted, H_a is rejected

RESULTS AND DISCUSSION

Given each business activity always has risks, including in the banking business activities, it is common if the banking company has to undertake the establishment of allowance for debt loss to cover business risks. The increasing amount of debt, the risk of rising bad debts will also increase. Uncollectible debt values cannot be directly recorded as debtloss and written off by the company in accordance with the Decree of Directors of Bank Indonesia No.31/148/KEP/DIR dated November 12, 1998 concerning the establishment of Allowance for Possible Debt Losses on Earning Assets (PPAP).
Analysis of the level of Receivables Provided, Bad Debt and Allowance for Bad Debt Loss of BPR Subang of Pabuaran Branch data is presented in the following table:

Table 4.1 The Rate of Debt Given BPR Subang of Pabuaran Branch Year 2012 – 2015

	2012	Develop-ment	2013	Develop-ment	2014	Develop-ment	2015	Develop-ment
January	16,073,265,762		21,229,311,262	0.35%	27,680,619,472	7.53%	31,270,593,942	2.65%
February	18,912,324,057	17.66%	21,804,320,360	2.71%	29,922,155,049	8.10%	32,416,590,192	3.66%
March	18,249,720,880	-3.50%	22,032,176,077	1.05%	30,246,613,105	1.08%	32,741,220,392	1.00%
April	19,500,627,911	6.85%	21,796,304,626	-1.07%	30,717,488,552	1.56%	34,026,247,292	3.92%
May	19,800,329,768	1.54%	23,155,676,111	6.24%	30,952,715,718	0.77%	35,290,499,492	3.72%
June	21,138,756,026	6.76%	24,332,300,670	5.08%	31,189,115,699	0.76%	34,240,162,492	-2.98%
July	21,347,354,584	0.99%	24,823,249,912	2.02%	30,313,180,580	-2.81%	32,824,452,092	-4.13%
August	21,813,761,447	2.18%	24,957,478,264	0.54%	29,077,049,992	-4.08%	34,306,450,700	4.51%
September	21,586,203,940	-1.04%	25,164,908,537	0.83%	29,294,517,087	0.75%	35,187,323,700	2.57%
October	21,519,556,962	-0.31%	24,627,459,899	-2.14%	29,447,296,473	0.52%	34,859,164,250	-0.93%
November	21,972,451,465	2.10%	24,407,834,513	-0.89%	28,349,641,759	-3.73%	33,790,693,250	-3.07%
December	21,154,758,584	-3.72%	25,742,534,418	5.47%	30,462,073,842	7.45%	32,086,614,000	-5.04%

Source : The data processed by the researcher

Level of Bad Debt BPR Subang of Pabuaran Branch Year 2012 – 2015

	2012	Develop-ment	2013	Develop-ment	2014	Develop-ment	2015	Develop-ment
January	327,421,500		404,558,912	5.40%	509,232,383	14.14%	448,320,458	6.26%
February	312,771,364	-4.47%	446,829,930	10.45%	566,705,448	11.29%	518,339,575	15.62%
March	315,201,839	0.78%	387,795,906	-13.21%	590,709,417	4.24%	498,433,374	-3.84%
April	334,165,049	6.02%	443,303,946	14.31%	662,387,837	12.13%	507,502,220	1.82%
May	352,207,326	5.40%	501,447,202	13.12%	744,198,338	12.35%	524,493,100	3.35%
June	364,026,353	3.36%	519,596,949	3.62%	771,896,198	3.72%	556,976,200	6.19%
July	350,169,252	-3.81%	550,607,029	5.97%	535,121,038	-30.67%	586,740,923	5.34%
August	362,397,001	3.49%	569,791,049	3.48%	359,657,484	-32.79%	584,668,025	-0.35%
September	308,132,262	-14.97%	509,708,029	-10.54%	367,436,929	2.16%	591,890,048	1.24%
October	295,394,292	-4.13%	516,220,185	1.28%	361,471,479	-1.62%	672,032,940	13.54%
November	301,967,939	2.23%	572,250,032	10.85%	446,063,309	23.40%	705,078,580	4.92%
December	383,830,290	27.11%	446,149,012	-22.04%	421,913,349	-5.41%	475,962,849	-32.50%

Level of Allowance for Bad Debt Loss BPR Subang of Pabuaran Branch Year 2012 – 2015

