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Economic freedom and growth: exploring statistical significance of the relationship in the balkan economies _____

_____ **Selami Xhepa** _____

FACULTY OF ECONOMY AND INFORMATION TECHNOLOGY, EUT

Abstract

Enhancing economic freedom remains a key policy objective of the reforms that Balkan economies are engaged in, particularly after ending of the conflicts and the start of Stabilization and Association Process. The assumption is that enhancing economic freedom will produce high economic growth and improve prospects for higher standards of living for citizens. Therefore, the question of determining the relationship between economic freedom and economic growth has attracted attention of a number of researchers and a number of working papers have tried to explore on the issue. In this paper I try to investigate this relationship between economic freedom, decomposed in his ten dimensions, and economic growth, welfare effects and business development through the capital formation index.

Key words: *economic freedom, economic growth, welfare.*

Some theory

Understanding the process of economic development and factors behind the prosperity of some nations and backwardness of others has been an area of extensive research work by economists and social sciences. Classic economic theory holds that countries can exploit the growth potential by making full use of his resources and use of better technology. However, such an assumption cannot explain why developing countries remain underdeveloped, although the potential in terms of resources is high. Therefore, developmental economists have been looking for an explanation analyzing economic and political institutions, specifically asking how

institutions affect growth and how do better institutions arise.

Throughout history, academic thought followed Adam Smith thesis that free nations grow and develop faster than the less free ones. Economic freedoms, as freedom of conducting transactions, freedom of property and strong economic institutions, have strongly been correlated with economic growth. History and evidence provide clear testimony supporting this thesis.

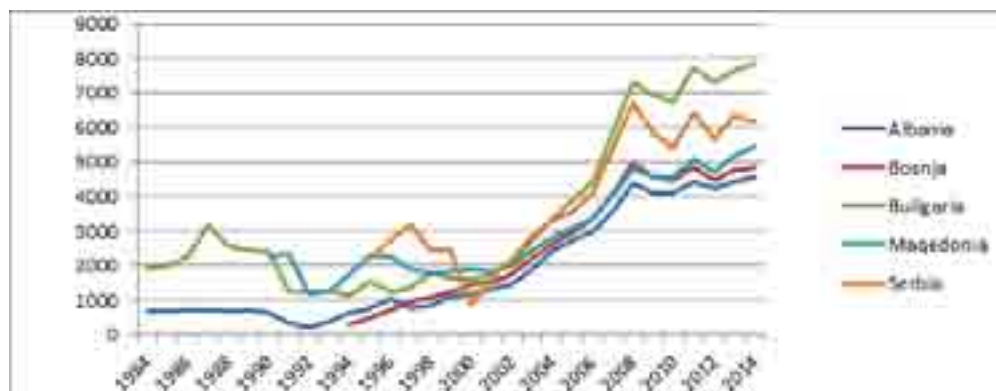
Prof. Gwartney (2004) brings evidences from historical data that free countries grow faster, and that there are higher FDI per worker, higher productivity, less poverty and more equal income distribution, improved living conditions, healthier democracy, etc. He was the creator of the Fraser Institute Index of economic freedom and in his research using data for the period 1980-1994, he found that GDP per capita in freer countries grew at an annual average rate of 2.4%, while in less free countries at a negative 1.3%.

Cross country data shows that improvements on the index of economic freedom are associated with higher income growth. However, China's rating for economic growth is an exception from the rule: the country had the highest growth while being still relatively repressed in terms of financial markets, business freedoms and corruption (Congsheng, 2011).

Regressing economic growth against an index of economic freedom allows us to quantify that relationship. Furthermore, we look at each individual component of the index in order to estimate which of the variables plays a more important role.

Economic and political freedom in the Balkan has produced high economic growth. Balkan economies were the least developed prior to democratic changes and Albania being the most isolated ones was the poorest. Data from the World Bank shows that starting from early 2000, when the conflict in the Balkan ends, GDP per capita increased on a much higher rate than before. Albania in particular, shows a flat level of GDP per capita before the country opened up. Starting from 2000, the region improved substantially during the last 15 years.

GRAPH 1: GDP per capita, PPP current USD



Identifying the measures to be used

There are three well known indexes developed by three organizations measuring the degree of economic freedom: Heritage Foundation Index of economic freedom; Fraser Institute economic freedom of the world index and Freedom House freedom of the world index. We use Heritage Foundation Index because the index, in addition to quantifying macroeconomic stability, government size and the rule of law, is accompanied by qualitative assessments of the research teams on the institutional capacities the countries have to strengthen and enhance country's economic freedoms.

Economic freedom is described as freedom from government involvement in economic decisions, macroeconomic stability in business environment, trade and financial market state of development, security of property rights and freedom from corruption. Each of these dimensions has received considerable attention from the research. The definition of economic freedom is based on a libertarian approach to the role of government in economic management and therefore it can be attacked on such grounds. However, this is the only measure we have to quantify relationship between economic freedom and growth and the one used in this article.

In this exercise we use the Heritage Foundation Index of economic freedom¹ to measure and compare the progress of Balkan economies. The main research question is: has economic freedom worked in the Balkan economies? Which of the main components of economic freedom (business freedom, trade, labor, sound money, government, and corruption, financial and fiscal freedoms) has been more important for growth? This will help focus attention of reform agenda in the areas which can deliver fast and meaningful results.

But first I review the index over years, using Germany as benchmark country and Croatia as the first country of our region to join the EU.

Enhancing freedoms in the region: how individual countries are performing in terms of reforms?

The Heritage index provides data for the period 1995-2016, covering a relatively long period of two decades of transformation, although for Macedonia,

¹ There are a number of methodological issues related to the use of indexes, mostly due to aggregation problems (from 50 questions that are used, they are grouped in ten indexes and aggregated in a one number index), quality of research teams and subjective evaluation of quality of institutional reforms, etc. However, we assume the error to be systematic and therefore the degree of confidence of analysis to be acceptable.

Montenegro and Serbia data covers the period 2002-2016, reducing the number of observations. However, we have to note the peculiarities of Albania, which started transition from the conditions of a much closer economy compared to relatively open economies of ex-Yugoslavia. Therefore, the first decade of Albania's transition can be considered as the one of preparing the ground for a serious reform agenda starting from the early 2000. Political realities of the Balkan related to the dissolution of ex-Yugoslavia had a substantial impact on the economy and society, keeping countries below the world average in terms of economic freedom (from mostly unfree to moderately free).

Data of table 1 provides a summary of statistics of the index and its components for the five countries included on the analysis: Albania, Macedonia, Montenegro, Serbia and Croatia.

For the whole period of the analysis, the mean of the index is 58.5 and media 59.2, with a standard deviation 6. The highest level of freedom is on the fiscal freedoms, reflecting low level of fiscal burdens in the regional economies compared with the world average and developed economies. Important progress has also been made in trade liberalization and business freedoms, reflecting improving business conditions for entry and operation of investors. Countries also reflect a stable macroeconomic environment, reflected in the high level of monetary spending, which measures the stability of price level and sustainable currency exchange rate policies.

TABLE 1: Economic Freedom index: Descriptive Statistics

Descriptive Statistics	Nr	Mean	Median	Min	Max	SD
Overall Index	78	58.5	59.2	43.5	68.6	6.0
Business Freedom	78	62.4	60.2	40	81	9.8
Trade Freedom	78	75.5	78.1	56	88.4	10.8
Fiscal Freedom	78	82.3	83.5	59.3	92.8	8.4
Government Spending	78	54.5	50.8	22.9	89.2	18.1
Monetary spending	78	74.5	79.0	22.1	90.7	13.1
Investment Freedom	78	58.3	60.0	10	80	14.9
Financial Freedom	78	55.1	55.0	30	70	12.0
Property Rights	78	34.8	30.0	30	50	5.9
Freedom from corruption	78	31.9	34.0	10	50	11.4
Labor Freedom	55	56.7	56.2	0	92.3	19.7

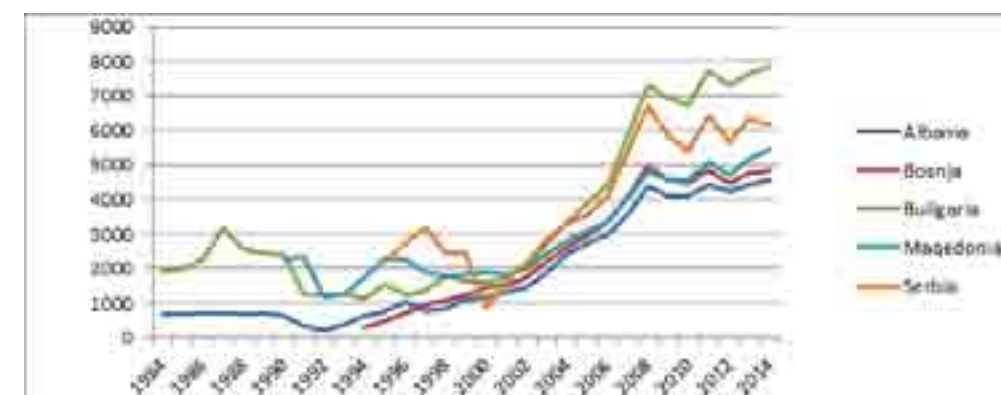
Two critical areas of lack of reforms are property rights and freedom from corruption, on which the region remains largely unreformed.

In order to measure the gap of the each individual country with one core EU country, Germany, we present some charts of each indicator to visualize the gap between the region and EU.

The following graph 2 clearly indicates that Albania performed much better than all the countries included in the comparator group till 2010, with Macedonia being much closed to Albania and overpassing Albania from this period on. Macedonia seems the most reformed economy in terms of enhanced economic freedoms. Distance to Germany narrowed over years. By end of 2016, region remains in average 9.3 points below the level of economic freedoms of Germany, from -55 points below that level by early 2001. This is an indicator that decade of 2000 has been a decade of important economic reforms, particularly with ending of conflict situation in ex-Yugoslavia.

What is striking is that Croatia still remains the lowest performing country in terms of economic freedom, although is the only EU member country in the group and the richest in terms of GDP/capita. The second observation is that Macedonia has been the fastest reforming country in the region, particularly from 2010 on. The third observation is that from 2012, the countries are falling behind or stagnating in terms of reform, widening the gap with Germany.

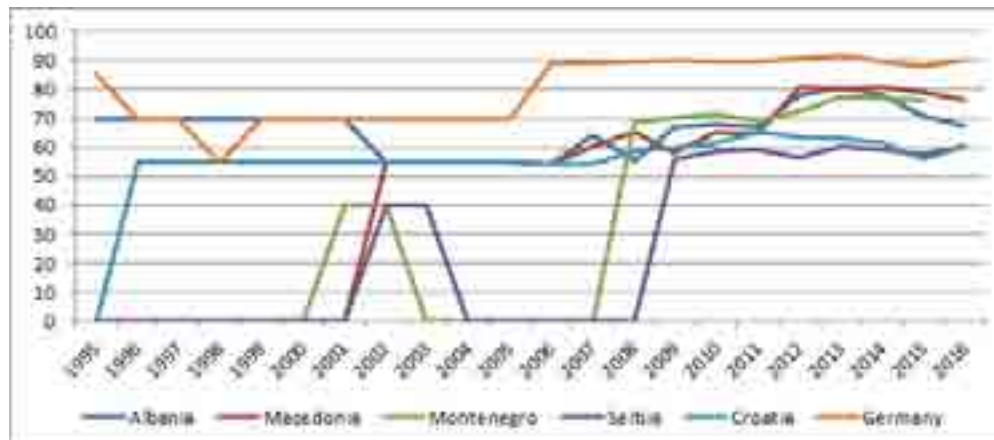
GRAPH 2: Overall score of Economic Freedom



Looking at individual components of economic freedom, we can again observe that Serbia and Croatia remain the least free countries comparatively; business freedom in Albania deteriorates starting from 2013 while Macedonia remains the freest country in business freedom. All countries are negatively impacted by two key component of the index: freedom of property rights and freedom of corruption. All countries are 37 points below the level of Germany (Albania being 46 points far away from that level) in terms of freedom of corruption and around 51 points below in property rights. These two single variables keep all economies of the region repressed and penalize economic growth.

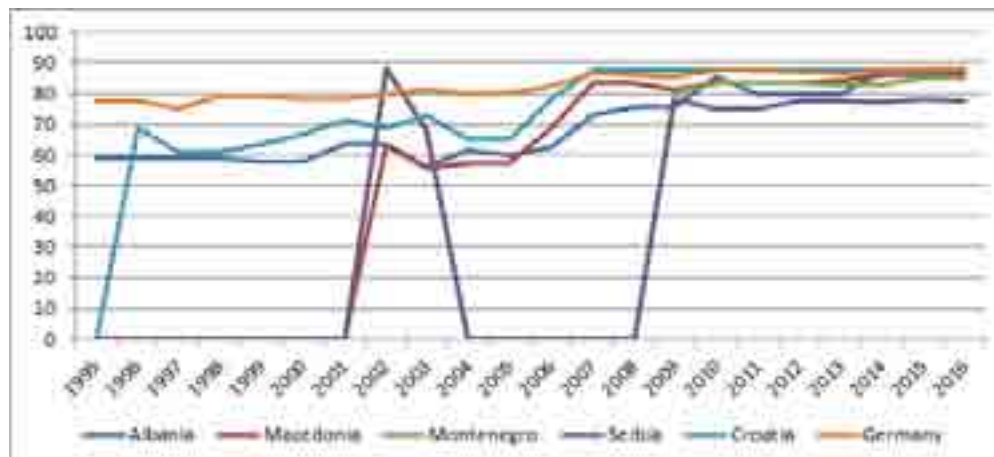
Business freedom is the efficiency of legislation with regard to the ability to start, operate and close a business. From a methodological point of view the index is based on ten subcomponents referring to procedures and costs of establishing, operating and closing a business.

GRAPH 3: Business freedom index



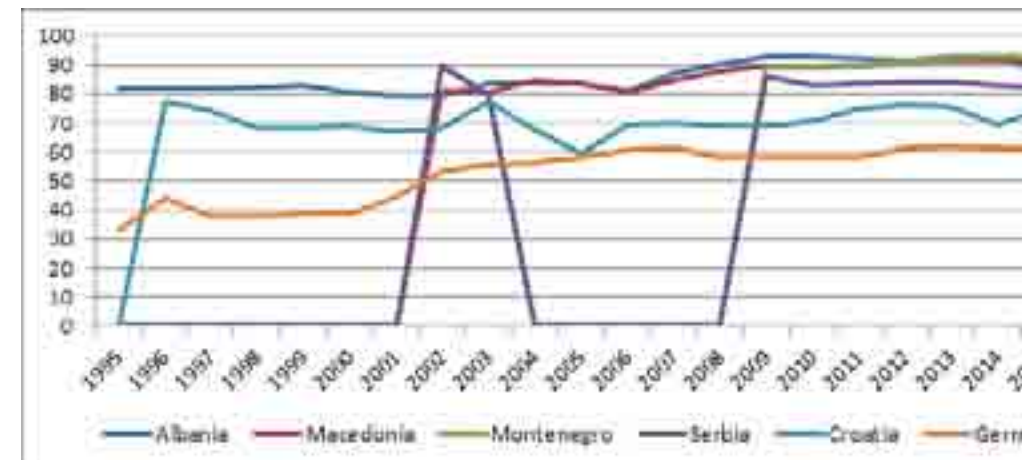
Trade regime is largely open and almost all countries converge, with some minor exceptions of Serbia

GRAPH 4: Trade freedom



Fiscal freedom measures tax burden (personal income tax rate, corporate tax and tax revenues as % of GDP), each one having the same share (1/3) in the composite index. Fiscal freedom is higher in poorer countries, such as Albania and Montenegro and lowest in richer countries. From this perspective, it seems Balkan economies are competitive in tax burden.

GRAPH 5: Fiscal freedom



Freedom of government spending is built around the idea that low government spending (less than 30% of GDP) improves business opportunities and helps private sector growth. It is clear the index is biased towards developing economies and as the graph shows, Albania scores the highest followed by Macedonia. This index is very controversial since the government spending could be critical to improve business environment and address social challenges of unemployment and widespread poverty.

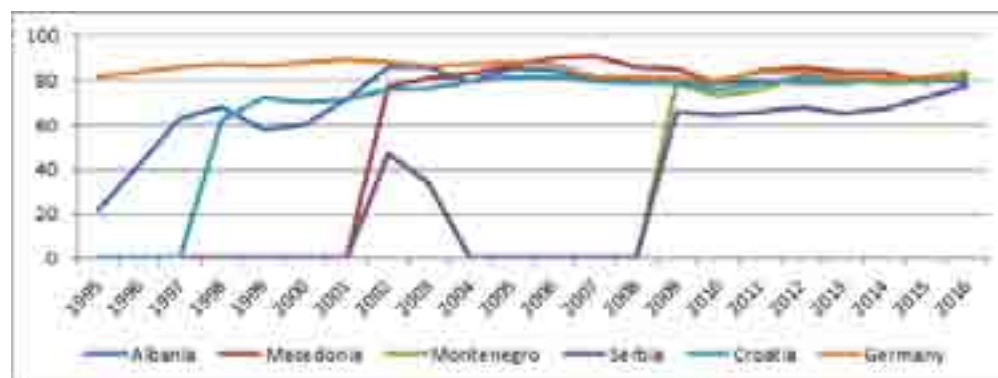
GRAPH 6: Freedom of government spending



Monetary spending is based on the principle that maintaining low and stable price levels helps economic growth and the index refers to price developments in the last three years. Although the situation has been unfavorable in the early years of transition, starting the second decade and particularly since 2008 a

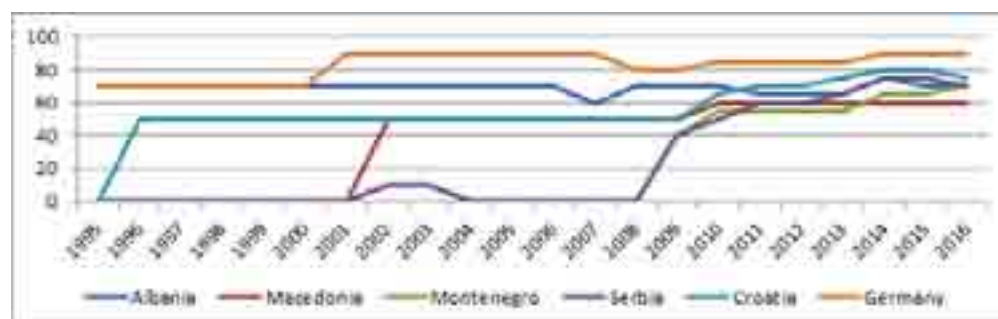
clear convergence process is observed. Convergence of price levels with core EU countries is a sustained process during the last decade.

GRAPH 7: Freedom of monetary spending



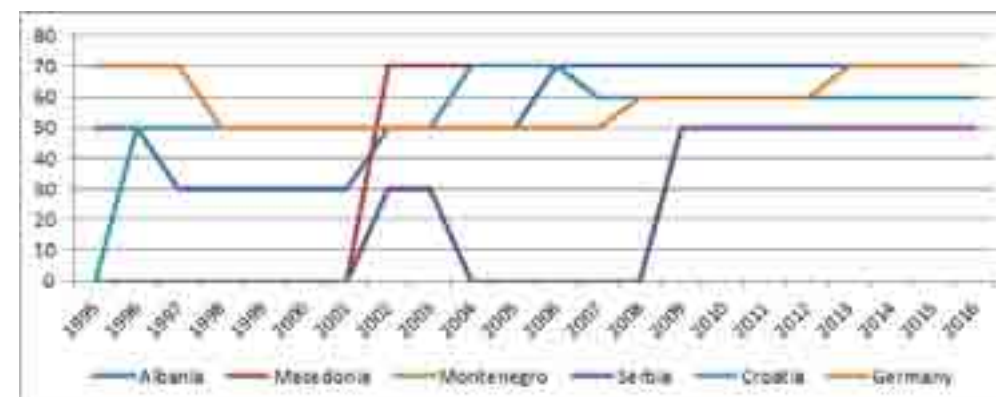
Investment freedom improves starting from 2008; however, Albania scores higher than all comparator group of countries, with Croatia overtaking from 2011 and Serbia from 2014. The index measures the restrictions to entry and operation of foreign investment.

GRAPH 8: Freedom of Investment



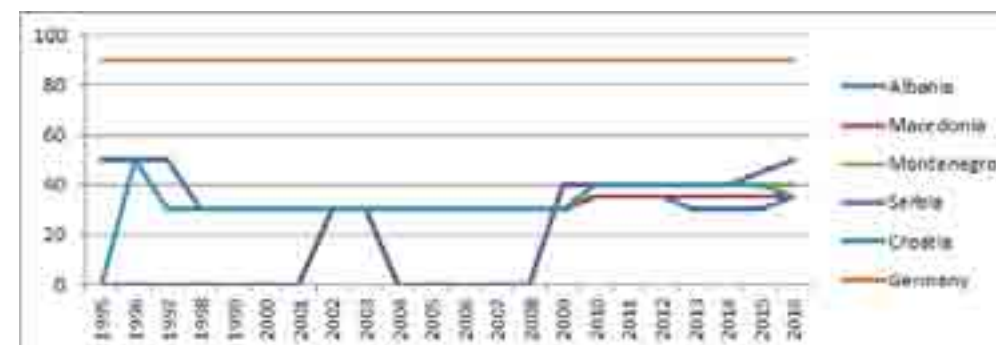
Financial freedom measures the level of government interference in the operation of financial markets, in terms of credit constraints and allocations, price of money, limitations to ownership, foreign entry etc. Again Albania ranks high but the picture seems mixed. During the last years we see a convergence with EU, except for Serbia which remains comparatively closed.

GRAPH 9: Financial freedom

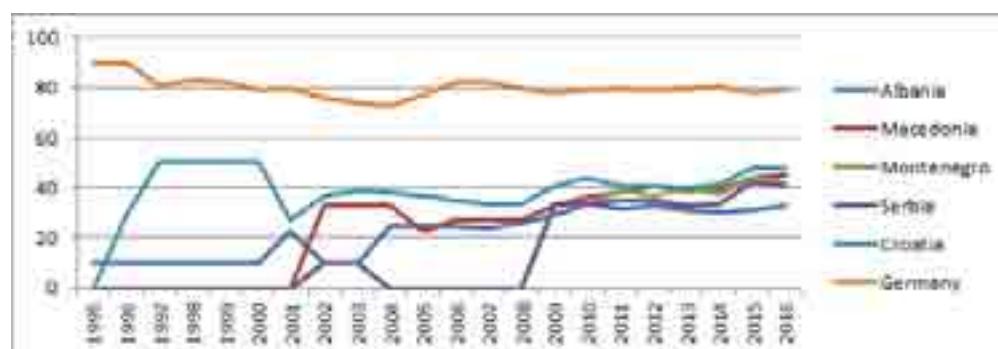


Property rights remain the most important impediment to economic growth and there has been no progress made since the beginning to transition. The index measures the degree to which countries legislation protect property rights and efficiency of judiciary in dispute settlement.

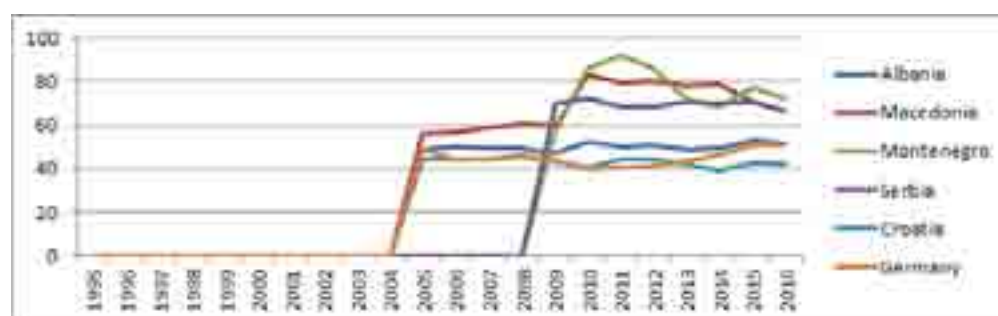
GRAPH 10: Property rights



Freedom from corruption represents one of the key challenges for the region. As the graph shows, although there are some slight differences, with Croatia being ahead of other countries, we are still far behind the advanced economies and Albania being the most corrupted country in the group.

GRAPH 11: Freedom from corruption

Labor market is characterized by a high degree of freedom and flexibility, compared with rigid practices on the EU.

GRAPH 12: Labor market freedom

Overall, most of economies of the region are today as mostly free and in many respects they are as free as German economy, in terms of labor, monetary, fiscal and financial freedoms. However, corruption, property rights and business and investment freedoms remain important on the agenda of reforms. Particularly property rights and corruption are the top priority areas for major improvements.

Economic freedom indicators will be regressed against some macroeconomic indicators selected to measure the impact of freedoms, namely the GDP growth, GDP per capita, as a proxy for the welfare and gross capital formation as a proxy for the impact of freedom on business development. Descriptive statistics of these data is presented at Table 2.

TABLE 2: Macroeconomic indicators, Descriptive Statistics

Descriptive Statistics						
	N	Mean	Median	Min	Max	SD
GDP Growth	86	3.1	3.6	-12.1	13.5	4.3
GDP/Capita (PPP, current \$)	88	10,159.6	9,801.3	2809.0	21,635.1	4,724.0
Gross fixed capital formation, % GDP	84	21.7	20.1	11.1	40.5	7.4

For the whole period of the data sample (1995-2014) we find a 3.1% average annual growth rate of the economies of the region. There is a high variation in terms of GDP per capita, ranging from a low of 2,809 USD\$, PPP, to 21,635.1 USD\$, PPP, with Albania being on the low end and Croatia being on the high. On average for the whole period, the whole region stands at 31% of GDP per capita of Germany. Extreme volatility characterizes also other macro variables, FDI and gross fixed capital formation. Albania registered the highest GDP growth, by an annual average of 5.2% and Croatia the lowest growth by 2%. On average, the region has attracted over a billion USD in FDI, but there is a high volatility and variation across countries.

Economic freedom, economic growth, business development and welfare effects of freedom

Next we investigate a group of questions related to growth and welfare. More specifically we try to answer: How has economic growth being related to economic freedom? Which of the components of the index is strongly related to growth and business/entrepreneurship performance? How much economic freedoms are related to welfare? Have long term growth prospects been improved through higher capital formation?

We use three variables to study this relationship: GDP growth, GDP/capita (in PPP, \$), and gross capital formation % of GDP. The last indicator is a proxy for the level of entrepreneurship and business development. Explanatory variables are the index of economic freedom and its components. Table 2 presents the correlation coefficient between the variables.

TABLE 3: Matrix of Correlation coefficients

Correlation coefficients											
	1	2	3	4	5	6	7	8	9	10	11
1. Overall Index	1.00	0.71	0.51	0.59	0.18	0.67	0.59	0.55	0.16	0.42	0.42

2. Business Freedom		1.00	0.28	0.51	0.14	0.22	0.51	0.15	0.28	0.17	0.47
3. Trade Freedom			1.00	0.28	-0.12	0.27	0.02	0.25	0.18	0.45	0.43
4. Fiscal Freedom				1.00	0.52	0.09	0.08	0.03	0.16	-0.17	0.48
5. Government Spending					1.00	-0.07	-0.07	-0.04	-0.33	-0.50	-0.16
6. Monetary spending						1.00	0.40	0.65	-0.24	0.51	-0.18
7. Investment Freedom							1.00	0.30	0.32	0.21	0.01
8. Financial Freedom								1.00	-0.17	0.45	-0.59
9. Property Rights									1.00	0.13	0.46
10. Freedom from corruption										1.00	0.18
11. Labor Freedom											1.00

Data on the matrix of correlations reveal that overall economic freedom scores high with business freedom and monetary spending, somewhat strong relationships are scored with investment freedom, fiscal freedom, and trade freedom. What is surprising is the very low impact of government spending, corruption, property rights and labor market freedom on the overall economic freedom index, with a correlation coefficient of less than 0.4. Freedom from corruption shows a high negative correlation with government spending, but the indicator performs poorly with all other dimensions of economic freedom. On the other hand, government spending is negatively but poorly correlated with almost all dimensions of economic freedom, consistent with the idea that high government size hurts growth. Other studies also find a negative relationship between size of government and growth (Carlsson, Lundsrom, 2001). On the other hand the direction of causation of government size with economic growth is the opposite: large governments are a product of economic development. Only developed economies can sustain high levels of government investments and public services.

A more formal, rigorous relationship is established through a regression analysis. Most studies regress economic growth with economic freedom; however, some researchers found that changes on the index of economic freedom are of higher importance than the level of index. There has been a long discussion on which of the variables to use in the regression analysis. De Haan et al (2006) criticize the use of both variables and advocate the use of the level of index of economic freedom. But, the use of the change in the index seems a reasonable solution, particularly for countries which have a long way to go in the reform process.

While for countries being on top and therefore no major changes can be expected could be justifiable to use just the level of index, for the Balkan economies the level and change in the index values, can yield better results. Therefore, we will use on the analysis both the level and the changes on that level to measure the relationship.

TABLE 4: Regression results: Fixed Effect

	(Model 1)	(Model 2)	(Model 3)
	GDP_growth	ln_gdpcap	ln_capform
Overall_ind	0.726*	-0.0431*	0.0113
	(1.92)	(-2.55)	(0.61)
Bus_freed	-0.00621	0.00446**	0.00342*
	(-0.17)	(2.68)	(1.88)
Trade_fred	-0.0655	0.0182***	-0.00106
	(-0.89)	(5.50)	(-0.29)
Fiscal_fre~m	0.0249	-0.00293	-0.00438
	(0.28)	(-0.74)	(-1.02)
Gov_spending	-0.122*	0.00538*	-0.00103
	(-2.38)	(2.34)	(-0.41)
Monet_spend	-0.160**	0.00377	0.00223
	(-2.81)	(1.48)	(0.80)
Invest_freed	-0.0537	0.0104***	-0.00481*
	(-0.89)	(3.83)	(-1.63)
Fin_freedom	-0.0410	0.00807***	-0.00121
	(-0.82)	(3.63)	(-0.50)
Propert_fr~d	-0.327**	-0.0135*	-0.00688
	(-2.70)	(-2.49)	(-1.17)
Corrupt	-0.186*	0.00762	0.00250
	(-1.99)	(1.82)	(0.55)
Labour_fre~m	-0.0236	0.00665***	0.000443
	(-1.09)	(6.86)	(0.42)
_cons	8.208***	8.981***	2.941***
	(5.32)	(131.60)	(39.56)
N	130	131	131

t statistics in parentheses; * p<0.05, ** p<0.01, *** p<0.001

Results of the regression show that economic freedom has produced positive results for economic growth and has contributed to welfare improvement for the citizens. However, the model does not explain capital formation and private sector development.

Initial conditions, captured constant of the regression, are large and significant, indicating that achieving high economic growth and improving prosperity for the citizens, requires that countries maintain economic freedom for a long period of

time. This conclusion is reinforced by the fact that differences among countries are found to be important.

Other important insights we can get from the data of the regression are that some dimensions of the freedom have produced better results for economic growth. In particular macroeconomic stability, stable trade and investment regimes, have been positively related to growth and welfare. On the other hand, high levels of corruption and low level of protection of property rights have been key impediments to enhancing growth prospects and welfare for the citizens. Enhancing business freedom has produced good opportunities for self-employment, which is shown by the significance of the index with GDP/capita and capital formation and this shows that economic freedom has not been working for the big companies only. On the contrary major beneficiaries to economic freedom have been entrepreneurship citizens.

Conclusions

This study shows that Balkan economies have entered a process of economic reforms with the aim of enhancing economic freedom. Although there is a large variation among countries in terms of progress of reforms, all countries included in the analysis are clearly lacking behind in terms of progress of anticorruption and strengthening property rights.

In average, the region remains below the world average index of economic freedom for the period in consideration. Experience and research results show that for countries to gain the benefits of economic freedom, they should maintain stable institutions and open and free business regimes for long periods of time.

Economic freedom has been important not only for the interests of big business, but it has been a vital force to improving material conditions for the population. This clearly supports the conclusion that economic freedom works for all and not in the favor of some interest groups.

Finally, fighting corruption and strengthening property right regimes, could produce enormous benefits both for economic growth and business development. The region has a long way to go to transform itself from a moderately free into a free region in terms of economic and business freedoms.

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Impact of fiscal decentralization on local economic development

The Case of Lezha Region (2002-2014)

Fatlum Nurja

PLANNING AND LOCAL GOVERNANCE PROJECT (PLGP) IN ALBANIA

Abstract

Many reforms have been undertaken in local governance after the collapse of the totalitarian, centrist and bureaucratic regimes in Central and Eastern Europe. Albania has demonstrated that decentralization is a major development tool. More than two decades of decentralization activities have revealed that the decentralization process has brought about changes in the operation of institutions and delivery of services, even though this change has taken place gradually. Fiscal decentralization is one of the three dimensions that characterize the decentralization process. Local finance issues are an everyday topic in countries in transition and should be addressed by means of an approach that favors consolidation of local autonomy. Local governments in Albania have lacked, and continue to lack, the fiscal capacity to deliver on the promise of decentralization to improve public services and to promote and nurture local economic development. Decentralization can promote economic development and improve citizens' welfare and living standards when service delivery and the quality of the decisions over how public resources are deployed are improved, but local governments remain hampered by inadequate transfers from the central government and from restraints imposed on various revenue-generating options. However, inadequate financial instruments, especially those of intergovernmental transfers, have affected regional disparities. In this paper, through comparative analysis, analyzing a part of the Region (Qark) of Lezha's LGUs, economic development indicators, will approve the need for reform of these LGUs' financial instruments in order to narrow the gap of regional disparities in Albania.

Key words: *economic development, fiscal decentralization, regional disparities, conditional transfers*

1. Introduction

Decentralization and globalization have been policy issues in many European and developing countries since the '80s (The World Bank Premnotes, 2001; BiZa, 1980). When dealing with these key concepts on issues of decentralization and economic development, one cannot avoid comparative definitions of these concepts.

There are many definitions on decentralization; they match with the principles on which they build and on the objectives for which they were designed. The most inclusive definition on decentralization is provided by the UNDP (1997)¹, which reads as follows:

“...Decentralization, or decentralizing governance, refers to the restructuring or reorganization of authority so that there is a system of co-responsibility between institutions of governance at the central, regional and local levels according to the principle of subsidiarity, thus increasing the overall quality and effectiveness of the system of governance, while increasing the authority and capacities of sub-national levels. ... Decentralization could also be expected to contribute to key elements of good governance, such as increasing people's opportunities for participation in economic, social and political decisions; assisting in developing people's capacities; and enhancing government responsiveness, transparency and accountability.” (UNDP, 1997:4)

Its need stems from the lack of motivation, from the check of balance and ensuring the allocation of decision-making power, and provision of development structures. The following definition is comprehensive in terms of this concept. It clearly shows that one of the reasons is the liberation of forces, creation of synergies and development.

“...Not only has the over-concentration of business and political power been a problem in holding back worldwide economic development, it has also helped foster corruption and dictatorship. In that respect, the single most important form of checks and balances in any society is the dispersal, or fragmentation, of political power. Without question, the creation of strong regional and local governments is critical to that development.” (UNDP, 1996:11)

¹ After the review and consultation of literature, it was generally found appropriate to incorporate quotes from the United Nations Development Program, because this organization's activities utilize an approach of development projects and programs. This focus suits well with the purpose of this study, as it correlates decentralization and local economic development. In addition, unlike definitions of other independent researchers and experts or banking institutions, such as the World Bank or International Monetary Fund, the United Nations employs a more balanced approach from the social viewpoint.

Fiscal decentralization is firstly linked with the creation of possibilities to fund supported or the so-called “subsidized” functions.

“...The establishment of effective and transparent financial management is at the core of any effort to reform the public sector. ...To be genuinely supportive of a decentralization process, the basic characteristics of a system for decentralized financial management should include: (a) transparency of allocation (b) predictability of the amounts available to local institutions and (c) local autonomy of decision making on resource utilization. In contrast with the widespread practice of ad hoc grants driven by politics, the allocation of resources should be based on transparent formulas. Also, unlike the typical unpredictability of most central-to-local transfer mechanisms prevailing in developing countries, the process should provide local institutions with an up-front indication of how much money will be available in the next multiyear planning cycle..” (DDSMS, UNDP, 1996:p.48)

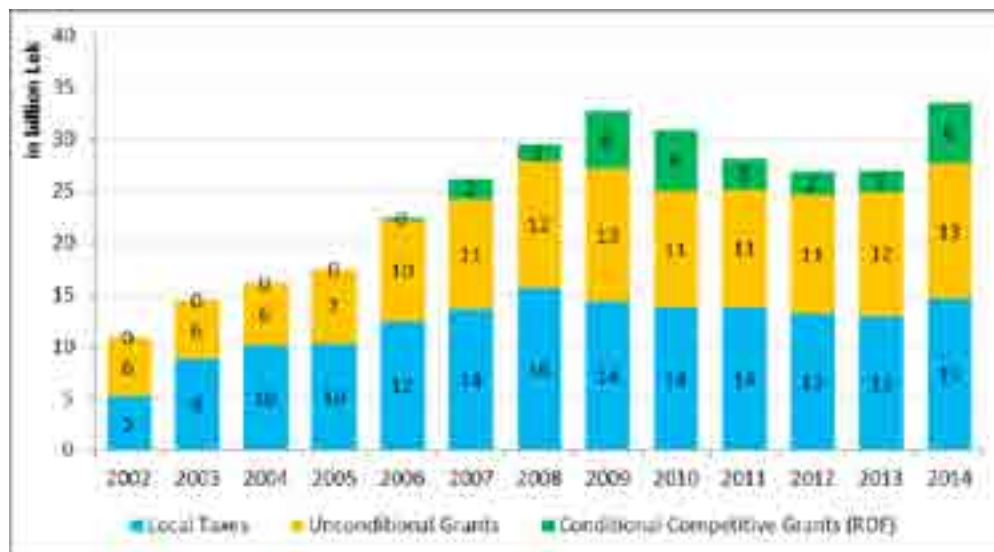
Why the constituent elements of decentralization as presented above are not the only definitions, they all converge in several shared points, which help to enhance implementation of the principle of subsidy and increase effectiveness and efficiency of public services and more. In order to narrow the regional gaps in terms of development indicators, funds have been projected, including Regional Development Fund (RDF)². This measure makes sense in supporting economic development processes and in the implementation of the constitutional principles of equality and proportionality. Yet, these instruments of governmental transfers have two elements that cause problems to the local economic development. Thus, rather than supporting this development, they affect the business climate, reduce local revenues and chances of employment, and decrease the GDP per capita. Firstly, an annual increase of the Competitive (Conditional) Grant or of the Regional Development Fund in ratio to the total revenues of the local government units impairs or reduces the fiscal autonomy. Secondly, investments in rich communities enlarge the regional differences and disparities of development. These two elements - impact of reduction of fiscal autonomy and lack of RDF – are quite visible in a comparative analysis for the Region of Lezha.

² Regional Development Fund (RDF) is a development instrument and a competitive financial mechanism that supports national policy of regional and local development, to ensure implementation of policy objectives of territorial cohesion, to have regions with balanced, competitive development, and sustainable, economic, social, and environmental development. The Regional Development Fund is administered through collegial decision-making of the Committee of Regional Development headed by the Prime Minister.

2. Local Governance Financial Instruments

Local revenues in Albania are mainly composed of: i) own revenues; and ii) inter-governmental transfers, which are divided in a) unconditional grant; and, b) conditional grant. Graph 1 presents the structure of revenues.

GRAPH 1: Basic composition of local revenues by region in billion Albanian Leks (ALL)

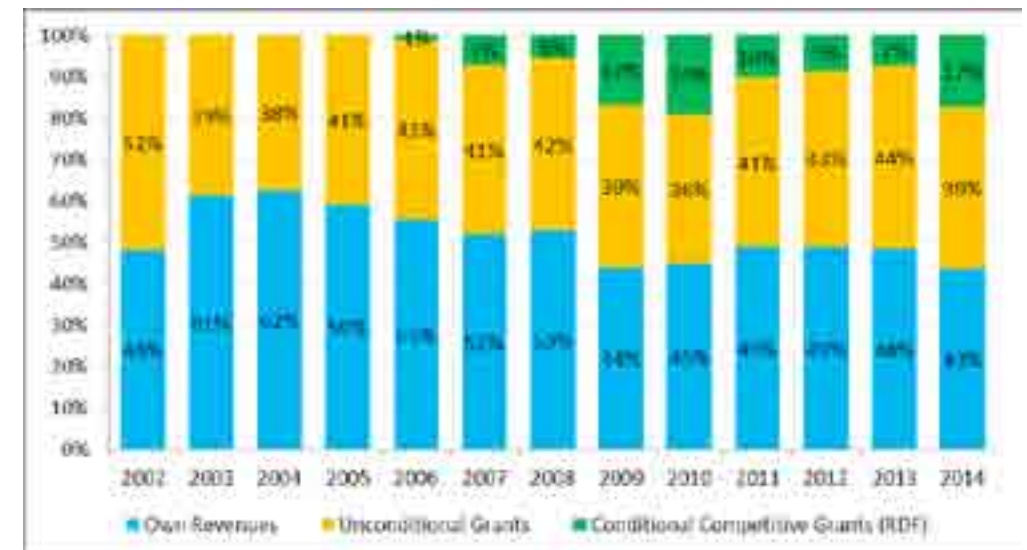


Source: PLGP/USAID

It can be easily observed that over the last few years there has been an increasing trend of funding for local governance in total (after year 2013), even though this is due to an increase of the Conditional Grant or the Regional Development Fund.³ While in absolute values it represents an increase of local revenues, this situation relatively harms the local fiscal autonomy. A presentation of this situation is given in the following graphic as a percentage of the type of funding in ratio to the total.

³ The Regional Development Fund and the Albanian Development Fund according GoA are designed to serve as instruments that promote urban and rural development in the framework of broader policies of regional development. Investments at local level will be incorporated in strategic programs of regional development that guarantee economic and social cohesion among various regions and areas of the country

GRAPH 2: Basic composition of local revenues (by region) in percentage



Source: PLGP/USAID

It is very hard in developing countries to accurately define the funding amount that local government units need to deliver services stipulated by law. This occurs for several reasons, but the most significant one is that in many countries we have little data on service costs, and even less data on costs per unit by reasonable service standards. (WB, 2004)

This makes it highly difficult to determine the amount of money required. Therefore, local budgets are guided by fixed demands for expenditures. We can set ideas and base indicators in our comparative analysis.⁴ (PLGP/USAID, 2015).

Fiscal Indicators of LGUs of the Region of Lezha (2002-2014)

Prior to implementation of the territorial-administrative reform, the Region of Lezha had 16 local government units. It is a region with no major administrative center; its rural LGUs have had no agricultural activity.

The fiscal indicators of these local government units are related with three major elements of their revenues: own revenues, unconditional grants, and conditional grants (RDF).

A comparative analysis is conducted by grouping the local government units by district, which after the territorial-administrative reform in 2014 became independent LGUs. It is also worthwhile to analyze progress over the years in terms of local expenditures. According to this table and the related illustrative graph, the

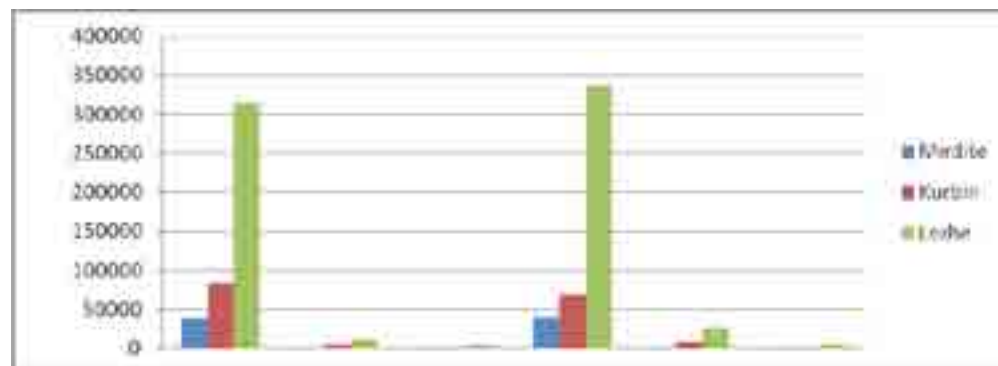
⁴ Indeed, many of these difficulties are still persistent in developed countries. Cf: J. Kim and J. Lotz, Measuring Local Government Needs, Korean Institute of Public Finances and Danish Ministry of Social Welfare, 2007 (PLGP/USAID)

specific share of local revenues in years 2011 and 2014, regardless of the LGUs within the region (in which 1/3 are municipalities), is in the center of the region.

Own revenues and those from the infrastructure impact tax (or building tax) are concentrated in Lezha. Table 1 below provides the main indicators of year 2011 and 2014 of own revenues of Lezha's LGUs and the two most important components that make up own revenues – property tax and tax on agricultural land. This table shows the dynamics in the last four years and the movement of the elements of own revenues in three districts of the Region of Lezha.

TABLE 1: Own revenues, tax on building/agricultural land (Region of Lezha)

Districts	Own revenues 2011	Property tax 2011	Agriculture B land 2011	Own revenues 2014	Building tax 2014	Agriculture B land 2014
Mirdita	38,983.33	646.45	210.37	39,542.68	1,632.88	62.95
Kurbin	84,638.72	4,747.2	249.64	69,173.12	8,096.96	907.71
Lezha	314,362.83	11,129.46	5,343.44	336,270.98	25,891.9	5,852.91



The theory of transfers states that transfers base their equalization on how communities are taxed. In the unconditional transfer, if a community has a high tax performance, then the transfers are small. The opposite applies for poor communities. (Prud'home, R. 2001).

The Unconditional Grant to LGUs of the Region of Lezha has experienced both an increasing trend since 2002 and noticeable fluctuations as shown in Graph 3, which provides data on the dynamics of revenues during 2002-2014. This grant reached its lowest level in 2009 and the highest peak in 2012. The Unconditional Grant is allocated by means of a formula and LGUs have complete discretion over it provided that a share of this grant goes for investments and salaries.⁵ Table 2

⁵ This value varies by the grant formula and budgetary conditions imposed by the local governance.

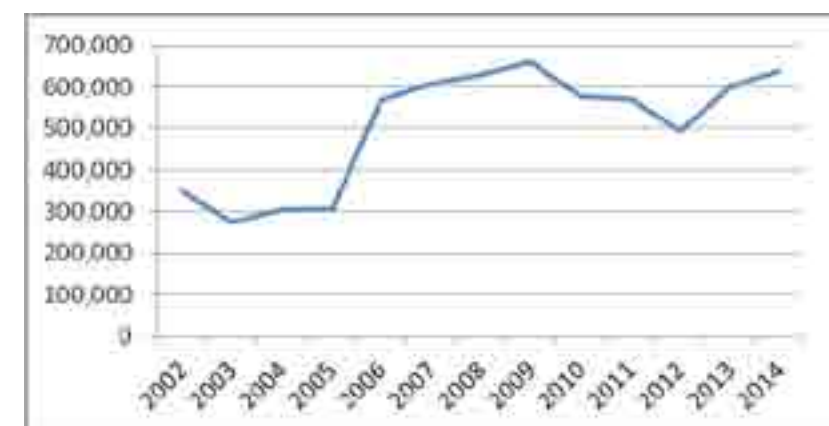
shows how this formula has not changed until 2012. In fact, the formula underwent modifications in year 2014.

TABLE 2: Changes in the rules governing THE ALLOCATION of the unconditional grant in 2002–2012

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Fixed amount	3.5%	3.5%	4%	0	0	0	0	0	0	0	0
Population	62.5%	62.5%	62.5%	73%	70%	70%	70%	70%	70%	70%	70%
Surface of communes	4%	4%	9%	12%	15%	15%	15%	15%	15%	15%	15%
Urban services	20.5%	20.5%	18%	15%	15%	15%	15%	15%	15%	15%	15%
Urban services Tirana	9.5%	9.5%	6.5%	0	0	0	0	0	0	0	0
Equalization	-	35%	35%	35%	30%	25%	25%	25%	25%	25%	25%
Further adjustments	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

While the grant formula for the period under consideration, starting from year 2005, has not changed, significant fluctuations have been noticed in the own revenues of the local government unit in the previous year, and the amount of funds to be allocated in the system has changed. The formula foresees a variable that in case an LGU performs poorly in terms of its own revenues, it can be compensated with the unconditional grant. As shown in Graph 4, “Own revenues in Year 2011”, revenues have increased when compared with year 2010. Therefore, the unconditional grant for year 2012 has decreased.

GRAPH 3. Unconditional grant for LGUs of the Region of Lezha in thousand ALL during 2002-2014



Source: Ministry of Finance, own calculations

GRAPH 4: Own revenues of the LGUs of the Region of Lezha in thousand ALL during 2002-2014



Source: Ministry of Finance, own calculations

According to Prud'home, benefits from decentralization are disproportionate or in opposite relation with the economic development, particularly in poor countries, where tax rates are low and tax collection or tax revenues are two to three times lower than in rich countries. This leads to problems given that some expenditures are the same for both groups of countries. (Prud'home, R. 2001). How will this problem for poor communities be possible to equalize? One way is the equalization part of the unconditional grant formula, whereas the other relates with the conditional transfers or grants.