	2012	Develop-ment	2013	Develop-ment	2014	Develop-ment	2015	Develop-ment
January	222,839,912		273,739,912	0.00%	506,964,115	15.03%	470,672,774	5.61%
February	232,839,912	4.49%	283,739,912	3.65%	537,051,872	5.93%	549,833,804	16.82%
March	233,739,912	0.39%	276,739,912	-2.47%	549,251,872	2.27%	599,833,804	9.09%
April	233,739,912	0.00%	293,739,912	6.14%	605,892,941	10.31%	599,833,804	0.00%
May	231,739,912	-0.86%	329,739,912	12.26%	679,510,408	12.15%	624,833,804	4.17%
June	255,739,912	10.36%	339,739,912	3.03%	731,872,191	7.71%	629,833,804	0.80%
July	247,739,912	-3.13%	374,734,980	10.30%	528,539,130	-27.78%	654,833,804	3.97%
August	252,739,912	2.02%	374,734,980	0.00%	345,672,774	-34.60%	679,833,804	3.82%
September	258,739,912	2.37%	374,734,980	0.00%	395,672,774	14.46%	689,833,804	1.47%
October	263,739,912	1.93%	374,734,980	0.00%	395,672,774	0.00%	735,101,628	6.56%
November	273,379,912	3.66%	407,234,980	8.67%	420,672,774	6.32%	783,910,151	6.64%
December	273,739,912	0.13%	440,734,980	8.23%	445,672,774	5.94%	472,114,266	-39.77%

Source : The data processed by the researcher

From table 4.1 it can be seen that the level of development of loan administration of Subang BPR of Pabuaran branch experienced the largest increase in January 2012 amounted to 17.66% and a significant reduction in December 2015 amounted to -5.04%. Development level of bad debts also increased and decreased, the largest increase was 27.11% in December 2012 and the biggest decrease was in August 2014 amounted to -32.29% this is due to the long holiday that reduced the working days. The development level of allowance for bad debts loss increased significantly by 16.82% in February 2015 and the largest decline was in December 2015 amounted to -39.77%, the amount of allowance for bad debts loss is highly depend on how large the possibility of a credit crunch in the company and the value of collateral pledged on the loan.

The result of the analysis of Profitability Level in BPR Subang of Pabuaran Branch Year 2012 -2015 Pabuaran are presented in the table below,

Table 4.2 Level of Profitability PD BPR Subang of Pabuaran Branch

2012	Cost	Income	Level of BOPO	Development
January	1,750,048,752	2,511,228,375	69.69%	
February	1,854,930,027	2,782,313,065	66.67%	-4.33%
March	1,837,419,222	2,757,342,612	66.64%	-0.05%
April	1,811,837,463	2,735,744,021	66.23%	-0.61%
May	1,809,354,472	2,835,929,720	63.80%	-3.66%
June	2,222,284,145	3,459,481,077	64.24%	0.68%
July	2,621,150,258	4,088,135,556	64.12%	-0.19%
August	3,111,182,470	4,810,762,306	64.67%	0.87%
September	3,508,386,450	5,432,307,307	64.58%	-0.14%
October	3,910,379,051	6,081,179,905	64.30%	-0.43%
November	4,318,780,836	6,713,402,469	64.33%	0.04%
December	4,724,056,400	7,373,516,012	64.07%	-0.41%
2013				
January	356,477,040	609,155,224	58.52%	-8.66%
February	753,367,947	1,247,150,501	60.41%	3.22%
March	1,198,685,177	1,939,329,812	61.81%	2.32%
April	1,599,165,868	2,606,357,646	61.36%	-0.73%
May	2,031,633,585	3,294,593,164	61.67%	0.50%
June	2,466,677,984	4,011,979,390	61.48%	-0.30%
July	2,914,251,713	4,736,600,400	61.53%	0.07%
August	3,338,446,954	5,417,897,990	61.62%	0.15%
September	3,722,636,530	6,122,773,473	60.80%	-1.33%
October	4,149,499,030	6,858,826,411	60.50%	-0.50%
November	4,553,403,351	7,529,145,211	60.48%	-0.04%
December	3,942,273,493	8,268,579,047	47.68%	-21.16%