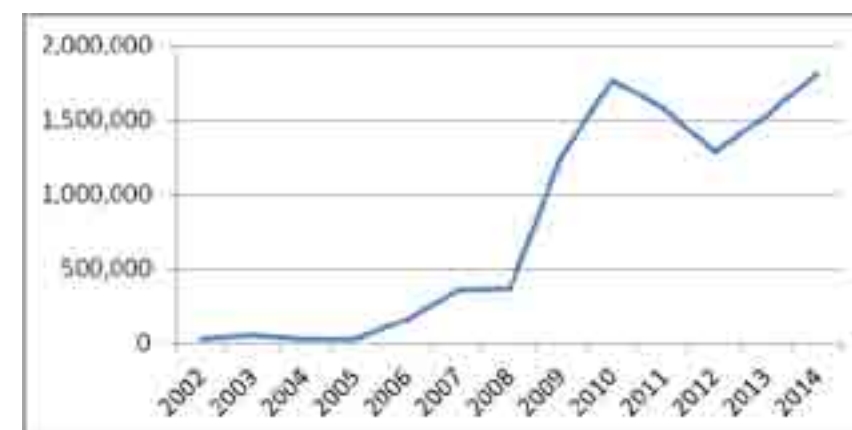
The Conditional Grant, or the governmental competitive transfer, also known as Regional Development Fund, is the most controversial instrument in the last years. Competitive grants constitute another instrument of the equalization in the Albanian system, though at least in theory these grants are supposed to be allocated less on the basis of the relative wealth of jurisdictions than on how well they have prepared their grant applications and on the relative importance of their investment priorities to the needs of the country as a whole. This fund was later called the Regional Development Fund that sought to decrease the regional development imbalances. As shown in Graph 5, in year 2009 a criterion to narrow the regional disparities was introduced in the conditional grant. By this time, this grant decreased for Lezha, while the GDP per capital for this region is the lowest in Albania, with the exception of Dibra and Kukes.

An increase of conditional grants in ratio to the total transfer has led to more dependence on central government and has decreased the rate of fiscal autonomy.

The criterion and procedures of these grants are not transparent. (USAID/PLGP, 2012, p. 73)

Local government units have no discretion to change the destination or intention of this type of funding for the local governance. This fund is composed of monies for investments of ministries as per their related sector, for which local government units compete to win funding for their projects.

GRAPH 5: Conditional grant in the Region of Lezha in thousand ALL during 2002-2014



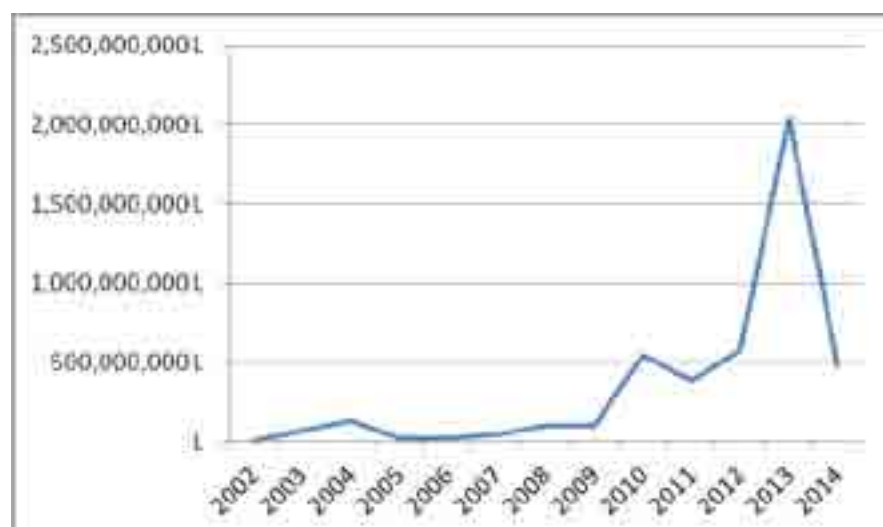
Source: Ministry of Finance, own calculations

The above graphical presentation shows that some progress has been achieved starting from year 2002. Local revenues have increased significantly as an absolute value; likewise, the unconditional grant has followed suit at similar pace.

A more dynamic trend is observed after year 2008, by which time there is a very significant increase. (See Graph 5.) This boost of ministries' spending at local level on matters pertaining to shared functions of LGUs and to own functions seems to have occurred by the time a moderate decrease of own revenues and unconditional grant of LGUs have taken place. (Shih Graphs 3-4).

According to this comparative analysis, this shows that the spending at local level has increased; that line ministries have increased their expenditures on annual basis (particularly after year 2008) in the Region of Lezha; and, that own revenues (from local taxes and fees) have also dropped after year 2008. After year 2012, an increasing trend of own revenues in the Region of Lezha can be easily seen, as shown in Graph 6. By this time, funding from the Regional Development Fund for the Region of Lezha also shrank.

GRAPH 6. Investments of the Regional Development Fund in the Region of Lezha during 2002-2014



Source: Regional Development Fund

The Conditional Grant or the Regional Development Fund implies direct conditional transfers for expenditures, capital investment of line ministries based on projects submitted by local governance. A variety of reports of international and donor organizations that have supported these processes, such as USAID, UNDP, SCD, etc., consider the criteria of allocation of these funds to be politically biased and non-transparent. Recently, there is a trend to increase the pool of the conditional grant in ratio to the unconditional one. This trend runs counter to the principle of local autonomy and its consolidation. (PLGP/USAID 2012:15).

3. What Is the Impact of Fiscal Decentralization Policies on Local Economic Development Indicators? Case of Lezha (2002-2014)

Why Lezha as a Study Sample?

At first, we have to point out that the timespan of this study belongs to a different territorial organization than the current one. Since this study covers a pre-territorial-administrative reform period, its discussions apply to that period. If we seek to analyze the LGUs of the Region of Lezha, initially we need to rationalize why we chose Lezha?

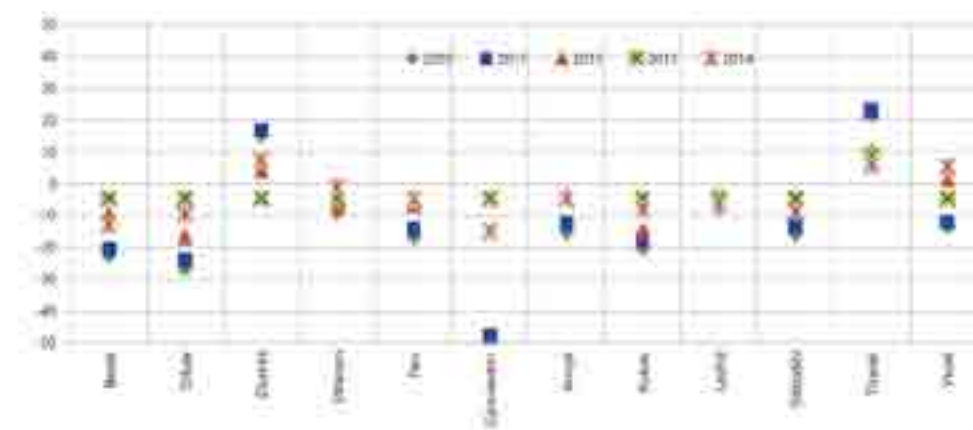
The Region of Lezha is composed of 5 municipalities and 16 communes, which have 9 towns and 170 villages, with a total population of 134,027 residents.

Surveys and statistics indicate that the Region of Lezha reveals a more sustainable picture of some base indicators that impact the increase of development indicators, which have not fluctuated during this period when compared with other regions of the country.

- Change of population and density of population
- Migration
- Political stability

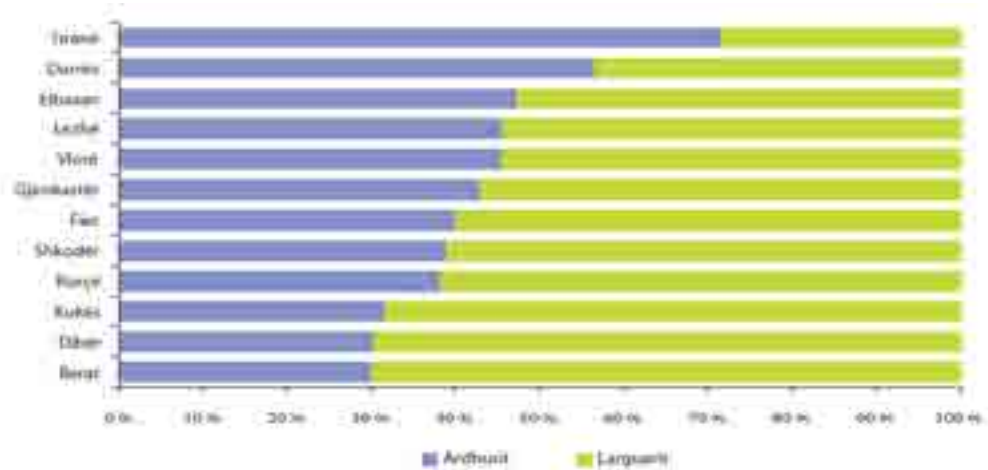
Change of population. When speaking about demography, similar to other regions in the country, the Region of Lezha has experienced significant internal migration of its population, with people leaving the rural areas and settling in urban centers and then leaving urban centers in pursuit of a better life in other cities with higher economic potentials. Regardless of this, the Region of Lezha has had a modest decrease of its population when compared with the demographic dynamics of other regions during 2002-2014. Graph 7 provides a graphical presentation of this phenomenon. It clearly shows that Lezha is almost constant in terms of its natural change and gross rate of change of population.

GRAPH 7: Regional demographic changes of the Region of Lezha during 2010-2014



Source: INSTAT/Regional Statistical Yearbook 2015

Migration. In addition, the Region of Lezha represents a more balanced division between the settlers and migrants. Thus, Lezha has an almost perfect balance between the newcomers and those who left the region, with a slight percentage favoring those that left their home in search for a better life in other places outside the region. See Graph 8.

GRAPH 8. Migration of the Region of Lezha during 2010-2014

Source: INSTAT/ Regional Statistical Yearbook 2015

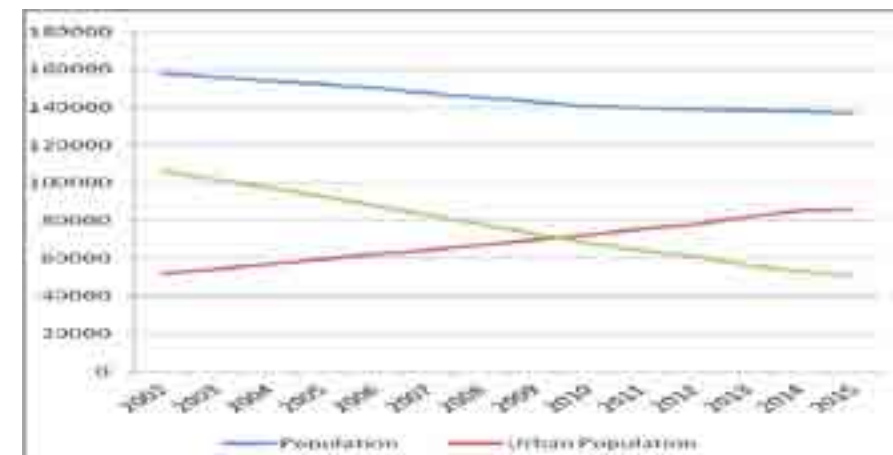
The following table provides a clear view of the migration from rural areas to urban centers with stabilized figures in the recent years, which imposed a balance between the rural and urban areas.

TABLE 3. Dynamics of demography of the Region of Lezha

LEZHA	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Demography	156,266	154,193	152,360	150,094	147,583	145,240	142,872	140,755	139,734	138,992	138,349	138,214
Urban	54,344	56,879	59,469	62,049	64,614	67,212	69,830	72,522	75,259	78,054	81,777	85,347
Rural	101,922	97,314	92,891	88,045	82,969	78,028	73,042	68,233	64,475	60,938	56,572	52,867

Source: INSTAT

Unlike other regions, the Region of Lezha does not have a major administrative center that dominates the entire region. In fact, the region houses five municipalities (Lezha, Laç, Rrëshen, Rubik, and Mamurras). The largest municipalities are Lezha (regional center) and Laç, whose population differs by no fewer than 1,000 residents. This statistical model shows that the region has a highly centric development model with regard to development terms.

GRAPH 9: Demographic dynamics of the Region of Lezha

Source: INSTAT, Own calculations

Political stability. According to the data of the Central Election Commission and the Institute of Statistics, the terms in the office for the Region of Lezha have been won by various political parties and on a rotation basis producing a balance of political mandate between the left wing and right wing parties for the period under consideration. The regional center (the Municipality of Lezha), or the largest town where the most political activity is carried out, was managed by the Socialist Party (SP) in 2002, then under the leadership of Socialist Movement for Integration (SMI) in 2007, and under a SP+SMI coalition in 2011. In addition, during the said period, the central government was run by the Socialist Party in 2002, Democratic Party (DP) in 2005, and DP+SMI in 2009 until 2013. SP regained power in 2013. Table 5 provides some details. Change of coalitions within the period of the office terms during 2011-2013 affected the balance of numbers of mandates, particularly at the regional level. It was necessary to point this out, because various reports of international partner organizations have emphasized that funds are allocated on political preferences. This finding would, indeed, render the study of our hypothesis difficult and unreliable and would, therefore, make our conclusions invalid.

TABLE 5: A comparison of Regional Development
Fund grants to LGUs by political affiliation

	Socialist Party	Democratic Party
Number of LGUs in each year of the 4-year term in the office	13 out of 26 LGUs (50%)	25 out of 33 LGUs (76%)
Total amount of grants		
2006	741,347	1,075,506

2007	1,266,275	1,343,739
2008	351,303	571,790
2009	496,982	1,271,132
Average grant per year		
2006	28,513	32,591
2007	48,702	40,719
2008	13,511	17,327
2009	19,114	38,519

Source: PLGP/USAID

4. Natural Resources and Access to Infrastructure Network

The Region of Lezha lies in a very good geographical location and features many natural resources. A combination of mountains, plains, and seaside lay bare a great variety of opportunities for the establishment of a sundry of economic profiles. An analysis of these potentials reveals that the Region of Lezha experienced the country's greatest growth (by 28.1%) of population during the 1989-2002. (UNDP/2005:11)

The region is home to a coastal tourist area of 11,000 hectares, with a seacoast line of 38 km long and 3 km wide. The coastline starts in Velipoja in North and ends in the Cape of Rodon in South. There are many places and locations appropriate for the construction of tourist resorts or ports.

The part that represents the region's economic engine is located in the crossroad of the major communication axes among North and Central Albania and Kosovo. Shengjin, its only port, is only 8 km far from the center of the region's administrative unit. Roads have been constructed recently that not only have shortened the distance and reduced commute time but have helped to boost cooperation and trade, increase of tourist visitorship, development of economy, etc.

Very important elements for local economic development include the road network, railways, power supply infrastructure, the Port of Shengjin, and air runways (in case the Airport of Gjadri becomes operational), water supply system, and regular urban transport service. (UNDP/2005:11) Yet, Lezha ranks among the regions with the lowest GDP per capita at national scale, irrespective of its location (between the regions of Tirana and Shkodra), its status as an administrative center with very good access to railroad infrastructure, to sea, natural resources and good climate, educational and cultural networks in place, and specialized healthcare network. Lezha occupies the 10th place out of 12 regarding the GDP per capita, at a rate of 327,000 ALL per capita (in 2013), leaving behind only the regions of Kukes and Dibra.

5. GDP of the Region of Lezha

Over the many years, Lezha has featured an almost trajectory in terms of GDP. The following table shows how this region's GDP has fluctuated in the 13 years taken under this study. During this period, this region has "maintained" the same place in comparison with other regions. It occupied the last places of this table, together with other northern regions, such as Kukes and Dibra, even though its comparative advantages and positions are better than those of these regions.

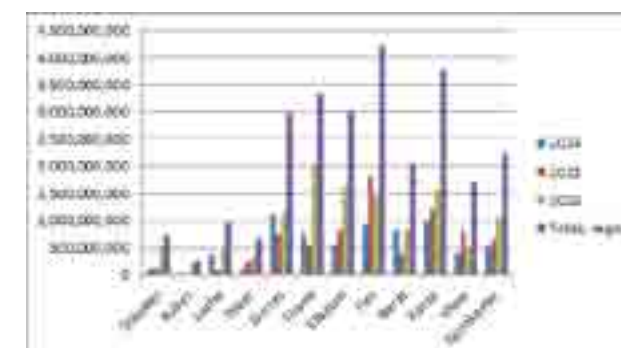
TABLE 6: GDP per capita in the Region of Lezha (in thousand ALL per capita)

Region of Lezha	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GDP per capita	177.2	188	217.1	238.6	260	282	298.3	294.3	289.5	294.3	327.3	303	311

Source: INSTAT, Own calculations

These elements –rich natural resources, access to major transport infrastructure– and the lowest economic indicators at national level (GDP) constitute some of the reasons for selecting the Region of Lezha as a case study. According to the USAID Planning and Local Governance Project, UNDP, OSCE, and CoE, the central government allocates funds from the Unconditional Grant, Conditional Grant or Regional Development Fund on preferential basis (as shown in Table 5). This situation occurs to this very day. (See Graph 10.)

GRAPH 10. Allocation of grants of rural development by the Ministry of Urban Development by region in 2014, 2015, and 2016 in thousand ALL



Source: Ministry of Urban Development, own calculations

What we see in the conditional transfers is the opposite to what is taught by the theory of alleviation of harmful effects of decentralization. The specific or conditional transfers through the Regional Development Fund go usually to relatively rich communities. (See Table 4 and Graph 10.)

Given the above and taking into account these reports as well as a simple reading of political mandates, we believe that the selection of the Region of Lezha as a study case will help to draw clear results that are politically unbiased and uninfluenced.

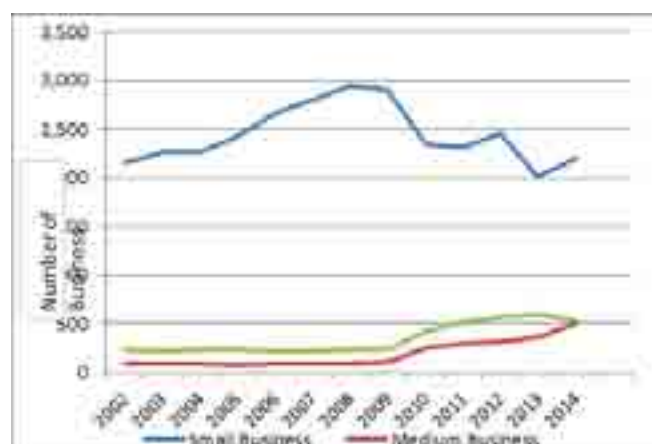
6. Base Economic Indicators and Situation of the Region of Lezha

The structure of economic operators in the Region of Lezha is dominated by small businesses. In this sense, there is a strong correlation with the local governance, which produces an impact on business development by providing infrastructure, capital improvements, public service, and local regulatory framework.

In addition to the local governance, central government contributes to the business climate improvement by making direct investments that support national policies with particular focus on regional policies, for which a considerable share of local investments is intended for them.

Likewise, INSTAT tables and reports on increase of enterprises and their dynamics over these years reveal a positive trend. This shows that small businesses have developed (as shown in Graph 11) and can be clearly proven by the structure of business operators in the region.

GRAPH 11: Non-agriculture enterprises in the Region of Lezha



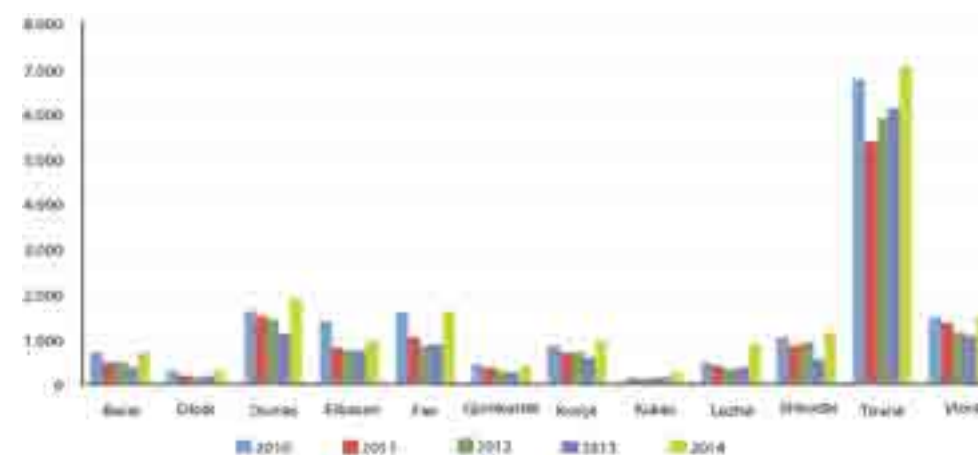
Source: Regional Tax Directorate; Own calculations.

Graph 11 shows fluctuations of the number of non-agriculture businesses/enterprises, mainly small businesses. This is due to fiscal policies implemented by central government and not simply as a result of the economic climate.

According to INSTAT, employment in the non-agriculture sector has increased. (INSTAT, 2015) This fact indicates a positive trend, mainly in urban centers, when comparing these data with those of the demographic movements from rural areas to urban areas. Indeed, it can be emphasized that business supply in urban areas is closer to local authorities and its need for services, infrastructure investments, capital investment plan, and support with regulatory framework and strategic planning.

This approach applies to all regions and is probably a result of the fight against informal businesses undertaken by tax authorities in year 2014. Tax inspections forced many enterprises to classify from small business to large business and change their registration with the tax authorities. (See Graph 11.)

GRAPH 12: New businesses by region



Source: INSTAT

Graph 12 shows that the dynamics is almost the same for all regions of Albania, with decreases in years 2011, 2012, and 2013, and an increase in year 2014. The slightest increase applies to the regions of Dibra, Kukës, and Lezha, which, as stated earlier in this analysis, have benefited the least from inter-governmental transfers in the subsequent years, producing more regional disparities among regions. (See Graph 10.)

TABLE 7. Employment in non-agriculture private sector

Qarku	2010	2011	2012	2013	2014
Shqipëria	241.836	256.287	268.696	290.763	318.571
Berat	6.699	6.853	7.827	8.275	8.828
Dibër	4.305	3.578	3.634	3.293	4.180
Durrës	23.166	21.814	23.680	26.825	28.000
Elbasan	13.428	13.299	13.685	13.845	13.996
Fier	16.754	16.092	16.359	16.424	17.671
Gjrokastrë	5.315	6.315	3.500	4.030	4.936
Korçë	12.351	12.422	12.790	12.650	12.685
Kukës	1.828	2.095	1.968	2.076	2.040
Lezhë	7.906	8.078	8.535	8.541	9.256
Shkodër	13.457	13.727	13.865	13.764	13.883
Tiranë	119.428	124.388	135.341	161.014	173.360
Vlorë	16.801	17.024	17.928	18.034	19.733

Burimi i informacionit: Shërbimi Kombëtar i Punësimit

Source: National Employment Service

Table 7 shows that employment increased significantly in the last year as a result of the fight against informality. The situation has, however, been constant in the previous years, divided in two segments (2009-2010 and 2011-2013). This indicator is closely linked with the work of the local government units. While, according to INSTAT, 87% of businesses are small and medium-sized businesses, employment is by all means linked with the success of these businesses. This is where local government units come in handy; they are a factor of significant impact on the creation of adequate business climate and promotion of new business development.

The structure of these local government units by region and economic activity is given in the following table (Table 8), which shows that 3,241 out of 3,887 businesses operate in the area of services. About 84.6% of the businesses operating in the Region of Lezha run their activities in the area of services.

TABLE 8. Local government units by region/economic activity and specific share in percentage by economic activity in totalNjësitë lokale sipas qarkeve dhe aktiviteteve ekonomike
Local units by prefectures and economic activity

Qarku	Popullsia	Numri i bizneseve të vogla dhe të mesme	Numri i bizneseve të vogla dhe të mesme (përqindje)	Numri i bizneseve të vogla dhe të mesme (përqindje)	Numri i bizneseve të vogla dhe të mesme (përqindje)	Numri i bizneseve të vogla dhe të mesme (përqindje)	Numri i bizneseve të vogla dhe të mesme (përqindje)	Numri i bizneseve të vogla dhe të mesme (përqindje)	Numri i bizneseve të vogla dhe të mesme (përqindje)	Numri i bizneseve të vogla dhe të mesme (përqindje)	Numri i bizneseve të vogla dhe të mesme (përqindje)
Shqipëria	2,944,490	16,177	2,278	14,899	4,278	196,393	47,198	6,400	14,254	4,470	98,819
Berat	8,899	221	100	121	91	1,191	2,708	80	140	80	870
Dibër	5,001	118	10	108	30	1,000	177	80	140	80	870
Durrës	18,000	1,011	100	1,107	100	8,700	4,211	80	1,000	100	1,000
Elbasan	9,000	1,111	100	1,111	111	1,000	1,111	100	1,000	100	1,000
Fier	10,000	1,000	100	1,000	100	1,000	1,000	100	1,000	100	1,000
Gjrokastrë	1,100	100	100	100	100	1,000	1,000	100	1,000	100	1,000
Korçë	9,000	1,111	100	1,111	111	1,000	1,111	100	1,000	100	1,000
Kukës	1,100	111	100	111	111	1,000	1,111	100	1,000	100	1,000
Lezhë	8,899	221	100	121	91	1,191	2,708	80	140	80	870
Shkodër	13,457	1,346	100	1,346	135	1,211	1,346	100	1,211	121	1,120
Tiranë	1,194,428	124,388	135,341	161,014	173,360	1,194,428	124,388	135,341	161,014	173,360	1,194,428
Vlorë	16,801	17,024	17,928	18,034	19,733	16,801	17,024	17,928	18,034	19,733	16,801

Source: INSTAT (2015)

7. An Analysis of Economic and Fiscal Indicators – LGUs of Region of Lezha (2002-2014)

Taking into consideration what we presented and discussed above, we can say that the expenditures for local governance as a share of GDP varied from 1.8% in 2008 to 2.3% in 2014, which is the lowest in the Western Balkans, even though the unconditional grant doubled during 2002-2014, own revenues increased annually during this time, and irrespective of the lack of progress in 2008-2014 as well as dynamic increase of the conditional grant after year 2008. (Nalas, 2015)

Yet, has all this spending impacted the business growth, increase of revenues from businesses and generation of employment in the Region of Lezha? What are the factors of fiscal decentralization and what is their impact on increasing or improving local economic development indicators?

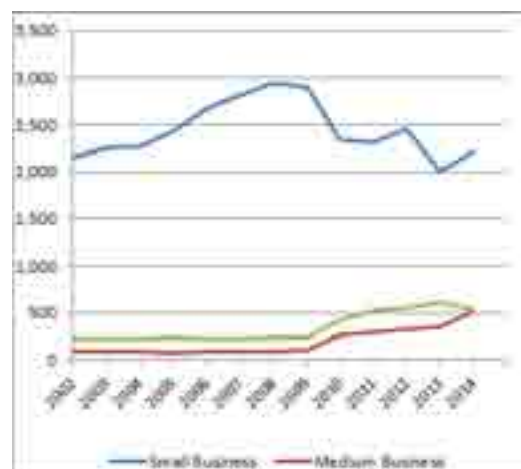
Graph 13 shows that the number of small business units has increased from 2002 until 2008, by which time local revenues started to shrink and the unconditional grant decreased. The number of small business fell at a significant rate. Regardless of an increase of expenditures and investments made by central government and the line ministries, mainly in infrastructure (Graphs 5 and 6), the number of small businesses decreased. We need to consider that the small and medium-sized businesses in the Region of Lezha occupy over 90% of the total of business entities in this region, as shown in the graphics provided earlier in this document.

The trend of the business numbers pursues coactively the trend of the graph of LGUs' Own Revenues. Therefore, 90% of the businesses of this region are correlatively linked with this indicator.

Expenditures of conditional grants and spending of the Regional Development Fund, as shown in Graphs 5 and 6, seem to have no impact on the business climate. Infrastructure is, by all means, important, but it requires decision-making autonomy so as to produce some impact on the typology of the economic operators, such as micro, small, and medium-sized businesses.

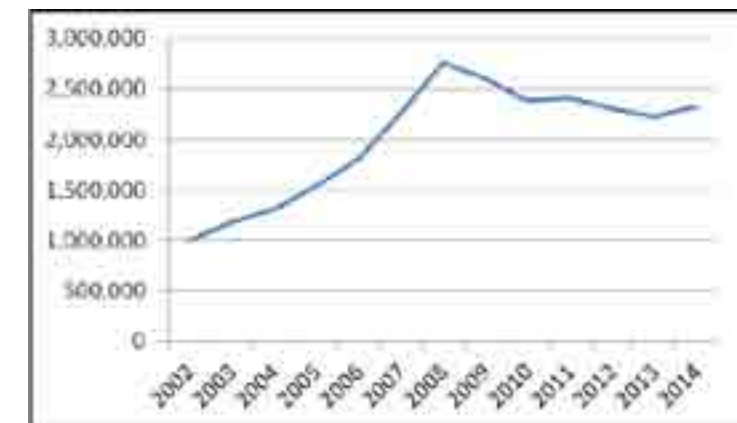
Graph 13 shows that revenues from businesses have slight fluctuations irrespective of the increase and decrease of the number of small business entities during 2002-2014. While the number of medium-sized and large business entities doubled after year 2008 in the Region of Lezha, revenues after this year dropped following the small businesses trend. This indicates that the economy in this region is closely linked with the small businesses. Also, the above graphs and a comparative analysis show that there is a correlation the own revenues and unconditional grants with the small business entities.

GRAPH 13: Total number of businesses in the Region of Lezha in 2002-2014



Source: Lezha Tax Directorate, own calculations

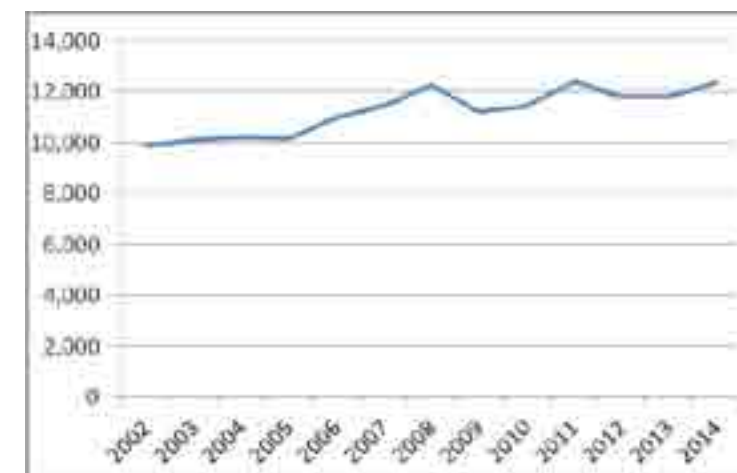
GRAPH 14: Business tax collection in the Region of Lezha in 2002-2014



Source: Lezha Tax Directorate, Own calculations

Employment figures in the Region of Lezha have followed the same trend with the increase of regional fiscal indicators, own revenues, and unconditional grant after year 2002 until 2008, their decrease after 2008 and a moderate increase after that year. Graph 15 shows that employment varied during 2008-2010 and 2011-2014. Its curbs indicate that regardless of an increase of the large business by 2.5 times since 2008, employment did not follow suit. This is another fact shedding light on the impact of the fiscal indicators, such as own revenues and unconditional grant, on local economic development.

FIGURE 15: Employment in the Region of Lezha in 2002-2014



Source: Lezha Tax Directorate, Own calculations

The fiscal autonomy, as explained by Nakai and Sakata, is measured by the ratio of own expenditures/revenues to the total of expenditures/revenues. When examining the ratio of own revenues with total revenues and the ratio of own revenues including the unconditional grant (since LGUs have discretion on its spending) to the total of revenues, we see that the fiscal autonomy of the Region of Lezha's LGUs has decreased with the increase of funding and spending at regional level until year 2010 (by 13% and 34% when including the unconditional grant). After this year, the rate of fiscal autonomy has moved horizontally, i.e., there is a balance between the own revenues and unconditional grant on one hand and the Regional Development Fund (conditional grant) on the other.

GRAPH 16: Fiscal autonomy of the Region of Lezha compared with the national fiscal autonomy in 2002-2014



Source: Lezha Tax Directorate; Own calculations

To conclude, the above graph shows that the level of fiscal autonomy in the Region of Lezha is below the country's level of fiscal autonomy. The graph also indicates the close linkage between fiscal autonomy and the number of small business entities as a key indicator that affects local economic development.

8. Conclusions

Irrespective of the efforts and achievements in implementing the decentralization reforms with the aim of improving local services and creation of opportunities

for a sustainable local economic development, there are, again, aberrations in the allocation of inter-governmental transfers, which harm poor communities and aggravate regional disparities.

The case of the local government units of the Region of Lezha, which has development potentials but is among the regions with the lowest GDP per capita at country level, clearly shows that the negative effects of the decentralization are persistent. In the mid and long run, these effects will lead to abandonment of the region due to migration and emigration, as residents will pursue a better life elsewhere.

Given what was presented above, we conclude that unconditional and conditional transfers should undergo a reformation in order to assuage the overall and fiscal decentralization effects, particularly to address the trend of regional development disparities.

"The UNDP Integrated Support for Decentralization Project' recommendations include improving the criteria for project selection, maintaining the level of funding at a constant ratio to GDP or national investment budget, and distribution of funds based on regional priorities. These are sound recommendations and should be implemented." (PLGP/USAID 2012:15).

Increase of the unconditional grant pool by identifying incentives for LGUs or by establishing the costs per unit for public services is a requirement stipulated in the new Law on Local Self-Governance. Enhancement of the dialog between central government and local government units would mend this situation with the aim of improving the enforcement of the law so as to produce the desired effects on generation of employment. (Lindin, M. 2005)

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Evaluation method and privatization of public property in the field of hidrocarbons in Albania: An analysis of influencing factors

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Abstract

Most of scholars focusing on privatization view the property appraisal and the appraisal methods as two important factors determining the degree of the success of the privatization process and post-privatization development and management of the subsequent private enterprises. Their role and influence is closely linked to the influence of financial experts, accounting rules, and the legal framework serving as the basis for the privatization process. In a broader view this study relies on recent studies, scholars, and debate emphasizing the important influence that the process and methods of appraisal of the real estate and public property exert on privatization as they prepare to undergo the privatization process. The study confirms the important role of the property appraisal and appraisal methods but it looks further and identifies other factors that influence the quality of the appraisal process and methods. Various scholars, however, view the quality of privatization process and the role of privatization in reviving the economy, closely linked to and considerably influenced by factors of managerial nature. From this point of view, as a factor of managerial nature, the evaluation method used for privatization of public assets is viewed to play an important role and exert a considerable influence on the quality of the privatization of the public assets. The focus in this paper is the relationship between the selected method of asset evaluation and the factors influencing and determining the selection of the evaluation methods. This relationship is seen in the context of the privatization of assets in the hidrocarbons sector in Albania after 1990.

Keywords: Privatization, Public property, The evaluation method, Privatization process, Evaluation of public property, Management, Hydrocarbons.

1. Introduction

In Albania, the transition from centrally planned economy to a market economy displays three key features: 1) involvement of state enterprises managers and chief executives in assessing the value of public property owned by the state, 2) privatization of the public assets, and 3) the transition of enterprise management from state management to private management. Both, the transition process in general, and privatization process in particular, are influenced by a large number of political, economic, and social factors. Various scholars, however, view the quality of privatization process and the role of privatization in reviving the economy, closely linked to and considerably influenced by factors of managerial nature. From this point of view, as a factor of managerial nature, the evaluation method used for privatization of public assets is viewed to play an important role and exert a considerable influence on the quality of the privatization of the public assets. The focus in this paper is the relationship between the selected method of asset evaluation and the factors influencing and determining the selection of the evaluation methods. This relationship is seen in the context of the privatization of assets in the hydrocarbons sector in Albania after 1990.

The issues this paper attempts to clarify get the impetus from two main realities accompanying the privatization process in Albania. The first observation refers to the reality and effects that produced the privatization process in the Albanian economy during the past 20 years following the transition from planned economy to market economy. Although privatization of public assets, in general, improved the performance of manufacturing enterprises, not all enterprises have been equally successful. The distinction marking enterprises performance raises the question of whether differences in performance may be due to the quality of the evaluation method and privatization process. The second observation pushing for this study refers to the various forms of privatization applied in Albania. Following the change of the political and economic system in the 1990s, in Albania, the privatization of public assets was considered as one of the main instruments in dealing with new economic and social challenges. Yet, no single model was applied, instead the privatization model varied from one enterprise to other, from one economic area to other. Different companies followed different paths to privatization. In their subsequent performance, some of them proved more successful, some less successful, and some failed to survive and went bankrupt. This variation in privatization model raises the question to what extent the method of evaluation and privatization may account for the subsequent performance and degree of success of privatized enterprises.

The issues tackled in this papers are intriguing and worth from a theoretical and scientific point of view. The ongoing debate among scholars over the role, influence, and effects of the evaluation method represents an important framework for looking into the issues linked to evaluation method. Given the existing debate and interest among scholars to have a better understanding of the factors influencing and determining the type of evaluation method, and given the variation in evaluation methods applied in the privatization process of public assets in Albania, either in general or specifically in hydrocarbon field, this paper attempts to shed light on three issues:

- 1) Why the evaluation method of public assets is important instrument? To what extent it has been an important and determining factor influencing on the quality and process of privatization in Albania
- 2) What are the main issues and insights in the light of the academic debate among schools of thought and scholars of management field with regard to evaluation methods and processes? To what extent these issues are observed in the case of Albania and in what way have they influenced the quality of privatisation process of public assets?
- 3) What are the main differences between schools of thought and theories with regard to evaluation methods? Are these differences and arguments reflected in Albania in the process of selection of the evaluation method?

2. Evaluation method: why is an important instrument?

The evaluation method is an important instrument in both practical and theoretical terms.

In practical terms, the evaluation method is as important instrument due to the effects caused by the type of method and accuracy of the method applied. The evaluation method has implications for the value attached to the assets assigned for privatization because it determines whether the asset value resulting from the evaluation it is real or not. In addition, the value given initially to an asset is added the value generated by privatisation process. The initial value, however, is of dual importance: in a broader context, it affects the effectiveness of the privatization process and the economy; in a narrower context it influences the performance of the enterprise created or transformed from the privatization process. In theoretical terms, the evaluation method represents an importance instrument due to five issues linked to it (Vandell 2006, Kinnard 2011).

The first issue linked to the evaluation method reflects the debate over the theory of evaluation. The evaluation process, by itself, is considered to represent

something closer to art than science due to excessive abstraction of reality and problematic behavior of actors and markets. Yet, the value of a theory rests on two key features: 1) in explaining the reality and also 2) in being as simple as possible. The second issue linked to the evaluation valuation method reflects the debate about the concept of value. Since the 19th century onwards the concept of value has been surrounded by a large semantic diversity. This diversity is expressed in the existence of numerous value-related practices such as insurance, appraisal, lending, investment, usage, or market valuation. This diversity in value-related notions has contributed to making the concept of value and the discussion on the method of evaluation quite complex. The third issue linked to the evaluation method is the issue about the nature of wealth. While the number of actors directly linked to wealth and property is very high, the view on the nature of wealth and property is very diverse and heterogeneous. As of today, there is no agreement among scholars about the nature of the wealth and property. The fourth issue linked to the evaluation method reflects the debate about approaches to the practice of evaluation. The approaches differ among themselves on two features. One their historic of development. All approaches have developed independently of each other. The other feature concerns their basic assumptions. All approaches build their analysis on assumptions often arbitrary and different.

The fifth issue linked to the evaluation method pertains the large number of schools and the arguments they make. The practice of evaluation represents a feature of all human societies regardless of their stage of development. The works of Herodotus and Aquinas show that the practice of evaluation and the debate on evaluation have been a feature of ancient times societies. In the era of modern society the practice of evaluation intensified, diversified, and became more complex. Since the 18th century there have flourished a number of schools. These schools include 18th century Classical School of Economics represented by Smith, Malthus, Ricardo, George, Mill, 19th century Austrian School of Economics represented by Bohm-Bawerk, Menger, von Wieser, and Neoclassical school of the late 19th and early 20th century represented by Marshall. The postmodern stage of human society development the 20th century debate on the practice of evaluation expands to include some other very important schools. The debate on the evaluation is advanced by the 1920-1940 School of Real Estate Economics, represented by Ely, Babcock, Fisher, Mertzke, Hyder, Atkinson; the 1940-1960 School of Critique to Real Estate Discipline, represented by Ross, Schmutz, Ellwood, Medici, Ratcliff, Graaskamp, Kinnard, Gibbons, Wendt, and the 1970-1990 School of Re-Integration, represented by Colwell, Isaakson, Vandell, Gau, Wang, Green, Kinnard, Fisher, Vandell, Kenney, Karvel. The practice of evaluation became a common standard not only for stable societies and economies but also for societies and economies in transition in the 1990s. The post 1990s Albania falls in the group of economies in transition characterized by diversification of the

management model from one based solely on state management to an economy combining both public and private forms of enterprise management. Today's debate (1990-2013) on evaluation practices and methods includes the latest developments in theoretical thought articulated by Fisher, Gatzlaff, Geltner, Hauri, Goetzmann, Peng Lin, Vandell, Bond, Hwang, Lai Wang, Capozza, Schilling, Gyourko, Corgel, Sirmans, Mei, Knight, Riddiough, Ott, Childs, Titman, Torous, Ciochetti, Kau, or Case (Kinnard 2011).

3. Evaluation method: what are the main approaches?

In the scholarly debate about the evaluation method the most controversial issue among scholars is about the approach one must take in analysing the evaluation method (Vandell 2006). The arguments in the debate strive to clarify which approach, among existing ones, provides a better analysis and understanding of the role and importance of the evaluation method. There are two main competing approaches: 1) the micro-level approach and, 2) the macro-level approach.

The micro-level approach is, in general, quantitative, i.e. it is oriented toward mathematical-statistical analysis and it is based on the availability of statistical data and electronic instruments. This approach focuses on and puts its emphasis mostly on the importance of four main factors linked to public assets and evaluation method (Kinnard 2001): 1) cost, 2) sales, 3) capitalization of income, and 4) repetition of the sale price. Each of these factors displays links of their own and are influenced by other factors such as 1) the cost of land, construction or investment made, 2) the price and value compared with similar properties, 3) the amount of profit 4) depreciation, or 5) similarity in features among real estate properties or enterprises.

The micro-level approach displays some problems. The most prominent problem of the analysis is the fact that the analytical model often displays a mismatch between the evaluation price and the value of market. The other problem is the failure to consider and include in analysis other influential factors. A third problem represents the fact that its analysis of the evaluation is limited at micro level and it gives priority the role of cost. Yet, despite of these problems, this approach has been and remains the most dominant approach. However, the debate over the validity of this method has been and will continue to remain open because of the ad hoc character of the theory of depreciation. Given the problems this approach displays, even though it remains a dominant approach, it has occasionally had to „rehabilitate“ himself (Vandell 2006).

The macro-level approach is qualitative, i.e. comparative, and it is oriented toward analysis of data and documents illustrating the dynamics of psycho-social and economic dimensions (Kinnard 2001).

Seen from psycho-social dimension, the macro-level approach relies on the insights from social sciences and behavioral theories in the fields of psychology, sociology, and anthropology. The approach attempts to analyze and explain the dynamics accompanying evaluation method by appealing to and observing the patterns in human behavior and decision-making processes. Therefore this approach, from a psycho-social dimension, focuses on and gives more importance to four factors: 1) the behavior and decision-making of the main actors, environment and context, 2) the impact of government policies and institutional legal, political, social framework of the community, 3) the nature of public policy (zoning / planning), and 4) taxation system (Ratcliff, Kinnard 2001).

Seen from economic dimension, the macro-level approach reflects the insights from neoclassical economic perspective. The approach attempts to analyze and explain the dynamics accompanying evaluation method and economic usefulness. Therefore this approach, from an economic dimension gives priority to the following factors: 1) profit maximization, 2) the best option possible, and 3) the optimal choice in decisions made. The macro-level approach display its own problems as well. The most prominent problem is the impossibility of verifying the real motives behind the decision-making process. The other problem is the applicability of such problematic notions as „maximizing“ or „optimization“ in human behavior, the behavior of markets, and in the decision-making process. Despite of these problems, the economic approach, however, remains a highly preferred approach for its model includes and combines the factors related to analytical decision-making with many other different factors. This study analysis the role and importance of evaluation method in the process of privatisation of public assets in the field of hydrocarbons in Albania. Its approach takes into consideration the advantages and problems accompanying each of the main approaches. For this reason the analysis conducted in this paper combines elements from both approaches. Therefore, from the micro-level approach this paper takes into account the role of factor „cost,“ whereas from the macro-level approach this paper takes into account the role of factor „profit maximizing“.

4. Method of evaluation: what factors influence it mostly?

The second important issue in the debate on the role and importance of the evaluation method is the identification of the factors affecting the choice of the evaluation method (Vandell 2006). The debate revolves around clarifying what factors, or group of factors, can explain better the dynamics surrounding the role and impact of the evaluation method. The debate is very lively and remains open-ended due to the existence of numerous schools identifying different set of factors.

The factors identified by these schools can be grouped more or less into five groups of factors.

The first group comprises the factors of financial nature. This group of factors is emphasized by Classical School of Economics, School of Critique, School of Re-Integration, and Recent Theoretical Developments. In this group, the scholars emphasize the important role and impact of such factors as value (Malthus), cost (Smith), cash flow (Ellwood), investments (Graaskamp, Kinnard), profit (Gibbons), financing and taxation terms, level of income (Geltner, Gilberto, Quigley) options available (Wendt, Babcock, Ratcliff, Graaskamp), liquidity and number of sales (Lai, Vandell, Wang), the number of public companies and portfolios (Capozza, Schilling, Gyourko, Corgel, Sirmans, Mei, Knight), derivatives (Riddiough, Ott, Childs, Titman, Torous, Ciochetti, Vandell, Kau), and the price of contracts for future construction (Case, Shiller).

The second group includes factors of an economic nature. This group is preferred by Neoclassical School and the School of Earth Economics. In this group, the most important factors emphasized by the scholars include pricing, markets, resource allocation, process evaluation (Ely 1924 Schmutz 1941), price index, the number of sales repeat (Bailey, Muth, Nourse, Case, Shiller) and the type of economic activity (Kinnard, Fisher, Vandell, Kenney, Karvel).

The third group refers to the factors of political nature. The role and impact of this group of factors is in the focus of the research and analysis conducted by the Classical School of Economics, School of Earth Economics, and School of Critique. In this group, the scholars look at the role of government policy, the tax system (George, Mill), resource allocation (Ely 1924), evaluation practices and process (Ross, Wendt, Ratcliff, Graaskamp), and evaluators attitude (Wendt, Babcock, Ratcliff, Graaskamp).

The fourth group consist of Socio-Psychological factors. The role of the factors included in this group is emphasized by the Austrian School of Economics and School Re-Integration. In this group the most important factors highlighted are time-preference (Menger, Bawerk), criminality level, racial and ethnic composition, actors uncertainty, courts role, investor identity (Kinnard 2001), budget decision-making, resource allocation, and sale and purchase (Ellwood).

The fifth group includes Environmental-Geographic factors. This is a group preferred and emphasized by the School Re-Integration. In this group the scholars pay attention to the role of physical and geographical location (von Thunen), pollution level, traffic, noise, the distance from the highway and submarkets, existence of skyscrapers nearby, and the possibility of effective use of property land (Clapp, Pace, Gilley).

In explaining the impact of the evaluation method on the quality of privatization of public assets in hydrocarbons sector in Albania, this paper intends to analyse the

role of the evaluation method linked to and determined by three factors: 1) financial advisers 2) legal framework, and 3) accounting rules. The main argument in this study is that the quality of the privatization process in hydrocarbon sector in Albania reflects the quality of evaluation methods. The quality of evaluation methods applied in the privatization process reflects, in itself, reflects not only the role and influence of economic, geographical, and financial factors but also the influence of political and socio-psychosocial factors.

This study rests on the view that while various schools and scholars have identified a large number of factors influencing and determining the choice for and the quality of the evaluation method, not all of them exerts the same influence or are equally important. Their role, or their share of influence, depends on the political, social, and economic specifics of the context in which the privatization process takes place. In the case of privatization of public assets in hydrocarbons sector in Albania, this study argues that political and socio-psychological factors have played a more important role and exerted a greater and a more decisive influence on the choice and the quality of the evaluation method than economic, financial, and geographical factors.

5. Evaluation method: what differences exist among schools and theories?

There are four elements that help identifying the differences existing among schools and theories: 1) their focus, 2) the understanding of evaluation, 3) the initial assumptions on the basis of their analysis, and 4) the analytical models they offer.