Source : The data processed by the researcher

2014				
January	420,863,374	730,994,485	57.57%	20.76%
February	807,031,759	1,506,868,801	53.56%	-6.98%
March	1,221,021,360	2,341,408,056	52.15%	-2.63%
April	1,696,974,224	3,149,831,622	53.88%	3.31%
May	2,203,418,312	4,064,735,209	54.21%	0.62%
June	2,630,666,551	4,885,212,946	53.85%	-0.66%
July	3,120,126,687	5,711,173,890	54.63%	1.45%
August	3,558,092,779	6,551,234,549	54.31%	-0.59%
September	3,980,481,780	7,413,702,851	53.69%	-1.14%
October	4,371,283,113	8,268,030,153	52.87%	-1.53%
November	4,736,135,501	9,063,240,215	52.26%	-1.16%
December	5,200,562,257	9,895,678,435	52.55%	0.57%
2015				
January	414,202,763	815,852,345	50.77%	-3.40%
February	881,711,844	1,602,263,825	55.03%	8.39%
March	1,332,541,754	2,474,996,653	53.84%	-2.16%
April	1,737,673,196	3,329,093,464	52.20%	-3.05%
May	2,160,832,093	4,243,694,524	50.92%	-2.45%
June	2,553,783,603	5,093,694,985	50.14%	-1.54%
July	2,957,949,382	5,926,083,709	49.91%	-0.44%
August	3,433,472,665	6,840,867,853	50.19%	0.55%
September	3,855,691,070	7,747,605,475	49.77%	-0.85%
October	4,247,905,423	8,636,770,244	49.18%	-1.17%
November	4,639,441,550	9,491,889,303	48.88%	-0.62%
December	4,809,352,272	10,381,805,932	46.32%	-5.22%

Source : The data processed by the researcher

Based on Table 4.2, the profitability levels of BPR Subang branch Pabuaran period of year 2012 to 2015 can be seen that the biggest increase occurred in January 2014 amounted to 20.76% this causes the level of health in the companies declined, after before suffer a decrease of profitability level that can be reviewed from the ratio of operating expenses to operating revenues amounted to -21.16% that became the biggest decrease in the period of 2012-2015.

The level of development of loan administration at BPR Subang Branch Pabuaran experienced the largest increase in January 2012 amounted to 17.66% and a significant decline in December 2015 amounted to -5.04%. The level of development of bad debts also increased and decreased, the largest increase was 27.11% in December 2012 and the largest declinewas -32.79% in August 2014. It was due to the long feast holiday that reduced working days. The level of development of allowance for bad debt loss increased significantly by 16.82% in February 2015 and the largest decline in December 2015 amounted to -39.77%, greater levels of allowance for debt loss is highly dependent on how large the possibility of a NPL in the the company and the value of collateral pledged on the loan.

In accordance with the title, the objective of this study is to determine the significance of the effect of the level of allowance for bad debt loss to the level of profitability at BPR Subang Branch Pabuaran. Other studies are in accordance with the objective in this study, namely:

To determine whether there is effect on the total amount of loan to the level of profitability in BPR

Subang Branch Pabuaran.

To determine whether there is effect on the value of bad debts to the level of profitability in BPR Subang Branch Pabuaran.

To find out how much the effect of the level of allowance for bad debt loss to the level of profitability in BPR Subang Branch Pabuaran.

Based on the objectives above, the author will conduct a series of tests that are relevant to the research objectives, the tests to be implemented are as follows:

Normality Test

Data normality test is used to test whether the regression model, confounding or residual variables have a normal distribution, with the provisions of the Z value produced will be compared with the critical value so it can be known whether or not the variable is normal distribution.

Results of skewness and kurtosis normality test can be seen in Table 4.3 as follows:

Table 4.3 Results of Normality Test Analysis

Descriptive Statistics					
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Unstandardized Residual	48	.300	.347	.353	.681
Valid N (listwise)	48				

Source: Data processed using SPSS V21.0

Of the value of skewness and kurtosis, Zskewness and Zkurtosis are calculated as follows:

$$Zskewness = \frac{0.300}{\sqrt{6/100}} = 1{,}225 \qquad Zkurtosis = \frac{0.353}{\sqrt{24/100}} = 0{,}720$$

The calculation result ofZskewness and Zkurtosis to produce a value below the critical value is ± 1.96 (significant at α = 0.05). Thus, we can conclude that residual data are normally distributed.

MULTICOLONIARITY TEST

Multicoloniarity test is used to test whether a correlation between independent variables is found in the regression model. If the independent variables correlate with each other, then the variables are not orthogonal or the correlation value between variables is equal to zero.