When schools and theories are analysed on the basis of their focus, the comparison shows that most of the attention is paid to such concepts as „value,“ „cost,“ and „price.“

The concept „value“ is the focus of two schools: Classical School and the School of Earth. Classical School takes the meaning of value and elaborates on it toward formulation of a theory, whereas School of Earth takes the theory of value and then applies it, test it, formalizes it, and rationalizes it. The variable „value,“ in itself, is viewed to exist in different types: 1) value of usage, 2) value of exchange, or 3) value of land (Ely 1924). The variable „value“ is linked seen two other variables: 1) price (Smith, Mill) and 2) the evaluation process (Schmutz 1941).

The focus on the concept „cost“ is a feature of the Classical School and School of Critique. These two schools see cost as a variable characterized by variance and different values. For Classical School, the variable „cost“ reflects changes in market dynamics, while for the School of Critique it reflects the changes in the role of agents and calculation formulas (Wendt).

The concept „price“ is the focus of almost every school. The variable „price“ can express itself in different types: 1) sales or market price (Classical School), 2) capital price (School of Critique), 3) indices or repeated price (School Re-Integration), or 4) liquidity price (Recent Theoretical Developments). As dependent variable, „price“ may take the forms „potential“ or „good“ (School of Critique) and it is influenced by a number of variables. These variables include 1) the marginal utility of the good, 2) actors time-preferences (Austrian School), 3) demand-supply rapport, 4) the general equilibrium (Neoclassical School), 5) costs-benefits rapport (School of Critique), or market micro-elements such as 6) the nature, 7) cost, 8) value and rate of capital gains and portfolios, the history of 9) amortization patterns, 10) associated debt, 11) derivatives, and 12) the number of sales repeats (School of Re-Integration, Recent Theoretical Developments).

When the schools and theories are analyzed on the basis of their understanding of the evaluation, the comparison shows there are some differences among them. The evaluation method is understood as a matter of 1) value (work or production), 2) location (Classical School), 3) preference (Austrian School), 4) markets equilibrium (Neoclassical School), 5) social benefits (School of Earth), 6) finance 7) legal rules, 8) decision-making, 9) physical condition (School of Critique), 10) evaluation process (School of Critique, School of Re-Integration, Recent Theoretical Developments), or 11) structuration of markets, companies, assets, capital, portfolios, debt, and derivatives (School of Critique, School of Re-Integration, Recent Theoretical Developments). Differences among schools and theories can be also seen when they are compared on the basis of their initial assumptions they use to formulate their hypotheses and theoretical models. For the Classical School, the value resulting from evaluation reflects the production cost (physiocrats), the value created by trade (mercantilists), the interaction of economic forces (Smith), the value of land (Malthus, Ricardo), geographical location (Thunrun) and the contribution of external forces (Mill). For the Austrian School and the Neoclassical School, the evaluation reflects the time-preference for a specific commodity, ratio between income, savings, and expenses (Baverk, Menger, Wieser) and the demand-supply balance (Marshall). The School of Earth builds its analysis on the assumption that the valuation reflects the attachment to the soil (Ely, Moorhouse), social or personal benefit, and the role of government (Ely 1924). The analytical models of the School of Critique build on the assumption that the evaluation reflects the influence of financial, legal, physical factors (Thurston, Ross), the specific conditions related to the profit rate, mortgage, or depreciation (Schmutz 1941 Ellwood, Gibbons) and the decision making (Kinnard 2001). The School of Re-Integration builds upon assumptions similar to those of the School of Critique, but it also assumes that the evaluation reflects the role of environmental and social factors, as well as components related to the evaluation process and the

calculation of value (Laronge, Wandell). The last distinction among the school and theories pertains the analytical models they offer. One can identify four main theories: 1) theory of value, 2) theory of interest, 3) theory of cost, and 4) theory of real options. Theory of Value holds that both, the evaluation and the value, reflect the value of the components as a whole. Theory of Interest holds that the evaluation and value reflect the dynamics in time-preference of individuals. Theory of Cost argues that the evaluation and the value reflect the combination of the actual value (basic or production-related) with the future value (added value). Theory of Real Options argues that the evaluation and value reflect the existence of alternatives in a given moment in the market.

This study takes into account the differences existing among schools and theories in terms of the focus, understanding, initial assumptions, and analytical models. Given the differences existing among schools and theories, this study rests on a clearly defined focus, understanding, initial assumptions, and analytical model. In its focus are the role of agents, calculation formulas, and legal framework. It understands the evaluation method as an instrument reflecting financial, legal, and political clouds. It analyses the dynamics surrounding the choice and application of the evaluation methods on the basis of assumptions standing close with those from the School of Critique and School of Re-Integration. In other words, this study assumes that the evaluation method reflects the influence of financial, legal, political, and physical conditions. Its analytical model combines elements from four theories. Its views evaluation method as a result not only of value, interest, costs, and real options, but also as a reflection of the role of stakeholders (experts) and instruments (laws and accounting rules).

6. Some concluding remarks

What does this study tend to analyze and explain? In its focus is the relationship between the evaluation method and the role of financial experts, accounting rules, and legal framework. The relationship is analyzed in the context of privatization of public assets in the hydrocarbon sector in Albania.

How does this study proceeds with the analysis of the dynamic surrounding the selection and application of the evaluation method? It does so by undertaking an analysis of the relationship between the evaluation method and the role of financial experts, accounting rules, and the legal framework from a macro-level approach. The analysis focuses on few specific factors, whereas the analytical model is closer to the models of the Schools of Critique and The School of Re-Integration. The analysis builds on the understanding that the evaluation method represents an instrument influenced by financial, economic, legal, political, and psycho-social

factors. It also assumes that the dynamics and the role of the evaluation method in the process of privatization of public assets can be better understood by seeing it closely related to the role and influence of political and social-psychological factors!

What are goals of this study? One goal is to shed light on the peculiarities of selection of the evaluation method and the conduct and quality of the privatisation process in the hydrocarbon sector in Albania. The study aims to clarify to what extent the features characterizing the selection and the use of the evaluation method match or deviate from the pattern observed in all countries experiencing the transition of public property and asset management from state to private hands. The other goal of this study is to clarify the role and impact of the evaluation methods on the effectiveness of the privatization process. The study aims to clarify whether the degree of effectiveness of the privatization process can be better explained with the quality of the evaluation method chosen and applied for the privatization of public assets in the sectors of hydrocarbons in Albania!

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War against poverty target group focused policies

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Abstract

Over the last two decades Albania has been undergoing radical structural reforms as a consequence of the changing trajectories of the democratization process, economic transition, administrative reforms, changing social groups and dynamics of the country as well as the integration process into the European Union. In this line, one of most persistent recommendations of the European Commission is the respect of fundamental rights and, in particular, with regards to the education and the employment is the social inclusion of the minorities in the Albanian society, in particular, the Roma minority. The aim of this research paper is to introduce the debate initiated in Albania for the promotion of a policy suitable of the effective mechanisms which guarantee equal protection of Roma Minority Rights in the country, in line with the recommendations of the European Commission Against Racism and Intolerance (ECRI). This study has concluded in a number of recommendations directed to public administration bodies, both locally and centrally, such as a wider inclusion of members from the Roma Minority into employment programs and vocational training; amendments in the normative legal basis for definition of criteria, procedure and action towards economic assistance focusing on Roma community; amendments in the existing legislation concerning Housing of Residents in Urban Areas; facilitation of enrollment and school attendance for Roma minority children as well as development of actions which would permit a better access to education for children etc.

Keywords: *Roma minority, Albania, Education, Employment*

1. Introduction

The existence of minorities in Albania is a reality as historical as well as current, which is paid special attention to the materialization of a good relationship with regards to tolerance, coexistence and understanding between members of the minorities concerned and the rest of the population. With the establishment of democracy in the country, the treatment of minorities has taken a new dimension, a fact that is evident in Article 20 of the Constitution of the Republic of Albania, which explicitly provided the excision in full equality before the law of the rights and freedoms of national minorities, as well as by sanctioning the principle of equality before the law and non-discrimination.

Effectively today, the Albanian society has set a positive balance for the issue and respect for minority rights, ranking among the countries that are engaged in fulfillment of international standards in this field. The Constitution guarantees the general principle of equality before the law and protection against discrimination on grounds such as race, ethnic origin, language, religion, social status, or ancestry¹.

Albania has already developed a National Strategy for the Development and Integration (2013-2020), a document drafted in the framework of the National Program for the social inclusion of marginalized groups. The attention towards marginalized groups, as Roma population, has started with the registration of them as part of the 2011 Census. The figures of persons declared as Roma amount to 8301 and 3368 Egyptian Rom. It is worth noting that the figures that show the size of the Roma and Egyptian communities range from 13,702 (UNICEF) in 11,669 in 2011 Census. The facts show that despite efforts to increase the degree of social inclusion of this population, only 55% of children from 6- 9 years old attend the 9-year education, versus 97% figure to the rest of the population.

TABLE 1: School enrollment according to age and ethnicity

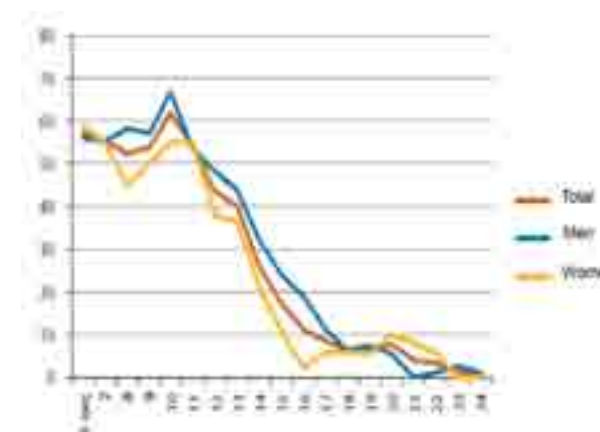
	Children that never attended formal education		Children that currently do not attend formal education	
	6-9 years old	10-14 years old	6-9 years old	10-14 years old
Albanians	2,1	0,6	2,8	4,5
Egyptians	6	9,7	6,8	27,6
Roma	44,4	39,5	45,2	54,1

Source: INSTAT, 2011 Census

¹ Article 18 of the Constitution.

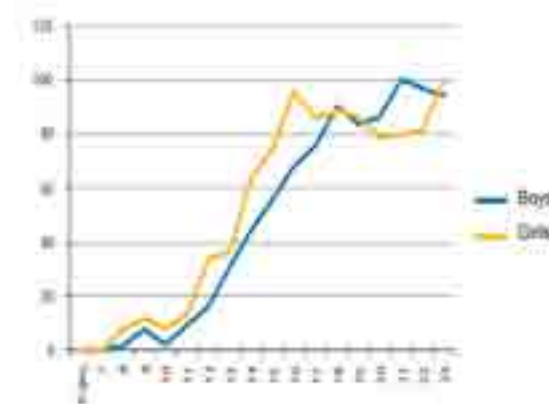
Referring the 2011 Census figures makes evident the reality how year after year children growing up go far from school despite efforts to increase the education years and quality among Roma children and young people. Till 10 years old, Roma children attending elementary school go around 60 percent after this age school attendance decrease and dropping out increase rapidly.

FIGURE 1: School attendance according to age and gender (2011) of Roma population



Source: INSTAT, 2011 Census

FIGURE 2: School dropout according to age and gender (2011) of Roma popula



Source: INSTAT, 2011 Census

Even if Roma children dropping out occurrence is still present, decade after decade in Albania, evidences can highlight the positive trend on the percentage of people who attend formal education throughout their life

TABLE 2: The percentage of people who have attended formal education throughout their life according to generation and ethnicity

	2005-1997	1996-1987	1986-1977	1976-1962	Before 1962
Albanians	98,5	99,1	98,5	99,0	93,7
Roma	58,7	45,1	42,4	57,3	51,5
Egyptians	91,8	83,6	79,5	86,7	83,1

Source: INSTAT, 2011 Census

The biggest obstacle faced by Roma families in access to education is economic by nature. The situation of Roma children is even more critical in terms of labor market. Only 25% of them are employed and gender inequality in this area is evident. Only 15% of Roma women are employed. The majority of this population does not participate in comprehensive economy and continue to be employed in informal sectors. Arguments justifying employment levels are linked to objective factors such as level of education or the lowest level of education as well as subjective factors such as discrimination in significant numbers. While 46% of those looking for work face rejection on reasons of discrimination.

TABLE 3: The duration of unemployment for Roma and Egyptian population

	%
Never been employed	58
Less than five years	24
Five to ten years	6
More than ten years	12
Total	100

Source: PNUD Research/BB, 2011

Instability in employment is accompanied by lack and instability of housing, as well. About 15% of them live in unusual buildings, cabins, tents etc.

History of Roma in Albania reveals an experience of deprivation and social exclusion. Voluntarily initiatives for poverty reduction are not sufficient. Today, social policies of Roma community as target-group focus on their education and housing.

Generally speaking, Roma people live in the outskirts of cities and not much urbanized areas which show their standard of living, manifested in the poor access to water, electricity, and sanitary services.

TABLE 4: Types of dwellings according to ethnicity

	Roma	Egyptians	Albanians
Total	100	100	100
A separate house	51,0	32,5	55,5
Partially separate house	8,6	14,3	9,2
In-row house (or with a terrace)	5,3	10,0	4,5
Apartment building (low)	19,3	38,2	30,1
Collective dwelling	0,5	0,9	0,3
Building not designed for living	0,4	1,4	0,4
Shelter	11,0	2,6	0,1
Tent	1,2	0,0	0,0
Barrack	2,4	0,1	0,0
Other type of structure	0,1	0,0	0,0

Source: INSTAT, 2011 Census

Although the government's commitment to the development of policies for Roma inclusion is an important step and has progressed into practice, these policies face a number of challenges. Despite the measures taken, many Roma and Egyptians in Albania are affected disproportionately by social exclusion and discrimination. Roma and Egyptians are facing extreme poverty and social and economic marginalization. The Roma community continues to be one of the most marginalized groups of the population in Albania. Inadequate housing, limited access to the labor market, education, health care services and other social services remain key concerns for the community. Some of the research questions of this paper are: Have been properly implemented the activities planned for the period 2013 - 2015 into Action Plan (including education and employment)? What are the key issues still unresolved? Why these obstacles are encountered and what might be some of the possible practical solutions (except those with legal basis)? Problems encountered are in housing and infrastructure, the provision of health care, employment, level of education and the access to that.

TABLE 5: Source of income according to the concentration level for Roma population

	Total	Low contrition	Middle Concentration	High Concentration
Self-Employment	39,6	48,7	40,8	32,1
Pension	16,2	21,7	16,0	12,6
Economic assistance	21,6	22,5	27,6	14,4
Remittances	4,8	5,2	3,7	5,6

Aid from other persons	1,1	0,6	1,1	1,4
Total	31,3	21,5	24,3	45,6

Source: INSTAT, 2011 Census

2. Review of the literature

Our country has ratified almost all the United Nations Conventions on the protection of human rights. Albania has also signed all the documents of the Organization for Security and Cooperation in Europe (OSCE) and a number of important documents adopted by the Council of Europe (CoE). Albania to guarantee the rights and freedoms of minorities has also adopted a number of laws and bylaws of important values, which provide not only the recognition and protection of the rights of minority members, but also to take firm measures for the integration and their involvement in public life, as well as preservation and development of cultural and ethnic identity. The law passed in 2010, against discrimination presents among others the opportunity to equal protection against acts of state or private individuals, in the area of employment, education and services. Besides the legal framework in the context of social policy in terms of promoting and protecting the rights of Roma in Albania, a series of positive steps were taken by the central government (National Action Plan 2010-2015).

The Albanian government approved in September 2003 the National Strategy "For the improvement of the living conditions of the Roma community", and adopted it with the Council of Ministers Decision 633, dated 18.09.2003. This strategy opened a perspective for social integration and improvement of living standards of the community is vital, and suffered traditionally marginalized. In addition, in the context of inclusion of the Roma, decade 2005 - 2015, as a political commitment of the Albanian government to reduce disparities in the spectrum of human and economic development of the Roma through the implementation of reforms and political programs designed approved National Action Plan 2010 - 2015, which aims at improving the situation of Roma in key areas such as education, health, employment, housing and social protection.

3. Research methodologies

The analysis focuses on some specific settlements (as in Shkodra, Kukes, Peshkopi, Shupenzë, Milot, Gjirokastra, Vlora, etc.) And institutions (first phase) while the second is a study (desk research) the achievements and results processing.

The purpose of this study, in essence, is to show that the majority of Roma children abandoning the school before reaching the minimum legal age. The same observation is achieved even in the case of employment, most of them are unable to find work due to lack of professional skills, limited opportunities for employment after structural changes in the economy, maladjustment to the new needs of the labor market, discrimination by employers and by the lack of specific policies designed to address the issue of unemployment of Roma.

4. Analysis of findings

The process of internal migration that is happening to Roma due to economic conditions is causing their settlements to lie in the entire country, changing the map of their locations.

Monitoring reports on the implementation of the National Action Plan on Roma Inclusion Decade confirm the status quo of Roma in Albania. Discriminatory practices against this community are still present in our society. The number of Roma children attending school remains very low compared with the number of children belonging to the majority population. The majority of Roma children abandoning school before reaching the minimum legal age. This also makes them highly vulnerable to other social problems. Most of the families belonging to the Roma community live in precarious conditions, in dwellings that do not have access to the system of drinking water supply and sometimes to system power supply. A great number of young people among the unemployed Roma have to contend with direct discrimination.

Employment

The road to a market economy was accompanied by the closure and reducing the activity of state-owned enterprises. Consequently Roma took full employment and ensure a massive and long-term unemployment. As a result of poverty and social exclusion they gradually displaced at formal market.

Roma unemployment is very high and usually derive their income from employment in ordinary jobs and low-skilled, usually in non-formal sector. The most common occupations, cleaning of streets, begging seasonal work in agriculture or sale in street clothes. The rest of the population employment is a common reality for Roma in Albania, it still continues to remain a major concern for them, as the situation related to the economic situation in which there are Roma families comes worse and worse, going up extreme poverty. Self-employment has become the subject of income of Roma in Albania, but taking into account the activities

with which they deal, these revenues are significantly below the average than the non-Roma population.

Despite this encounter a low level of participants in these programs Rome, a level that is associated with lack of information and awareness on the benefits of vocational education. Employment Office has an average access of Roma community. Despite the lack of information about the preferential policies, which are approved for this community, discrimination is one of the most serious obstacles and basic factor that significantly contribute to the level of unemployment this community. As one of the links of the failure of the legislation regarding the Roma community, feels the need of reinforcing measures against entities that discriminate this community. Safe discrimination, the community will more easily integrate and significantly increase their employment. A solution for the normalization of market employment and income growth for the Roma could be the creation of social businesses, such as the collection and sale of scrap metal, recycling of PVC-processing, paper and glass into works of straw in agricultural production, meeting the sale of medicinal plants etc. These businesses can have as partners, along with members of the Roma community, the municipality / commune, private entrepreneur and a banking institution.

Roma integration through education and vocational training is regarded as one of the measures that will increase employment and alleviate poverty in Roma.

Education

Because of poverty, many Roma children do not have the proper conditions at their homes to prepare lessons and homework. In addition, the low educational level of the parents did not give the opportunity to receive help with their preparation, as students of the majority population. Others are forced to work to contribute to the financial income of the family. Therefore, in schools where students learn Roma should be developed special programs, where students (of all ethnicities), on school premises and under the care and help of dedicated teachers and qualified, have the opportunity to study after completion hours. Books and other school items should be provided free of Roma pupils. Also, in some villages, or urban areas where the Roma are settled, they are positioned away from school, and must ensure regular and free transportation to the Roma pupils.

Still lacks strengthening the cultural identity of Roma, which will help to better integrate them. Therefore extra hours, by teachers trained and prepared, should talk about the history and culture of the Roma in Albania. However, strengthening the cultural identity of Roma pupils would make school friendlier to them. Such things are done in some schools of Korca and Gjirokastra, but this experience should be extended even further.

According to the quantitative and qualitative data with parents and students, some school teachers do not treat them equally with Roma pupils of the majority population. Consequently, educational policies should be aimed at training and qualification of teachers to work in multi-cultural classes, to recognize cultural values of other ethnic groups, to recognize the needs of marginalized groups and be able to treat all students equally.

Meanwhile, university scholarships where public institutions can collaborate with international organizations will have a major impact on the creation of Roma elites. Some of these scholarships may also be awarded to branches (teaching, medicine, etc.), Where the Roma community needs are greater. Preschool education should be expanded further for Roma children, aiming to include all children free of charge and possibly in gardens with lunch. In these gardens, Roma children can learn Albanian from teachers' educators dedicated Roma. In some certain places (as in Shkodra, Kukes, Peshkopi, Shupenzë, Milot, Gjirokastra, etc.), these institutions must take account of the difficult living conditions of Roma children and must have the necessary infrastructure.

It should increase access this minority, for a particular awareness of youth for attending school, vocational training courses, increasing the participation and involvement in the labor market and public sector. Policies aimed at training and educational qualification of teachers to work in multi-cultural classes, to recognize cultural values of other ethnic groups, to recognize the needs of marginalized groups and be able to treat all students in equal order. Roma talented students from poor families should be supported with scholarships to continue their studies in secondary and higher education. These scholarships will be administered and monitored by public institutions will motivate talented students and successful (starting from the upper grades of primary education) and would help them in terms of social-economic hard.

5. Conclusions

Recently, the treatment of minorities has taken a new dimension, a fact that is evident in the commitments that the state has taken for this purpose. Practical implementation of the provisions of the basic acts, but also the implementation of international acts and particularly the provisions of the Framework Convention of the Council of Europe "Protection of minorities" directly affect the improvement of minority rights.

Roma should have a broader involvement in vocational training programs and employment. Changes to the legislation law to take positive measures by the state to ensure equality in fact and effective members of the Roma minority in the

access they should have in the educational system in the country, ranging from pre-school onwards.

Based on this situation to ascertain, the Roma minority in the country is still necessary to make improvements in the Albanian legislation, in terms of meeting the criteria to benefit from the opportunities offered by central and local government on issues such as education and employment, simplify the application procedures for the Roma community near government offices, for a wider access and ease in completing documentation.

Finally we can conclude that the most important elements in resolving the issues facing Albanian society, including Roma minority issues remain constructive dialogue and continuous, and intercultural cooperation between, state institutions, civil society and citizens, that addressing the issues and the process of analyzing and solving them to be more inclusive and accepting of all. Fulfilling the obligations of Albania in the framework of respecting the rights of minorities, especially against Roma, in order for this community to live by the standards of the rest of the population in our country requires interagency coordination, which is essential for the effective protection his rights.

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An alternative method to evaluate the teaching's standards

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Abstract

The article applied the DOE approach to evaluate the teaching's standards. Design of Experiments (DOE) is the statistical method to assess the quality related to products and services. Meanwhile the one's aspect of DOE's using focused to the evaluation according to the public services. DOE used to evaluate the teaching's quality in the master courses at European University of Tirana (EUT). The article demonstrates shortly the content of DOE model referring to the required practical construction of orthogonal matrix to obtain information by using the standard matrix L_2^8 Taguchi. The questionnaire focused to the students of master's courses of Faculty of Economics and Information Technology, I Year (2015-2016). The analysis of results using the Taguchi method through ANOVA's highlighted the significance and impact of the inclusive factors which affected the teaching's standards. The results confirmed the significance of ability to explain and to communicate and the teacher's experience related to the teaching's standards.

Key words: DOE, Taguchi, teaching's standard

1. Introduction

The evaluation of teaching process comprises the one's core issues according to the comprehensive development into universities actually. Institutional accreditations, legal requirements, internal or external evaluation, the various rankings of colleges, etc., are the most important elements of the overall framework related to the

development of higher education. This aspect is linked with various "bid" in the market naturally, meanwhile the "product" of higher education, the student with his knowledge; it can only be tested in the end of study's cycle due to the required time at least into three year period in the best case. Taking into consideration this "product" is not random, but it has the crucial substance related to the professional development of each individual, because the consequence of permanent evaluation of the teaching's standards in colleges is primary.

Generally the evaluation of the teaching process, without considering the evaluation that the labor market makes to different schools (which it is the most important), can be divided into the two main forms: through the processes of institutional evaluation and also through the evaluation of interviews or direct surveys. The institutional evaluation in the overall view realize through the checking of diverse legal criteria, study's programs, (academic evaluation), the academic staff's qualification, student's admission criteria, material base (eg. libraries, internet, etc.). Meanwhile the evaluation relying on the interviewing and surveying provides the "feedback" from direct subjects who they related directly to the high school product: the students, businesses, and the academic staff of course. This article is focused exactly on the second types according to the evaluating of teaching's standards.

2. Interviews and their problematic

Referring to above the recognized method to evaluate the teaching's standards is also the interviewing of students about what they think according to the development of various courses, respective programs or their lecturers. At first sight this approach seems simple, but it is so complex, similar to put up questionnaires as well as the content of reflective. Subjective nature in the questionnaire's completion is known, but it becomes more problematic related to the assessment due to the other concerned factors are not directly associated to the directed questions. It is no usual during the evaluation of lecturer, if the student may be influenced by his taken assessment of course, and did not concentrate to evaluate the preparation or the ability of lecturer. Otherwise, we should investigate if there were any probability that a student evaluated "very good" in his course, but his lecturer evaluated "not very good". Referring to this aspect of questionnaires' results, despite of their structure and completion might have the wholly positive principles, regularly they have concluded into the contradictory and inexplicable output. In some cases, it noticed the trend that the most exacting lecturers were evaluated "less" compare to the less exacting ones, the effective internal lecturers compare to non- effective lectures, etc. Due to this problematic, another used form at The European University of Tirana (EUT) is the assessment through open interviews according to "focus groups". But it is not the best solution due to

it does not remove the bias, also the additional question requires how focus groups should be selected to give further assessment.

However, all interviews carried out above, simultaneously general survey of students and focus groups do not provide the level of overall assessment for teaching. They can serve to diverse lecturers, but they cannot provide the comprehensive assessment of teaching's level at universities (even if the student perspective). On the other hand the processing of their results, particularly when interviews are open, it is quite difficult. They often remain into the descriptive presentation of estimations related to specific criteria, without providing a comparative result among evaluation of criteria.

Emphasizing the problematic according to evaluating of teaching process through interviews, we do not mean to reject their significance. These forms should not be neglected, but rather, should be developed and improved in advance. However that's neither the issue of article. We analyzed the above problematic due to the requisite of any alternative method to evaluate the comprehensive teaching's standards relying on the incorporated appearance according to the determinants of this process. The question related to make possibly the analysis in depth and demonstrated where we should be more considerable. Another specific question linked to the proper comprehensive evaluation on teaching standards into the course or department and it was not just related to subjects or individual professors. The partial solution of these circumstances relied on the Design of Experiments (DOE).

3. DOE and modeling of teaching's evaluation

About DOE technique

Design of Experiments (DOE) is a statistical technique studied and presented for the first time by the Englishman R. A. Fisher in the '20s. In many statistical techniques to study the impact of a factor on the dependent variable, they assume that other factors remain fixed, which it is not practically the real assumption. Meanwhile taking into consideration the simultaneous change of all factors generates several complexities mainly due to their combination is almost the considerable number. Referring to this feature, Fisher tried to demonstrate the dependence's analysis of factors' set on the given output realizing the necessary minimum number of experiments. Precisely this comprises the DOE's core: the dependence's revision of cause – consequence by determining the minimum crucial number of required experiments. According to this focus Fisher attempted to analyze the dependence of agricultural cultures efficiency by determinants' efficiency like irrigation, temperature, utilize of fertilizers, etc. Relying on the realization of certain number of experiments, he managed to

argue the optimal combinations of these factors for a maximum result according to agricultural cultures.

The Japan's Taguchi efforts for many years during '40 years has contributed in subsequent searches of DOE who's his contribution focused particularly to the standardization of alternatives and making the technology more "user friendly". The using of the Taguchi DOE was mainly in the engineering field, which constituted the core of its application in improving the quality of products and services. An important part of the achievements in the field of automobile industry in Japan was evaluated to be exactly the DOE's contribution of Taguchi's technique.

DOE and application in education

DOE relates mainly to the study of increasing the quality of products and services to determine the optimum combination of determined factors. However, its use has been extended to the field of public services, where it intended to assess the diverse factors to a certain level of offered public services. Furthermore, the use of DOE can apply to evaluate the teaching's standards in schools starting from the assessment of particular factors affecting them.

To give a general idea of this view, we take into the simple example. Assume that we discuss to create the teaching program, which it includes a group of subjects, amongst them deciding about two subjects, for instance A and B. Each of them can be developed in two levels, for example level 1 and level 2 more advanced, then we will have A_1 or A_2 and B_1 or B_2 . The possible combinations can be A_1B_1 , A_1B_2 , A_2B_1 and A_2B_2 . The question related to which of these can be selected. To answer to this question we can make an interview of a group of experts in the field, each of them gives his alternative. Interview's results according to experts' preferences are set in Table 1.

TABLE 1 The combinations of DOE's results

	B_1	B_2	Means of B_1B_2 by A_1 or A_2	Difference of means B_1B_2
A_1	10	50	30	5.0
A_2	40	30	35	
Means of A_1A_2 by B_1 or B_2	25	40	37.5	
Difference of means A_1A_2	15			

Source: Authors' evaluation referring to DOE

The table demonstrates the possible combinations respectively 10, 50, 40 and 30 ratings. For the B_1 level of the case B, the average A_1 and A_2 is 25, on average 25 experts are on the level of B to B_1 , regardless of level A. Similarly to level B in B_2 is approximately 40 experts. While the level of A to A_1 or A_2 are respectively an average of 30 and 35 experts. The indicator of average by group A or B, regardless of the level of another subject (A or B) is also important. These changes represent reality which of passage has more significant impact on the teaching's level.

In the above case, the number of discussed alternatives is 4 (A_1B_1 , A_1B_2 , A_2B_1 and A_2B_2), so relatively small. But in the general case, this number would be relatively significant, for example in the case of discussing for seven factors that affecting to teaching, where each of them can be seen on three levels, the number of alternatives would be $2.187 (3^7)^1$. This would make it hard to compare various alternatives. This aspect consist the contribution of Taguchi, who managed to standardize the analysis of alternatives reducing significantly their number. Starting from the number of factors and their levels, Taguchi put up the sample tables that are used today to assess precisely the measure of the impact of these factors. For instance, if we analyze the effect of seven factors, where each of them takes two levels (eg. 1 and 2), the standard table Taguchi would be the L_8 ⁸ (Table 2) and the analysis of results would be sufficient to evaluating of accessible alternatives in this table:

TABLE 2 The combination of factors

	A	B	C	D	E	F	G
1	1	1	1	1	1	1	1
2	1	1	1	2	2	2	2
3	1	2	2	1	1	2	2
4	1	2	2	2	2	1	1
5	2	1	2	1	2	1	2
6	2	1	2	2	1	2	1
7	2	2	1	1	2	2	1
8	2	2	1	2	1	1	2

Source: Taguchi method

So in this case, instead of evaluating options 128 (2^7), we can realize the analysis of assessment according to the eight above options.

¹ The calculating of the number of alternatives in the general case will be n^f , where f -is the number of influencing factors and n - the number of level that can take each factor.

4. DOE's application and Taguchi method in UET

The construction of the questionnaire and matrix

The applied aspect in this article relies on the implementation of DOE and Taguchi method according to the evaluation of influential factors into the teaching process in Master cycle, the Faculty of Economics and IT, European University of Tirana, the I year (2015- 2016).

The assessment was made for the following five factors that are considered to be significantly in teaching:

1. The ability in explanation.
2. The ability in communication
3. The use of contemporary literature
4. The use of innovative methods
5. The experience of the lecturer

Based on the Taguchi method firstly was built the following matrix (matrix 1), which it will be evaluated by the students:

MATRIX 1 The factor's combinations in questionnaire

Variant	Ability to explain	Ability to communicate	Use of contemporary literature	Use of innovative methods	Lecturer experience	Student rating (1 to 6)
1	bad	bad	bad	bad	bad	
2	bad	bad	good	good	good	
3	bad	good	bad	bad	good	
4	bad	good	good	good	bad	
5	good	bad	bad	good	good	
6	good	bad	good	bad	bad	
7	good	good	bad	good	bad	
8	good	good	good	bad	good	

Source: Authors' evaluation

For each variant (1 to 8), the Master Cycle students, I year, should give their assessment 1-6 (1 low level, and 6 the highest level). Particularly this assessment

meant to the respective variant, they assess the impact on teaching from 0% to 100%:

1	0%
2	20%
3	40%
4	60%
5	80%
6	100%

Source: Authors' evaluation

The total participation in testing was 87 students, where 53 were students in Science's Master cycle and 34 in the Professional Master; 71 students of the total number were women and 16 men.

Results by variations to the average form in percentage are presented in Table 3:

TABLE 3 The average rating (%) according to factor's combinations

Variant	Ability to explain	Ability to communicate	Use of contemporary literature	Use of innovative methods	Lecturer experience	Average rating (%)
1	bad	bad	bad	bad	bad	8.5
2	bad	bad	good	good	good	24.4
3	bad	good	bad	bad	good	21.5
4	bad	good	good	good	bad	28.7
5	good	bad	bad	good	good	38.1
6	good	bad	good	bad	bad	27.8
7	good	good	bad	good	bad	40.5
8	good	good	good	bad	good	26.2

Source: Authors' evaluation

Referring to these results, we confirm that from 435 reviews (87 students x 5 factors), variant VII received the highest rating (40.5%), where "bad" are estimated the using of contemporary literature and the experience the lecturer, while "good" the other three factors. Meanwhile the combination with the less "assessment" has been the first (8.5%), which it evaluates "bad" all the factors.

The standard of Matrix Taguchi is the L_2^8 form, which means taking into consideration seven factors (not five as is in the concrete case). Due to this reason the analysis may include two other factors considering that some of factors taken

into study interact to each other. This assumption by Taguchi can be applied if you think that the factor's impact interacts with another factor. In our case it can be assumed that the two pairs of factors interact with each other are “the ability in explanation” with “the ability in communication “ and “the ability in communication “with “the contemporary literature”. Including these two new couples of factors, L_2^8 matrix can be presented (matrix 2):

THE MATRIX Taguchi 2

Variation	Ability to explain	Ability to communicate	Interaction AB	Use of contemporary literature	Use of innovative methods	Interaction BC	Teacher experience
	A	B	C	D	E	F	G
1	1	1	1	1	1	1	1
2	1	1	2	2	2	2	2
3	1	2	1	1	1	2	2
4	1	2	2	2	2	1	1
5	2	1	1	1	2	1	2
6	2	1	2	2	1	2	1
7	2	2	1	1	2	2	1
8	2	2	2	2	1	1	2

The analysis of the results and ANOVA

The matrix 2 above demonstrates the estimates “bad” and “good” replacing respectively to “1” and “2”. It represents the standard Taguchi matrix L_2^8 (Table 2). By setting the (average) results according to variations (1-8), the matrix will show (matrix 3)

THE MATRIX Taguchi 3 according to average rating (%)

Variation	Ability to explain	Ability to communicate	Interaction AB	Use of contemporary literature	Use of innovative methods	Interaction BC	Teacher experience	Average rating (%)
	A	B	C	D	E	F	G	
1	1	1	1	1	1	1	1	26
2	1	1	1	2	2	2	2	24.4
3	1	2	2	1	1	2	2	21.6
4	1	2	2	2	2	1	1	26.7
5	2	1	2	1	2	1	2	26.1
6	2	1	2	2	1	2	1	27.8
7	2	2	1	1	2	2	1	40.5
8	2	2	2	2	1	1	2	26.2

Source: Authors' evaluation

The descriptive analysis of factors by level

The first step of analysis related to these results is the evaluation of average according to the factors referring to their level (1 or 2). The data processing with MINITAB provides the following results (Table 4 and Graphic 1):

TABLE 4 Results of Taguchi analysis

Taguchi Analysis: Rating versus Ability to e, Ability to c, Interaction , ...
Main Effects Plot for Means

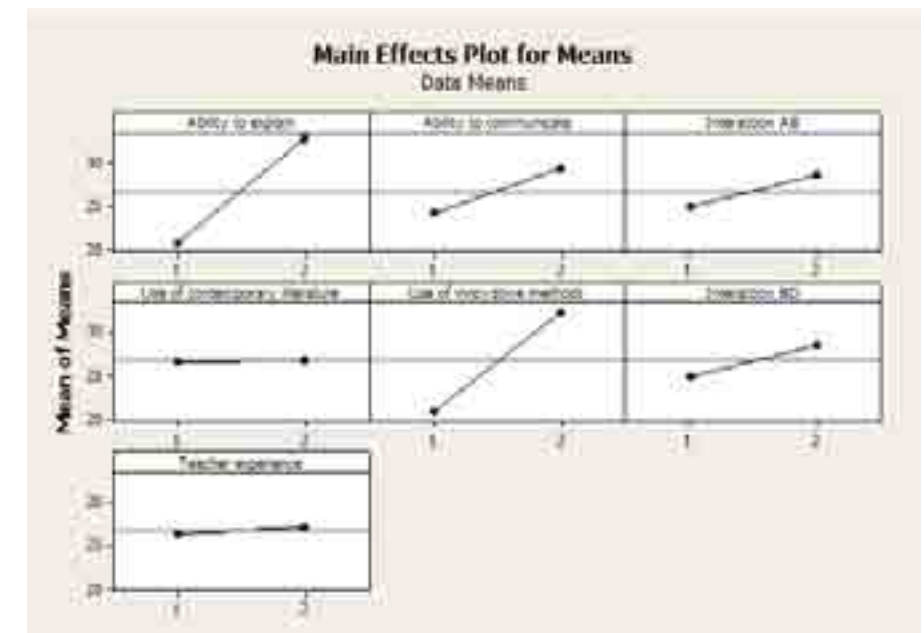
Response Table for Means

	Ability to explain	Ability to communicate	Interaction AB	Use of contemporary literature	Use of innovative methods	Interaction BC
Level						
1	20.77	24.20	24.90	26.65	21.00	24.88
2	32.65	29.23	28.53	26.77	32.42	28.55
Delta	11.88	5.03	3.63	0.13	11.42	3.67
Rank	1	3	5	7	2	4

Level	Teacher experience
1	26.38
2	27.05
Delta	0.68
Rank	6

Source: Authors' evaluation

GRAPH 1 Means' effects



Source: Authors' evaluation

Referring to the table, for instance the value 20.77 shows the average of assessment according to the level 1 (“bad”) related to the factor “the ability in explanation”, so the percentage of 0-100% of “bad” assessment for this indicator has been an average of 20.77. “Delta” in table 4 shows the difference between two averages of two levels for each factor. As the greater difference is, as the greater impact of factors is considering into the results’ study. So in the last row, “rank” shows from 1 to 7 the extent of factor’s impact in teaching process. It shows that the greatest influence in this process has been “the ability in explanation” furthers “the innovative methods”. The results are clearly demonstrated in Graphic 1.

Referring to DOE model theoretically, the analyzed factors are considered as “signal”, so like factors that affects the study’s output. In addition to this output can also affect other factors that are not considered in the analysis due to they cannot be controlled and influenced by us. Such factors are considered as “noise” in the DOE. In this aspect DOE requires the calculation of another index, known as the S/N ratio which characterizes the relation between signal factors (S) and those noises (N). This indicator intended to receive as great value as in the experiment. Table 4 confirms the calculation of S/N in MINITAB, as well as the ranking of factors by this index.

TABLE 5 Results of Taguchi analysis

Taguchi Analysis: Rating versus Ability to e, Ability to c, Interaction , ...

Linear Model Analysis: SN ratios versus Ability to e, Ability to c, ...
Main Effects Plot for SN ratios

Response Table for Signal to Noise Ratios
Larger is better

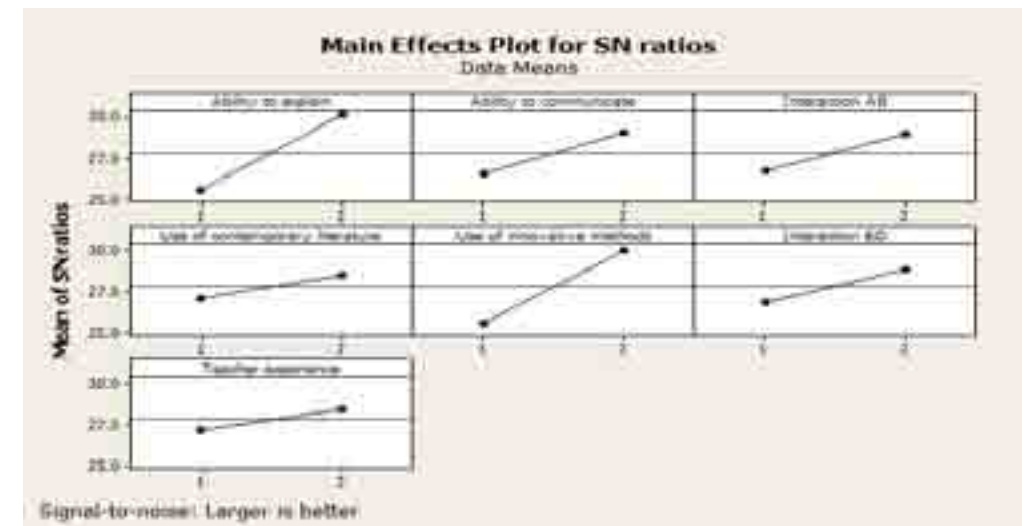
	Ability to explain	Ability to communicate	Interaction AB	Use of contemporary literature	Use of innovative methods	Interaction BD
Level 1	25.54	26.59	26.71	27.13	25.62	26.82
Level 2	30.14	29.08	28.96	28.54	30.05	28.86
Delta	4.60	2.49	2.25	1.40	4.43	2.04
Rank	1	3	4	6	2	5

	Teacher experience
Level 1	27.19
Level 2	28.48
Delta	1.28
Rank	7

Source: Authors’ evaluation

However we demonstrate that “the ability in explaining” and “the use of innovative methods” are more acceptable. While graphically S/N is presented in Graph 2.

GRAPH 2 SN ratios effects



Source: Authors’ evaluation

The standard deviation is another indicator which it used to assess the variation in Taguchi model. This indicator provides to assess the variation of the factor in the result due to the noise factors. Results of our model illustrates in table 6 and graphic 3.

TABLE 6 Results of Taguchi analysis

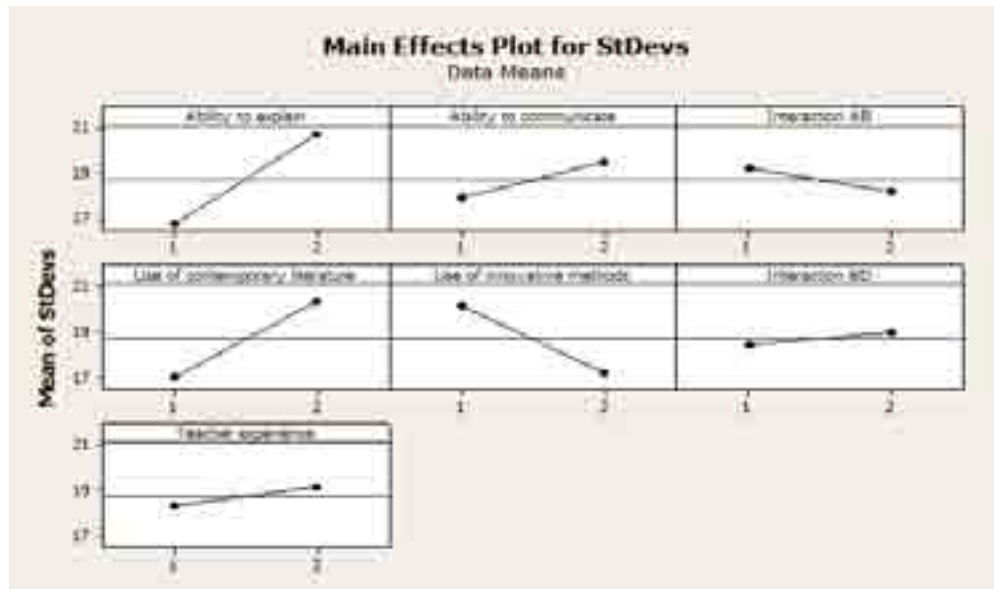
Taguchi Analysis: Rating versus Ability to e, Ability to c, ...

Main Effects Plot for StDevs
Response Table for Standard Deviations

	Ability to explain	Ability to communicate	Interaction AB	Use of contemporary literature	Use of innovative methods	Interaction BD
Level 1	16.71	17.94	19.23	17.02	20.10	18.44
Level 2	20.70	19.48	18.19	20.40	17.23	18.98
Delta	3.99	1.54	1.04	3.38	2.95	0.54
Rank	1	4	5	2	3	7

	Teacher experience
Level 1	18.31
Level 2	19.11
Delta	0.80
Rank	6

Source: Authors’ evaluation

GRAPH 3 The effects of standard deviation

Source: Authors' evaluation

The order of the estimated factors by the standard deviation is shown in the last row of table 6.

The analysis of the variance, ANOVA

The analysis of variance by ANOVA represents the certain procedure which initially involves the calculation of some indicators. The estimated values of these indicators are presented in Table 7²:

TABLE 7 ANOVA results

Factors		f	S	V	F	P
1. Ability to explain	A	1	282.0	282.0		43.53%
2. Ability to communicate	B	1	50.5	50.5		7.80%
3. Interaction AB	C	1	28.0	28.0		4.08%
4. Use of contemporary literature	D	1	0.0	0.0		0.00%

² The calculations are made with MINITAB and by the standard analysis given in "A PRIMER on the Taguchi Method" - Ranjit K. Roy, (Second Edition, SME -2010).

5. Use of innovative methods	E	1	261.1	261.1		40.30%
6. Interaction BD	F	1	27.0	27.0		4.17%
7. Teacher experience	G	1	1.0	1.0		0.14%
Other / Error	e	0	0	0		
Total		7	847.8			100.00%

Source: Authors' evaluation

Referring to this table:

- f - Degree of freedom-DOF
- S - Sum of squares
- V - Variance - mean of square
- P - Percentage of contributions in the estimated output.
- F - Factor ratio (an indicator used for assessing the statistical significance of factor)

According to the estimation of variation, the indicators S_e , V_e , F are important and relate to the alleged error in the model as well as in the assessing of statistical significance to each factor. These indicators result zero referring to Table 7 which it does not allow further evaluation. Due to this reason, factors that have a small percentage of impact on the study's results are eliminated. According to our case such factors are demonstrating as "literature" (C) and "experience" (E). The recalculated coefficients like S_e , V_e and F will obtain a different value from zero. Recalculations demonstrate in Table 8.

The evaluation of factor's significance is the most important after these calculations. According to Taguchi method, it is analyzed by comparing the F value (ratio factor) of each factor with the estimated values in standard tables related to the certain level of confidence. The statistically significant factor will be considered if the value of F factor in the experiment will be greater than the tabular value³.

TABLE 8 ANOVA results

Factors		f	S	V	F	P
1. Ability to explain	A	1	281.7	281.7	628.7	43.48%
2. Ability to communicate	B	1	50.0	50.0	112.3	7.72%

³ The tabular values are determined by the level of confidence, as well as the DOF factor and the DOF of the error term.

3. Interaction AB	C	1	26.1	26.1	58.1	3.98%
4. Use of innovative methods	E	1	260.2	260.2	581.0	40.23%
5. Interaction BD	F	1	26.1	26.1	50.1	4.10%
Other / Error	e	2	0	0.0		0.51%
Total		7	845.0			43.48%

Source: Authors' evaluation

Referring to the significance level in our case 99%, DOF of factor =1 and DOF of error term = 2, the estimated value of F is 98 503. Referring to Table 6 is demonstrating that “the ability in explanation” is above this value (628.7), “the ability in communication” (112.3) and “the use of innovative methods” (581.0). Meanwhile the other two factors according to significance level 99% are considered not significant statistically, so they should be eliminated and recalculated. If we obtain the significance level 97.5%, so lower, then the tabular value of F will be 38.506, however related to this significance level all factors of table 8 would be considered statistically significant.

The last column of Table 8 shows the impact on the teaching's quality of particular factors. It demonstrates that the larger impact provides “the ability in explanation” (43.5%) and “the use of innovative methods” (40.2%).

The calculations with MINITAB related to ANOVA provide the results of table 9. The influence of three factors in the analysis, as well as their interaction is statistically significant ($P < 0.05$). Also R-Sq is high (99.86%), which shows that these factors explain almost completely (100%) the teaching's level.

TABLE 9 Results of linear model

General Linear Model: Rating versus Ability to e, Ability to c, ...