Multicoloniarity test results in this study are presented in Table 4.4 as follows:

Table 4.4 Results of Multicoloniarity test

Coefficient Correlations[a]					
Model			Tingkat cad. kerugianpiutang	Total credit	Piutangtaktertagih
1	Correlations	Cad.kerugianpiutang	1.000	.045	-.377
		Kredit yang diberikan	.045	1.000	-.194
		Piutangtaktertagih	-.377	-.194	1.000
	Covariances	Cad.kerugianpiutang	.038	.015	-.035
		Kredit yang diberikan	.015	2.900	-.157
		Piutangtaktertagih	-.035	-.157	.224
a. Dependent Variable: Tingkat profitabilitas					

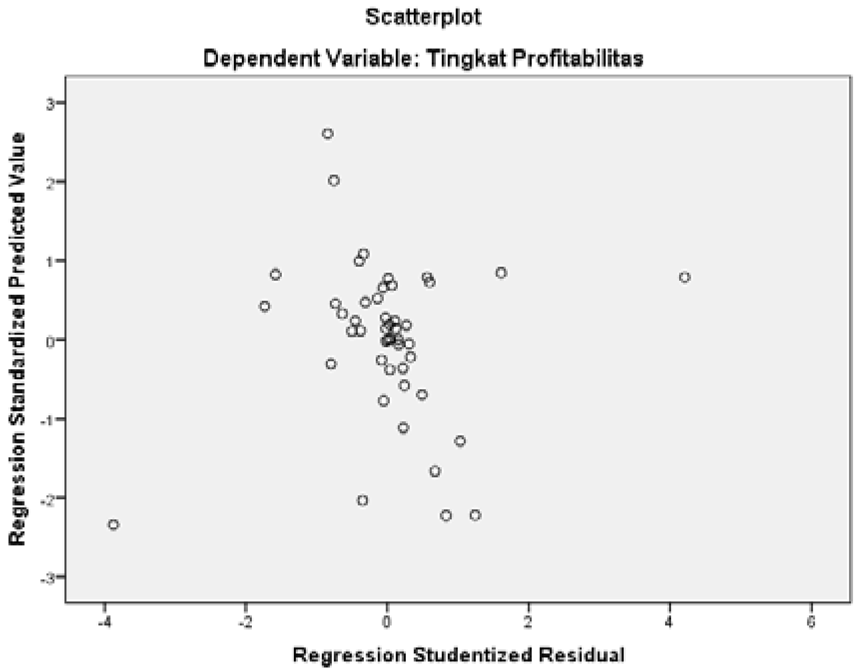
Source: Data processed using SPSS V21.0

From the results of the correlation value between the independent variables, it appears that there is no variable that has a correlation> 0.8 meaning the correlation between independent variables of multicoloniarity.

HETEROSCEDASTICITY TEST

Heteroscedasticity test aims to test whether there is inequality varience of residual from one observation to another observation in the regression model.
Heteroscedasticity test in this study has Plot graph as follows:

Figure 4.1 Results of heteroscedasticity test



Source: Data processed using SPSS V21.0

From the Scatterplotgraph above, it can be seen that the point point spread at random and spread both above and below 0 (zero) on the Y axis.The scatterplot results show that there is no heteroscedasticity in the regression model.
Autocorrelation test
Autocorrelation test aims to test whether the linear regression model has correlation between disturbance's errors in period t with an error in period t-1 (previous). If there is a correlation, then it is called autocorrelation problem (Ghozali, 2011:110). The results using Durbin Watson autocorrelation test are presented in Table 4.5 as follows:

Table 4.5 Results of Autocorrelation test

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.926a	.858	.848	.02427	1.929
a. Predictors: (Constant), Piutangtaktertagih, Kredit yang diberikan, Cadangankerugianpiutang					
b. Dependent Variable: Tingkat Profitabilitas					

Source: Data processed using SPSS V21.0

Autocorrelation test using Durbin Watson produces a value of DW at 1.929 and compared to a table value with a significance value of 5%, the number of samples is 48 (n) and the number of independent variables is 3 (k = 1), then at the Durbin Watson table found the values as follows:
DW value of 1.929 is greater than the upper limit (du) of 1.674 and less than 4 – 1,674 (4-du), it can be concluded 1.674 (du) <2.135 (d) <4 – 1,674 (4-du) which means that there is no autocorrelation.
Simple simple linear regression
Simple linear regression analysis is used to determine the relationship between the dependent and independent variables, thus from the relationship obtained, we can estimate a variable if prices of other variables are known to the form of the regression equation. Based on the results of data processing that has been done, the results are presented in the following table:

Table 4.6 Results of simple linear regression test

Coefficients[a]						
Model	Unstandardized Coefficients		Standardized Coefficients		T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.681	.023		29.637	.000
	Cadangankerugia-npiutang	-7.228	1.472	-.586	-4.910	.000
a. Dependent Variable: Tingkat Profitabilitas						

Results of regression calculation obtain value of a at0.681 and value of b at -7228, in thus obtaining the form of simple linear regression equation as follows:
From simple linear regression equation, it can be explained:
The coefficient value of 0.681 is the value of the intercept, which means that the regression line cuts the axis Y at point 0.681 and also dependent upon estimates of X equal to 0.
The regression coefficient value of b = -7.228 is the coefficient of linear regression direction, which means that any increase in the value of the level of allowance for bad debt loss (X) of 1% would cause a decrease in the value of the level of profitability in terms of operational efficiency ratio (Y) amounting to 7.228%.