Factor	Type	Levels	Values
Ability to explain	fixed	2	1, 2
Ability to communicate	fixed	2	1, 2
Interaction AB	fixed	2	1, 2
Use of innovative methods	fixed	2	1, 2
Interaction BD	fixed	2	1, 2

Analysis of Variance for Rating, Using Adjusted SS for Tests

Source	DF	Seq SS	Adj SS	Adj MS	F	P
Ability to explain	1	282.03	282.03	282.03	598.47	0.002
Ability to communicate	1	50.50	50.50	50.50	107.14	0.008
Interaction AB	1	26.28	26.28	26.28	55.77	0.017
Use of innovative methods	1	261.06	261.06	261.06	553.98	0.002
Interaction BD	1	27.01	27.01	27.01	57.32	0.017
Error	2	0.94	0.94	0.47		
Total	7	647.83				

$$S = 0.886477 \quad R\text{-Sq} = 99.85\% \quad R\text{-Sq(Adj)} = 99.49\%$$

Term	Coef	SE Coef	T	P
Constant	26.7125	0.2427	110.06	0.000
Ability to explain	-5.9375	0.2427	-24.46	0.002
Ability to communicate	-2.5125	0.2427	-10.35	0.008
Interaction AB	-1.8125	0.2427	-7.47	0.017
Use of innovative methods	-5.7125	0.2427	-23.54	0.002
Interaction BD	-1.8375	0.2427	-7.57	0.017

According to coefficients, ANOVA shows their value to the level “1” (“bad”) of factors, referring to the dependence of Y output (the teaching's level) related to the factors taken into analysis may be presented with the following equation.

$$Y = 26,7215 + (-5.9375 + 5.9375)A + (-2.5125 + 2.5125)B + (-1.8125 + 1.8125)C + (-5.7125 + 5.7125)E + (-1.8375 + 1.8375)F + (-1.8375 - 1.8375)D$$

The equation demonstrates the largest impact on the teaching's standards referring to “the ability in explanation” (A) and “the using of innovative methods” (D).

5. Concluding remarks

DOE is an alternative method which can be recommended related to the analysis of impact according to various factors on the teaching's standards. In spite of divergence among results of the simple interviews and the descriptive analysis, the proposed approach enables the more complete statistical analysis between various factors and the outcome of study.

The current model demonstrates through the relatively large number of proposed “experiments” relying on the Taguchi method, can be studied the impact of diverse factors in the teaching's standards. The analysis of article concentrates to explain which of the factors are more influential on teaching's standards and which of them are considering not more influential.

Referring to DOE's approach confirm the statistical significance and largest impact on the teaching's standards related to “the ability in explanation” and “the using of innovative methods”. Meanwhile we should be considered the influential interactions of factors according to the teaching's standards.

We propose to apply this approach like the standard statistical method due to it can be applied to other aspects when it required to analyzing the quality's level to diverse services related to the influential factors.

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- DOE Demystified:
A1A2

A theoretical model of mandatory use of e-government system adoption: factors affecting digital notarial system

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Abstract

Even though all government around the world are investing a lot of a lot of efforts and money in E-government initiatives, the adoption factors of such systems doesn't seem to be studied enough from the researchers. Without a good adoption by users, the E-government investment is jeopardized. Through studying the Digital Notarial system in Albania, we build a new model for user adoption of E-government technologies. Technology adoption is one of the most mature area in Information Systems (IS) research. Since voluntary use is the main context of these researches, they are focus in predicting system Use and Behavior Intention as the direct predictor of usage. Because the use of Digital Notary is not voluntary, but instead is mandatory, we argue that the Behavior Intention and system use are not the appropriate variables to be measured as the success of adoption. Instead User Satisfaction is an appropriate measure in the mandatory use. Using previous research work, this article will identify the determinants' constructs and their relationship to the adoption of Digital Notarial system in Albania. Finally, a theoretical framework for private professionals' adoption model of mandatory E-government Information Systems will be proposed.

Keywords: E-government, Technology adoption, Notarial System, Albania, Mandatory use.

1. Introduction

Notarial service plays a very important role in the well-functioning of modern countries. Either directly or indirectly, it serves to respond to government, businesses and citizens' demands. Considering life dynamics, at a certain point in life almost everybody will have to get notarial services like: business contracts, power of attorney, real estate purchase, attestations, Credit Loans, different types of written declarations, company statutes, testaments, etc., especially in those countries which are operating under the Civil Law. Notarial Service range is only getting bigger as legislation of countries gets more complex and the free movement of people, services and goods are promoted between countries and regions through the world.

Basically there are two main types of notaries in the world: 1) Common-Law notaries (i.e. public notaries), like in United States of America, Canada, United Kingdom, Australia, etc. and 2) Civil-law notaries, like in most of European countries, Latin America, etc. The notaries in Civil-Law are basically well trained, government licensed private professionals (Malavet, 1995). In comparison to Common Law notaries, Civil-Law notaries have more legal power. Albanian notarial service is part of the Civil-Law type. This means that notaries in Albania have very strong legal power (similar to judge decisions) and they effect many aspect of businesses' and individuals' life. Many legal services are monopoly to the notaries.

As all other service businesses, the notarial service has to be adapted to the digital era and its challenges. In Albania, the notarial service has been part of the national strategies and objectives for the digitalization of services they offer to citizens, businesses, governmental institutions and third parties.

In view of Albania's European integration agenda, a great emphasis is put on automation and ICT as a mean to provide more effective services to the population as well as to fight corruption. Nevertheless, the adoptions, effectiveness and efficiency of e-government services in Albania are still a critical issue, upon which neither the government nor the private actors have invested enough time or efforts to monitor and measure. Thus, it is a necessity for all the e-government services to be critically discussed, systematically measured and monitored thought unbiased methodology. As a response to this challenge the study will try to identify the determinants of the adoption and use of Digital Notarial Service in Albania and propose an adapted theoretical framework for private professionals' adoption model of mandatory E-government Information Systems.

A major distinction between E-government and other online technologies such as e-commerce, is that the use of certain E-government technologies

is mandatory, rather than voluntary (Warkentin, Gefen, Pavlou, & Rose, 2002). Digital Notarial is a very good example of a mandatory E-government technology in which the notaries are required by law to use the system and digitally archive the legal documents they produce as well as their transactions. While prior research has been focused primarily on voluntary technology-based in consumer context, this work focuses especially in mandatory e-government services context.

This study firstly makes a short introduction of E-government. Then a review of the most well-known Information System (IS) adoption models in individual level will be presented. A detailed elaboration of Mandatory use is done. Next, by using previous research work done we will identify the determinants' constructs and their relationship to the Digital Notarial system adoption and build our conceptual adoption model.

2. E-government and Digital Notarial

E-government is the use of ICT and its application by the government for the provision of information and public services to the people (United Nations Department of Economic and Social Affairs, 2014). E-government is described as the use of technology to enhance access to, and delivery of, government services to benefit citizens, business partners and employees at local, municipal, state and national levels (Grant & Chau, 2005). E-government includes electronic interactions of three types—i.e. government-to-government (G2G); government-to-business (G2B); and government-to-consumer (G2C). Digital Notarial system is a governmental service, despite the fact that it is offered by private professionals. Thereof this study will be focused on the perspective of E-government. We will study the factors that explain the system adoption of Digital Notarial system by the end users. The end users of this system are notaries, trained private professionals licensed by government.

E-government implementation can significantly increase benefits like improved efficiencies, greater access to services, greater accountability, transparency and citizen empowerment, lowered costs and time for services, improved interactions with citizens, other government organizations, businesses and industry, better relationships between government and private sector (Gupta, Dasgupta, & Gupta, 2008). Increased use of E-government by citizens also lead to increased trust in local government and also in positive attitudes towards E-government processes. In contrast to traditional government processes, e-Government is notably characterized by (a) the extensive use of communication technology, (b) the impersonal nature of the online environment, (c) the ease by which in formation

can be collected, processed (data-mined), and used by multiple parties, and (d) the newness of the communication medium (Warkentin, Gefen, Pavlou, & Rose, 2002).

Government of Albania has implemented Digital Notarial system for the first time only in 2012, as part of the Digital Albania Initiative. This system was disruptive to the way the notaries used to work and comply with legal requirements. They had to switch from 100% manual work to a digital system where the use was mandatory. Every notary was given access to the Digital Notary system where they have to register all their daily transactions and archive all the legal documents they produce. By using this system they have to communicate with some other governmental institution in order to get documents to offer specific services to the citizens.

3. Existing Models of Technology adoption

Technology adoption is one of the most mature area in Information Systems (IS) research and a lot of models are developed for this purpose. These models are grouped in two types: 1) Technology adoption models in firm level like DOI (Rogers, 1995) and the TOE framework (Tornatzky & Fleischer, 1990), etc. and 2) Technology adoption models in individual level (detailed below) like TRA, TAM, TAM2, TPB, UTATUT, etc.. Because end users of Digital Notarial are individuals (notaries), then we will study the adoption from the individual level.

There are many models developed that try to explain the individual adoption of IS. This study is interested only in theories about technology adoption, with special focus on those adapted for workplace environments.

The most used theories of technology acceptance model in individual level are the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1977; Fishbein & Ajzen, 1975), Motivational Model (MM) (F. D. Davis, Bagozzi, & Warshaw, 1992), Theory of Planned Behavior (TPB) (Ajzen, 1985, 1991), Decomposed Theory of Planned behavior (Taylor & Todd, 1995b), Technology Acceptance Model (TAM) (F. Davis, Bagozzi, & Warshaw, 1989; F. D. Davis, 1989), Task Technology Fit (TTF) (Goodhue & Thompson, 1995), Technology Acceptance Model 2 (TAM2) (Venkatesh & Davis, 2000), Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003), Technology Acceptance Model 3 (TAM3) (Venkatesh & Bala, 2008), Unified Theory of Acceptance and Use of Technology (UTAUT2) (Venkatesh, Thong, & Xu, 2012).

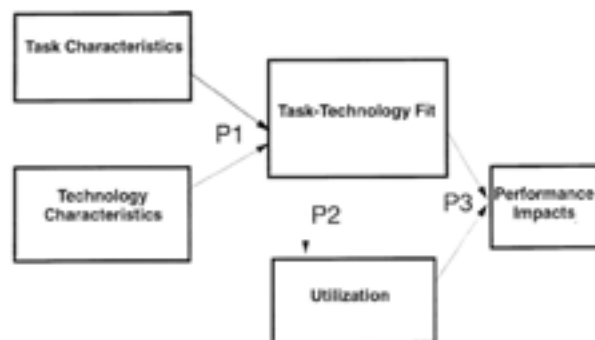
TABLE 1: Theories of individual acceptance

Model/theory	Core constructs	Source(s)
Theory of Reasoned Action (TRA)	Attitude toward Behavior (AT) Subjective Norm (SN)	(Fishbein & Ajzen, 1975)
Technology Acceptance Model (TAM)	Perceived Usefulness (PU) Perceived Ease of Use (PEOU)	(F. Davis, Bagozzi, & Warshaw, 1989; F. D. Davis, 1989)
Theory of Planned Behavior (TPB)	Attitude toward Behavior (AT) Subjective Norm (SN) Perceived Behavioral Control (PBC)	Adapted from TRA (Ajzen, 1991)
Decomposed Theory of Planned Behavior (DTPB)	Attitude toward Behavior (AT)	Adapted from TRA/TAM
	Subjective Norm (SN)	Adapted from TPB
	Perceived Behavioral Control (PBC)	Adapted from TPB
	Perceived Usefulness (PU)	Adapted from TAM
	Perceived Ease of Use (PEOU)	
	Compatibility (COMP)	(Taylor & Todd, 1995a)
	Resource Facilitating Conditions (RFC) Technology Facilitating Conditions (TFC)	
Task Technology Fit	Self-Efficacy (SE)	(Compeau & Higgins, 1995; Taylor & Todd, 1995a)
	Task Characteristics Task Characteristics Task-Technology fit Utilization Individual Performance	(Goodhue & Thompson, 1995)
Social Cognitive Theory (SCT)	Output Expectation - Personal (OEPR) Output Expectation - Professional (OEPL) Self-Efficacy (SE) Affect (AFT) Anxiety (ANX)	(Compeau & Higgins, 1995)
Innovation Diffusion Theory (IDT)	Relative Advantage (RA) Compatibility (COMP) Image (IMG) Triability (TRB) Visibility (VSB)	(Moore & Benbasat, 1991; Rogers, 1995)
	Ease of Use (EOU)	(F. Davis, Bagozzi, & Warshaw, 1989; F. D. Davis, 1989; Moore & Benbasat, 1991; Rogers, 1995)
	Result Demonstrability (RD)	(Moore & Benbasat, 1991; Rogers, 1995)
	Voluntariness of Use (VU)	(Moore & Benbasat, 1991)
	Image (IMG)	(Moore & Benbasat, 1991; Rogers, 1995; Venkatesh & Davis, 2000)
Extended TAM (TAM2)	Perceived Usefulness (PU) Perceived Ease of Use (PEOU)	Adapted from TAM
	Job Relevance (JR)	(Venkatesh & Davis, 2000)
	Result Demonstrability (RD)	(Moore & Benbasat, 1991; Rogers, 1995; Venkatesh & Davis, 2000)
	Subjective Norm (SN)	Adapted from TRA/TPB
IS Success Model (ISSM)	Information Quality (IQ) System Quality (SYQ) Service Quality (SVQ) User Satisfaction (USTS)	(Delone & McLean, 2003)
Diffusion of Innovation (DOI)	USE Net Benefit (NB)	
	Relative Advantage (RA) Compatibility (COMP)	(Moore & Benbasat, 1991; Rogers, 1995)
	Complexity (CLX)	(Rogers, 1995)
Unified Theory of Acceptance and Use of Technology (UTAUT)	Performance Expectancy (PE) Effort Expectancy (EE) Social Influence (SI) Facilitating Conditions (FC)	(Venkatesh et al., 2003)

Source: Author

In this article we will conceptualize our adoption model by extending the UTAT model with Task-Technology Fit.

FIGURE 1: Task-Technology Fit and Individual Performance



Source: (Goodhue & Thompson, 1995)

At the center of this model is the assertion that for an information technology to have a positive impact on individual performance, the technology: (1) must be utilized and (2) must be a good fit with the tasks it supports (Goodhue & Thompson, 1995). This model highlights the importance of the fit between technologies and users' tasks in achieving individual performance impacts from information technology. It also suggests that task-technology fit, when decomposed into its more detailed components, could be the basis for a strong diagnostic tool to evaluate whether information systems and services in a given organization are meeting user needs.

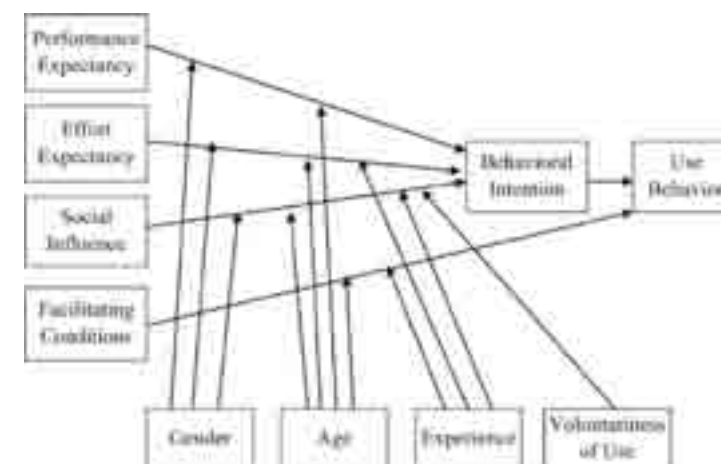
TTF argues that a user will only adopt an information technology when it fits his/ her tasks at hand and improves his/her performance ((Goodhue & Thompson, 1995). Since its inception, TTF has been widely used and combined with other models such as TAM to explain user adoption of an information technology (Dishaw & Strong, 1999). Recently, TTF has been applied to explain user adoption of emerging Internet services such as mobile technologies, blogs, etc.

4. Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003)

Venkatesh et al. (2003) attempted to review and compare the existing user acceptance models with an ultimate goal to develop a unified theory of technology acceptance by integrating every determinants of user acceptance that was evaluated as important by their longitudinal study. This new model conceptualized and tested was named Unified Theory of Acceptance and Use of Technology (UTAUT).

The eight original models and theories of individual acceptance that were integrated by (Venkatesh et al., 2003) include the Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Motivational Model (MM), Theory of Planned Behavior (TPB), Model Combining the Technology Acceptance Model and Theory of Planned Behavior (C-TAM-TPB), Model of PC Utilization (MPCU), Innovation Diffusion Theory (IDT), and Social Cognitive Theory (SCT). Summary of this models and their constructs are listed below.

FIGURE 2: Unified Theory of Acceptance and Use of Technology (UTAUT)



Source: (Venkatesh et al., 2003)

Longitudinal field studies were conducted across heterogeneous contexts. The reliability and validity of each construct from every model were measured. For the new research model, seven constructs appeared to be significant and directly determined the intention of information technology usage. These seven constructs are:

1. Performance expectancy: the degree to which an individual believes that using a particular system would improve his or her job performance;
2. Effort expectancy: the degree of simplicity associated with the use of a particular system;
3. Attitude toward using technology: the degree to which an individual believes he or she should use a particular system;
4. Social influence: the degree to which an individual perceives that others believe he or she should use a particular system;
5. Facilitating conditions: the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of a particular system;

6. Self-efficacy: the degree to which an individual judges his or her ability to use a particular system to accomplish a particular job or task;
7. Anxiety: the degree of anxious or emotional reactions associated with the use of a particular system.

5. Mandatory Use of IS

A crucial differentiating point in building an adoption model that fits Digital Notarial use is the concept of mandatory use. This concept makes a huge distinction in the logic and results of existing adoption models literature. Most existing technology adoption models deal with Voluntary use of information systems. Missing this concept in the model makes the results of many researches in the field to be contradictory. Because mandatory use is a key point in this paper's work, a more detailed explanation will be detailed below.

A voluntary use environment is one in which users perceive the technology adoption or use decision to be a choice; a mandated environment is where users perceive use to be organizationally compulsory (Hartwick & Barki, 1994; Venkatesh & Davis, 2000). While seemingly a clear distinction, a number of issues surrounding the notion of mandatory vs. volitional usage behavior have been raised in the literature. Some research suggests that there is a continuum of voluntariness (e.g. compulsory (Hartwick & Barki, 1994; Moore & Benbasat, 1991), such that a given adoption decision may seem more or less voluntary to the users. Even on the same system settings users can have variable perception of voluntariness. According to (Hartwick & Barki, 1994), even in mandatory use, usage behaviour is variable because employees can vary their extent of use. In mandatory environment, the system use is highly integrated across job functions, more then to the behaviour intentions.

A voluntary use environment is one in which users perceive the technology adoption or use decision to be a choice; a mandated environment is where users perceive use to be organizationally compulsory (Hartwick & Barki, 1994; Venkatesh & Davis, 2000). Instead, "A mandatory use environment is defined here as one in which users are required to use a specific technology or system in order to keep and perform their jobs" (Brown, Massey, Montoya-Weiss, & Burkman, 2002, p. 283). The user must use the system, regardless of whether he or she intends to use it. This is in contrast to the volitional usage behavior studied by most TAM research. Mandatory use was considered a probable cause for mixed findings in TAM studies (Hartwick & Barki, 1994; Taylor & Todd, 1995b; Venkatesh & Davis, 2000). While seemingly a clear distinction, a number of issues surrounding the notion of mandatory vs. volitional usage behaviour have been raised in the

literature. Some research suggests that there is a continuum of voluntariness (e.g. compulsory (Hartwick & Barki, 1994; Moore & Benbasat, 1991), such that a given adoption decision may seem more or less voluntary to the users. Even on the same system settings users can have variable perception of voluntariness. According to Hartwick & Barki (1994), even in mandatory use, usage behaviour is variable because employees can vary their extent of use. In mandatory environment, the system use is highly integrated across job functions, more then to the behaviour intentions.

There have been efforts to modify the TAM to address mandatory use of software. Because the intention to use has been the central construct in the model the researchers have a strong tendency to use it in their models for mandatory use too. The paradox here is that, if a user is required to use a system, their intention to use is not likely to be relevant (Brown, Massey, Montoya-Weiss, & Burkman, 2002).

Two approaches are used to apply TAM in mandatory use. First, some researchers used the same model to study both mandatory and volitional systems (e.g., (Brown, Massey, Montoya-Weiss, & Burkman, 2002; Venkatesh & Davis, 2000; Venkatesh et al., 2003). In those research the voluntariness was modeled as a moderator of the relationship between intention and determinants of intention (e.g. (Venkatesh et al., 2003)). This was the approach used by the TAM2 and TAM3. In Venkatesh et al. (2003) study, voluntariness was only found to have significant moderation effect when it interacted with three or four other moderators simultaneously. This added complexity in interpreting the moderation effect and the exact role voluntariness played in the model.

The second approach used by researchers was to reintroduce the attitude construct that was in the earlier versions of the TAM but has removed during the evolution of the model. Attitude is an "individual's positive or negative feelings (evaluative effect) about performing the target behavior" (Fishbein & Ajzen, 1975, p. 216). In the original TAM, attitude toward using the system was modeled to predict behavior directly (F. D. Davis, 1989) and to mediate the influence of perceived usefulness and perceived ease-of-use. Over time, intention was introduced and studies conducted in volitional environments showed that the explanatory power of the model was equally good with attitude removed. For the sake of parsimony, attitude was removed in later versions of the TAM, including the Parsimonious TAM, UTAUT, TAM2, and TAM3. As researchers broadened the contexts of system use in TAM studies, the importance of attitude resurfaced. Attitude was found to be a significant predictor of continuance intention. As for mandatory use, arguments have been advanced that the removal of attitude causes an inaccurate representation of the phenomenon (Brown, Massey, Montoya-Weiss, & Burkman, 2002). Since captive users must use the system regardless of their intention, the linkage between intention and use and that between attitude and intention are

broken ((Brown, Massey, Montoya-Weiss, & Burkman, 2002; Yousafzai, Foxall, & Pallister, 2007). With no option but to use the system, displeased users have to cope with cognitive dissonance by altering their attitude toward the system mentally (Rawstorne, Jayasuriya, & Caputi, 1998). Employees' satisfaction (or dissatisfaction) with their use of system reflects the extent to which these functions adequately (or inadequately) fulfill their work needs. Employees are dissatisfied when these functions fail to support their service activities. Thus, in a mandatory setting, intention is not appropriate for assessing their mental acceptance of the system (Nah, Tan, & Teh, 2004). For these reasons, models of mandatory use of software should include attitude as a key construct (Brown, Massey, Montoya-Weiss, & Burkman, 2002).

A fundamental difference between a mandatory and a volitional system is the organizational consequences that system use carries for the user. For the former, system use is mandated based on the organization's aims and objectives. Users are obliged to use the system because that is the only way of accomplishing their daily tasks. Performance considerations surrounding the use of the system often are the users' main concern (Taylor & Todd, 1995b). They can lead to reward or punishment for the user. Hence, a user's attitude toward use highly depends on whether he or she believes that such use will enhance his or her job performance, i.e., performance expectancy of the system.

A user of a mandatory system also can differ substantially from a volitional user in terms of his or her social environment of use, whereas mandatory systems often are used for tasks that are tightly coupled with other users' tasks (Nah et al., 2004). A user of a mandatory system cannot avoid paying attention to his or her supervisors' and peers' opinions about using the system, so it is more under the influence of the "subjective norm". Subjective norm is defined as a "person's perception that most people who are important to him think he should or should not perform the behavior in question" (Fishbein & Ajzen, 1975, p. 302) developed by Martin Fishbein and Icek Ajzen (1975, 1980. It is part of the Theory of Reasoned Action (TRA), on which the TAM was based.

For system use in mandatory environments, some researchers suggested the removal of use from the model because a captive user must use the system ((Nah, Tan, & Teh, 2004; Rawstorne, Jayasuriya, & Caputi, 1998). In mandatory environments, even if a user mentally rejects a mandatory system, he or she is prohibited from refuse to use. The user, however, may underutilize or sabotage the system ((Brown, Massey, Montoya-Weiss, & Burkman, 2002).

User attitude toward system use has been associated with user satisfaction ((Delone & McLean, 2003). Attitude can become a predisposition to respond favorably or unfavorably to a stimulus (in this case, the system). A positive attitude is more likely to lead to the feeling of satisfaction with the system.

6. User Satisfaction

The success adoption of technology, in mandatory environments, is user satisfaction, instead of behavioral intention. Delone & McLean (1992) suggest that user satisfaction is probably the most widely used single measure of IS success. User satisfaction (US) is the ultimate depended variable we want to predict in our model of mandated user adoption of technology.

User satisfaction (US) is an accumulative experience based evaluation developed over time and represents users' overall affective and cognitive assessment of the entire IS user experience (Au, Ngai, & Cheng, 2008).