CORRELATION COEFFICIENT ANALYSIS

Correlation analysis is used to determine the strength of the correlation relationship between the two variables and the measure used to determine the degree or strength of the correlation relationship.
Based on the results of data processing by SPSS V21.0, the correlation coefficient analysis results are as follows:

$$Y = 0{,}681 - 7{,}228\,X$$

The results obtained from this correlation calculation of -0586 indicate that in the two variables, there is a negative relationship between variable X (the level of allowance for debt loss) with variable Y (level of profitability).
Strong correlation between variable X with variable Y can be used as interpretation table of coefficient value (r). Based on the interpretation table of r value, it can be seen that the result of the calculation of correlation coefficient is -0586 which means that there is a relationship being between the level of allowance for bad debt loss to the level of profitability in BPR Subang branch Pabuaran.
Coefficient of determination

The coefficient of determination is used to determine how much the effect of the level of allowance for bad debt loss as an independent variable to the level of profitability as the dependent variable. Coefficient of determination test results can be seen in Table 4.8 as follows:

Table 4.8 Results of Coefficient of Determination Test

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.586a	.344	.330	.05094
a. Predictors: (Constant), Cadangankerugianpiutang				
b. Dependent Variable: Tingkat Profitabilitas				

Source: Data processed using SPSS V21.0

Figures on R square column in the table above mean that the effect of the level of allowance for bad debt loss to the level of profitability in BPR Subang branch Pabuaranis 34.4%, the remaining 65.6% is another factor that is not studied by the author such as net income, total assets and the effect of the amount of third party deposits kept by banks. The result of t testing are as follows :

Table 4.9 The result of t testing (Allowance of Bad Debt Loss to the Profitability Level)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.681	.023		29.637	.000
	Allowance of Bad Debt	-7.228	1.472	-.586	-4.910	.000
a. Dependent Variable: Tingkat Profitabilitas						

Source : Data processed with SPSS V21.0

Based on the Table 4.11, judging from the significance number is 0.00 and compared to the significance number is 0.05. The decision is to use the following criteria, considering the comparison value of > that is 4.910 > 2,021, it means is rejected and is accepted. The conclusion is that the rate of allowance of bad debt loss is significantly affects the level of profitability based on the ratio of operating expenses to operating income in BPR Subang of Pabuaran branch.

CONCLUSION

The level of allowance of bad debt loss in the Regional Company of Community Bank of Subang of Pabuaran Branch obtained average value at 1.0540.

The lowest level of profitability is 0.08% in January 2015. This shows the value of the bank's health from the aspects of profitability in January 2013 and 2014 decreased due to the big percentage of the costs against the low income.

The change rate in the amount of total receivables that occurred in BPR Subang of Pabuaran Branch during the period of 2012 – 2015, there was no significant effect on the level of profitability

The change rate in the number of bad debts occurred in BPR Subang of Pabuaran branch during the period of 2012 – 2015, there is a significant effect on the level of profitability.

From the test t test, it is known that = 1,529 < from = 2,201, which means that the rate of bad debt loss has no significant effect on the level of profitability.

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INSTRUCTIONS FOR AUTHORS

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SUMMARY

Summary should be written at the beginning of work and should be typed in Times New Roman, Italic, 12 pt. Alleged "Summary" should be written two spaces below the title, in Times New Roman, Bold, 11 pt. Summary length is 50 to 150 words. One line after the summary you shoul give key words (up to 10 keywords).

KEYWORDS

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Introduction should be written two spaces after keywords (TNR, bold, 12).

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Main titles should be written in capital letters, centered, TNR font, bold, 12. Before and after the main title there is one blank line.

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Second level headings should be written in lower case, centered, TNR font, bold, 12 Before and after the title is an empty line.

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Papers are written in Microsoft Word for Windows program. Language is Serbian and English. Part of the Serbian language to the Latin script. Economics, Journal of Economic Theory and Analysis using APA writing standards of scientific research.TABLESTables should be numbered in Arabic numerals continuity, and the title and number of the tables are placed above the table, flush with the left margin. Legend is printed below the table. When quoting data table name with writing Capitalized and mention her number. APA follows the rule that the tables eliminate the vertical line and the horizontal retain only the most necessary. Font size is 10pt in the tables. Tables are centered and only in English language, and the legend, if necessary, should be written in the Serbian language too.

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