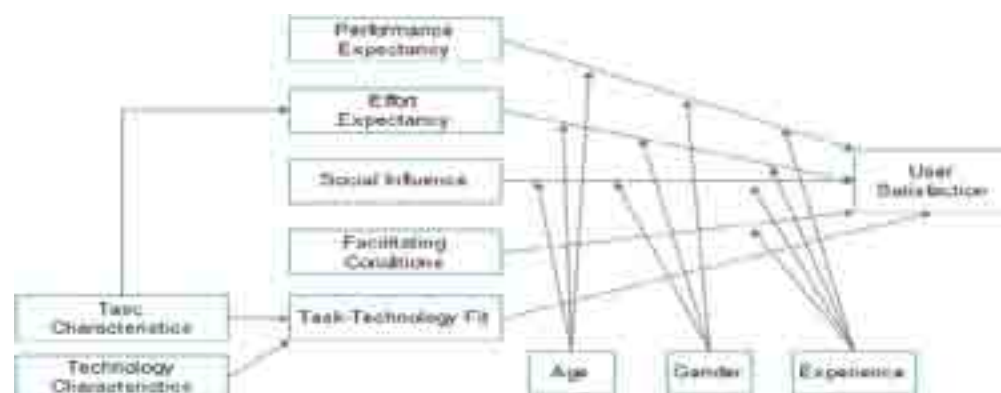
For mandatory systems, users' satisfaction with the system is a more useful measure, especially when evaluating an individual system (as opposed to an IS program) (DeLone & McLean, 1992). Overall satisfaction is often included in studies of mandatory environments as a mediator or dependent variable. This satisfaction construct is applied to the system as a whole. In contrast, "characteristics-based" satisfaction is directed toward certain characteristics within the system (Wixom & Todd, 2005). Since system/information satisfaction may be based on an arbitrary set of characteristics (Wixom & Todd, 2005), having an overall satisfaction construct also provides the benefit of a more general, higher level measure of satisfaction.

7. Model Development and conclusions

In order to develop our model, we review the UTAUT and TTF, the list of their constructs their theorized relationships. UTAUT is the most well-known adoption model in work environment. There are thousands of articles that applied or extended it in many different context, populations, and technologies.

Task-Technology Fit model is focused on a very crucial part of technology, the fit between technology and user needs. A system that fits the user needs will increase the user satisfaction. A good task technology fit will promote user adoption and satisfaction of Digital Notarial. In contrast, a poor task technology fit will decrease users' satisfaction.

Combining the above models, seems a very logical way of achieving a higher exploratory power of user adoption of Digital Notarial then using each of them separately. Figure 2 represent the conceptual model of Mandatory E-government Digital Notarial.

FIGURE 2: Research model of Mandatory E-government Digital Notarial

Source: Author

The research model conceptualized in Figure 2 need be tested through real data from users of Digital Notarial system in Albania. For distributing the questionnaire to the notaries of Albania, an agreement is already done with the Albanian National Chamber of Notaries. The questionnaire is under development and after a pre-test with a small group of notaries, it will be available online and the link will be send by email to all the notaries. Adoption of Digital Notarial system in Albania needs to be critically discussed, systematically measured and monitored thought unbiased methodology. A major distinction between E-government and other online business technologies, is that the use of certain E-government technologies is mandatory, rather than voluntary. Digital Notarial is an E-government system that its use is mandatory from the notaries. The existing models of adoption doesn't fully apply to this situation and a new model needs to be developed and tested. The model developed in this study defines the factors that especially affect the adoption of notaries to the Digital Notarial system under the mandatory environment. The full analysis and conclusions of the research will be presented in a next paper.

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A theoretical and empirical approach in the restaurant sector

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Abstract

This study is based on the literature review of the tourism industry in the world and in Albania with a main focus on the restaurant service offer. The restaurant sector has experienced different challenges in the last decades in Albania since the creation of the market economy. It is an important sector that may significantly impact the tourism industry. This article aims to offer some important theoretical and empirical evidence from the existing literature related to the marketing practices, service quality and customer satisfaction in the restaurant business. It wants to assess the marketing means used by the restaurants in Albania. Based on the review of the literature, a semi structured questionnaire was created. The questionnaire aims to offer a critical assessment of the restaurant sector from the management point of view. The study gives data and figures of the actual situation of tourism in the world and in Albania in order to offer a realistic look of the present situation. The data from the semi structured questionnaires showed that marketing is considered as a significant element in the restaurant business and important on keeping actual customers and gaining new ones but marketing procedures are not properly and empirically used and assessed by practitioners. Based on the findings, there are given some recommendations for practitioners and researchers.

Key words: Restaurant sector, Service quality, Satisfaction

1. Introduction

Tourism industry has been considered an important economic driver for many countries. More people are travelling abroad despite the troubles that the world has experienced during the last years. This fact has been supported by the data of

World Tourism Organization, showing higher numbers of travelers each year. The table shows these data during the last years.

TABLE1. INTERNATIONAL tourist's arrivals

	International tourists arrivals (million)		
	2010	2013	2014
World	949	1087	1133
Advanced economies	513	586	619
Emerging economies	435	501	513
Europe	488.9	566.4	581.8
Southern/Mediterranean Europe	173.3	201.0	214.9

Source: UNWTO (2015)

As an industry generating many benefits to countries, the tourism industry has been part of many developing strategies worldwide. Developed and developing nations are embracing every initiative that generates tourism and activities related to it. The emerging and developing nations have put a great emphasis on tourism as a significant mean of improving their economies. The data from World Tourism Organization reinforce these endeavors and show that this trend is expected to continue for the next years, stating that between 2010 and 2030, tourists arrivals in new and emerging destinations (+4.4% a year) are expected to increase at twice the rate of those in advanced economies (+2.2% a year) (UNWTO, 2015). The market attracted from emerging and developing economies has shown great increase in the past (from 30% in 1980 to 45% in 2014) and this tendency is expected to continue in the future years (it is expected to reach 57% by 2030, equivalent to over 1 billion international tourist arrivals) empowering these nations with the great opportunity of being at the center of the attention of many worldwide travelers (UNWTO, 2015).

Europe has experienced 3% increase in the last year in the number of international arrivals while this region's growth was driven largely by Southern and Mediterranean Europe (+7%) and Northern Europe (+6%) and it continues to be the world largest source region by generating over than half of worldwide international arrivals (UNWTO, 2015). In the Southern and Mediterranean Europe (part of which Albania is) the top major destinations continue to be countries with significant experience in tourism development like Greece (23% increase), Spain (7% increase), Portugal (12% increase), Italy (2% increase), Malta (7% increase), Croatia (6% increase) (UNWTO, 2015). The same observations show that Albania has experienced a double digit increase which is very significant

for this country despite the difference in numbers of international arrivals with other established tourism destinations. The tendency observed in the last years is that the majority of international travel takes place within travelers' own regions, with about four out of five worldwide arrivals originating from the same region. The long-term forecast of UNWTO shows that tourism in the emerging nations will grow by the double of that of advanced economies. Mentioning that Europe is the largest region of tourism source, these data show a significant market opportunity for the emerging countries within the European region and for Albania also. The outlook for the year 2016 is positive (growth of 3.5% - 4.55% in Europe) although slightly lower than the previous years (UNWTO, 2016). Not only there is great emphasis toward tourism development but this attention has shifted toward sustainable development and as by December 2015, UNGA (United Nations General Assembly) approved the adoption of 2017 as the International Year of Sustainable Tourism for Development.

The restaurant sector is considered an important part within the tourism industry. It has the potential to attract, satisfy and maintain tourists with its variety and quality by improving the whole touristic experience. The World Forum on Gastronomy has underlined the significance of local communities and cultures in gastronomy. It stressed the importance of using gastronomy tourism as a tool for promoting destinations, their cultural and bio diversity.

2. The tourism industry in Albania

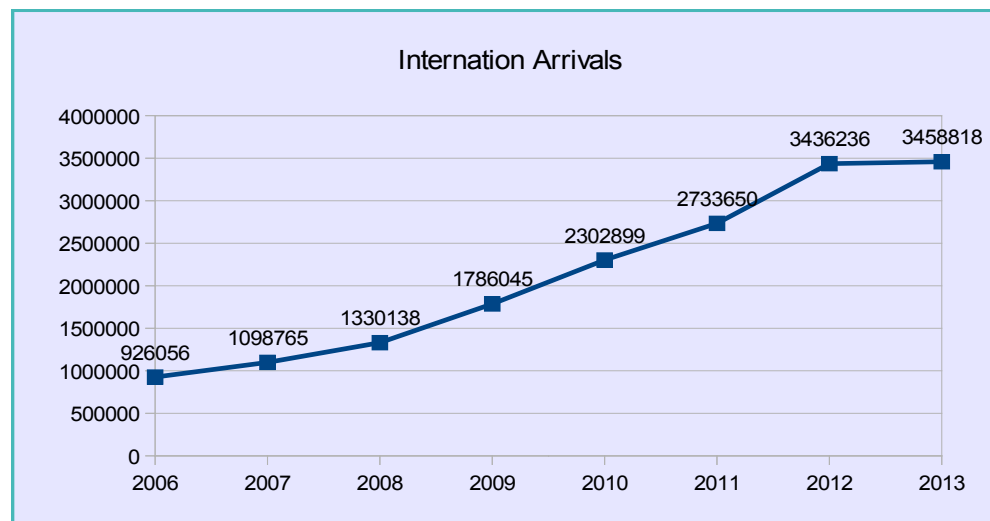
During the last decades Albania has undertaken important steps toward tourism development. From a country closed to the world, with a limited number of structures and activities dedicated to tourism it has developed to a country with many accommodation buildings and service offering organizations. These changes have been done in a short period of time and with very little or no attention from the regulatory institutions. During the last 20 years the tourism development has not been in line with the sustainable development principles and has not responded to the expectations of the population and tourists. Many problems have been faced during the last years as the absence of tourism planning, capacity deficiencies, many problems related to service offerings, poor or absent infrastructure, lack of coordination and collaboration between different levels of institutions in the central and local level and chaotic investments by private organizations (MUDT, 2015). Many informal buildings in the form of houses or businesses (hotels, restaurants etc) were built without a urban plan and has changed the look of many touristic sites.

The positive benefits related to tourism are very important to Albania. During these years, tourism development has been one of key issues of the country

strategies and politics aiming development and prosperity. Different national strategies have focused tourism development as the Tourism Strategy 2007-2013 and the National Strategy for Tourism 2014-2020. The key scope of these strategies have been offering some regulations means on the industry functioning, setting standards and regulations in the way the tourism should develop, improve the services offered by businesses, creating and improving the infrastructure of tourism through linking different activities in the industry (as accommodation, transportation, travel agencies, regulatory role of institutions etc.) and giving directions for the future development of tourism in Albania.

The data from the institutions show a steady increase on the number of tourists traveling to Albania in the last ten years. The table 1 shows the data about international arrivals in Albania during the last years.

TABLE 2: International arrivals for the period 2006 – 2013

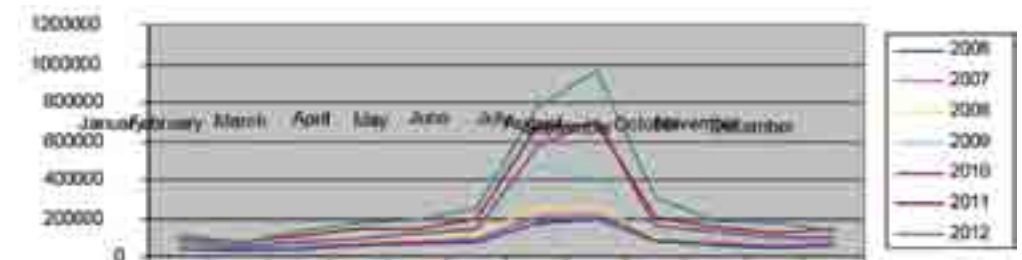


Source: Ministry of Urban Development and Tourism, 2015

The Albanian Institute of Statistics shows also the numbers of international arrivals in Albania during the year 2014 and 2015 are 3.373.000 and 4.131.00 respectively (IS, 2016). Although there have been undertaken some actions (and underlined in the strategies of tourism development) for developing different kinds of tourism during all the year period in Albania, the main foreigner tourists arrival remains mainly a seasonal activity. Activities from different groups and organizations have aimed to the development of different kinds of tourism as the sun and sand tourism, adventure tourism, cultural and historic tourism etc. and these could expand the time of tourist arrivals. Despite that, the highest number of tourists is concentrated in the summer, reinforcing the sun and sand tourism

which is the main kind of tourism developed in the country. The table 2 shows this trend.

TABLE 2: Foreigner tourists in seasonal bases



Source: Ministry of Urban Development and Tourism, 2015

This trend puts great emphasis on the activities related to the summer season and the services offered in this period. As the main demand for tourism services is concentrated in a few months, the local businesses have found difficulties to direct and concentrate their efforts in offering adequate services for tourists. The data from the institutions show that the quality of services remains very low and the overall experience of tourists is not as good. There are a set of factors related to the businesses offering the service and the whole infrastructure created and maintained by public institutions and businesses. The main problems are related to the road infrastructure, the electric system, wastewater sanitation, rubbish collection and administration in landfills, transportation systems, the problems related to informality of the properties and activities undertaken and the malfunction or absence of tourism information offices (MUDT, 2015). On the other hand, there are many problems related to the quality of the service offer. Poor quality is a phenomenon of different sectors within the industry, hotel businesses, restaurants and bars, travel agencies, transport organizations etc. and each of them have specific problems and issues to resolve.

The restaurant sector, including cafés and bars has experienced many changes and developments. It is widely widespread within the Albanian territory and offers a high variety of services. There are many different restaurants that offer traditional and international cuisine. These businesses have relatively low prices compared to the prices in the region and good food offer, remaining so a key point in the tourism offer in Albania. The restaurant sector is closely related to the hotel one as many restaurants are within the area of the hotels, a tendency known also in other countries. Despite the recent problems related with the food origins and controls and hygiene, the cuisine variety and taste of food remain as positive points for the sector. Apart from that, the other elements of the restaurants offering which is mainly related to the service delivered are still classified as poor performance and need to be developed (MUDT, 2015).

3. Literature review

The significant role of tourism industry has attracted the attention of many groups of interest. Not only the practitioners are interested on studies in the industry but also many researchers have focused their attention on tourism in order to explore the elements and benefits related to it. Early studies have been conducted in the developed countries as they were firstly focused on the tourism industry and during the last years other studies have been conducted in developing countries and regions. Many of them have aimed to explore the issues of tourism from the management point of view while others have put at the center of the study the customers or tourists and their perceptions. There are studies that have assessed different factors in the hotel sector (Kayaman and Arasli (2007), tour operators and travel agencies (Johns et al., 2004), restaurant sector (Chang et al., 2010), travel sector (Lai and Chen, 2011; Nadiri et al., 2008) and destinations (Chen and Tsai, 2007; Chi, 2012). These studies have aimed to explore the quality of the service, customer satisfaction, tourists' destination, intentions to repurchase, brand equity and other relevant factors.

The restaurant sector can create a positive experience for the tourists. The food and gastronomy experience can be an important element to attract tourists in a region. In different countries, institutions and organizations have establishes classification of restaurants based on the type of service they deliver but also classifications based on the performance of significant criteria. So, in different countries there are distinctions between businesses in the sector as quick-service restaurants, fast-casual restaurants, midscale restaurants and other types (Barrows et al., 2012). The spread of restaurants is also related to the adaption of these businesses within other activities as hotels, retail stores and shopping malls. They may also be organized as chain systems, franchise and independent ones. Despite the type of the offer to the customer, important issues remain the quality of food delivered, the quality of the service, the atmosphere and image, customer satisfaction and their impact on business profitability.

Service quality has been recognized as an important indicator in the tourism industry. It is considered a significant element of the restaurant sector also (Kim et al., 2009). The relationships of quality of the services offered; food and physical environment on several significant variables of marketing and consumer behavior, were at the center of the study of Ruy et al. and the authors found that these elements of restaurant quality were important determinants of restaurant image, perceived value, customer satisfaction and behavioral intention to frequent the same restaurant (Ruy et al., 2012). These elements are crucial to the performance of the

restaurants and they can signal to management the perceptions of customers about their offering. Quality assessment becomes important because previous studies in the service quality-profit chain (known as the "Return on Quality" framework) proposed by Rust et al. (1995), considered service quality as very important to customer behaviors and organization financial profitability. Their study proved that the quality of the service delivered to customers has a significant influence on the business revenues, the market share and the organization profitability as it dictates high levels of customer retention and loyalty and also new customers' attraction. So, it becomes fundamental to explore the customers' perceptions of service quality.

When assessing quality an important factor is determining its dimensions so the key aspects of this element in a specific sector. The SERVQUAL model (Parasuraman et al., 1988) has been a significant instrument in assessing service quality in the restaurant industry. The three dimensional model of Brady and Cronin (2001) was based on the model of Gronroos (1984) and views quality as composed of interaction quality, physical environment quality and outcome quality. Stevens et al. (1995), based on the previous models proposed the DINESERV instrument. This instrument is specifically adopted for the restaurant industry and contains three dimensions named tangibles (all the physical elements that surround the customer), empathy (feeling created and instilled by the restaurant and its personnel) and reliability (timely, quickly and dependably service). It is used as a quality assessment model by several studies in the restaurant sector (e.g. Chang, et al., 2010; Ladhari et al., 2008). Other studies (Gazzoli et al., 2010) have focused on the antecedents of quality in the restaurant sector and have showed that empowerment of employees can create job satisfaction and their job satisfaction can be determinant in delivering high service quality to restaurant customers. These results present important issues for managers, owners and human resources specialists operating in the sector.

Another key element in the dining experience is the customer satisfaction. Customers who are highly satisfied with the service received in the restaurant have shown to have greater intentions to repurchase and recommend the restaurant to other people. In contrast, dissatisfied customers are more likely to switch, complain or spread negative word-of-mouth (Oliver, 1996). Different studies have found that satisfaction with the restaurant can positively influence post purchase intentions (Kivela et al., 1999; Soderlund and Ohman, 2005), so the satisfied customers are more likely to re-frequent the restaurant again in the future. Also, Han and Ryu (2009), in upscale restaurant sector, found that improving customer satisfaction levels is essential to increasing revisit and recommendation intentions. These desired outcomes are positively related to customer loyalty and with new customers visiting the restaurant. These studies have assessed customer satisfaction by using single items such as measuring overall satisfaction or a set of different ones by measuring satisfaction with specific elements of the restaurant offer.

The study of Chow et al. (2010) aimed at studying the effect of service quality on customer satisfaction and repeat patronage in the China restaurant sector. They suggested that customer satisfaction and repeat patronage are important indicators of restaurant performance. They found that interactive quality and physical environment quality were important predictors of service quality and the high level of service quality was associated with customer satisfaction and frequent patronage. In the same way, the study of Chang et al. (2010) found that service quality positively influences customer satisfaction in the restaurant sector and customer satisfaction directly influences attitudinal and behavioral customer loyalty.

4. The study, data analyses and results

The literature review and the data presented above showed that tourism industry has the potential of improving ones country economic situation. This is related to the employment it creates, the income it generates from international arrivals and in the positive effects it creates between countries. In the light of these advantages it is essential to continually assess Albanian touristic offer and conduct empirical studies to gain knowledge of the situation. Despite the advantages generated by the industry and the significance of it to the Albanian economy, the studies that explore empirically the different sectors of tourism are just a few and many of them do not address critical variables of tourism offer.

This study aims to give a first look at the restaurant sector in Albania. It offers some information from the restaurants managers' point of view about the different elements of their service offer. It wants to understand at what extent the businesses in the sector deal with marketing practices and the means used by them to deliver high service quality and customer satisfaction. First, it was built a self-administered questionnaire. Based on the literature review, the items aimed to gain information of different decisions and procedures taken that lead to high service quality, customer satisfaction which than lead to repurchase intention.

The questionnaire consisted of 9 items; three of them measuring the demographic variables of the restaurants and the other items assessing marketing tactics used by restaurants, procedures about employees, attention to tangible aspects, databases and records taken about customers, assessment of service quality and customer satisfaction from the customers point of view. A 5-point Likert scale was used to measure the agreement or disagreement of the respondents with the questions and for each question there was the necessary space for giving more detailed information. The semi structured questionnaires were distributed by e-mail to the addresses of the restaurants or their managers. The restaurants were assured about

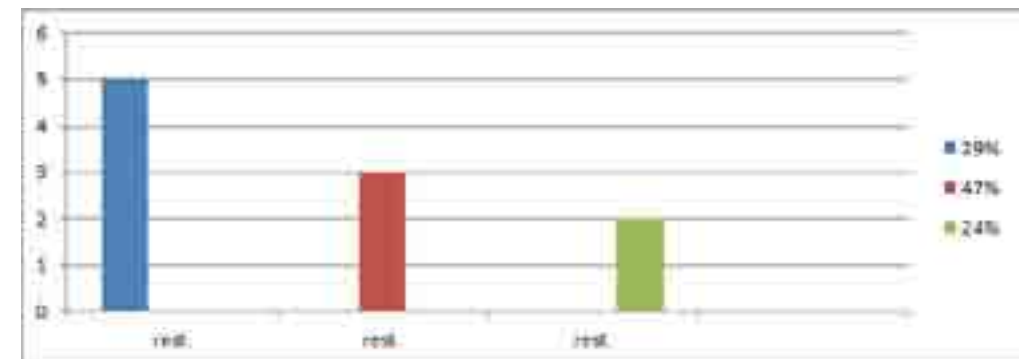
the anonymous of the questionnaires. There were distributed 100 questionnaires out of which 45 completed questionnaires were returned while 20 addresses were not valid. The demographic variables of the respondent sample are presented in the table below.

TABLE 3: Demographic variables of restaurants

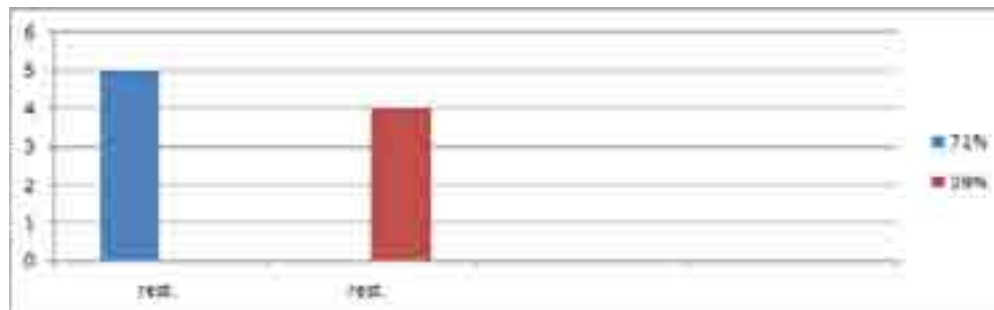
Experience in business	Experience in business	Nr. of employees	Nr. of employees	Nr. of tables	Nr. of tables
1-5 years	20 or 44%	1-5	33 or 73%	1-10	5 or 11%
6-10 years	12 or 27%	6-10	11 or 25%	11-20	13 or 29%
11-15 years	8 or 18%	11-15	1 or 2%	21-30	17 or 38%
>16 years	5 or 11%	>16	0	>31	10 or 22%
total	45 or 100%		45 or 100%		45 or 100%

The responses of managers/proprietors about the items in the questionnaire are presented in the tables below and are explained accordingly.

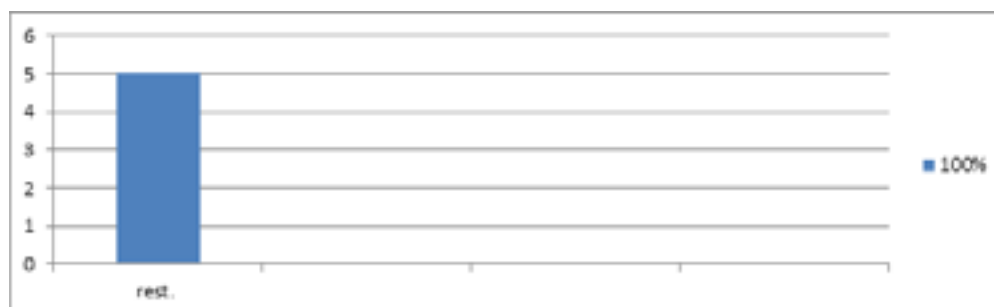
TABLE 4: The use of marketing instruments from the restaurants



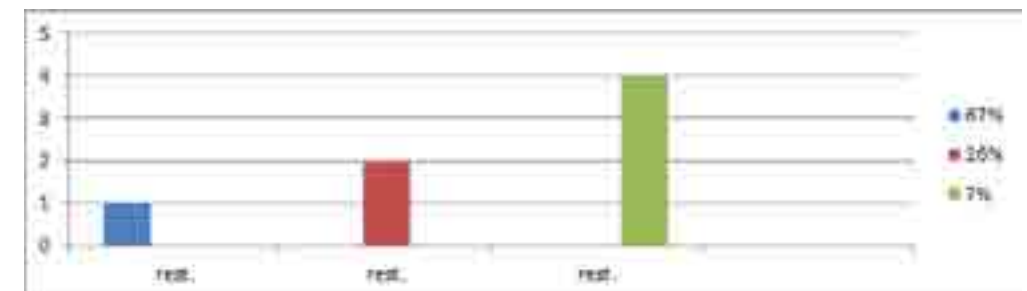
The data from the questionnaires show that 29% of the restaurants use marketing means to attract customers and attain attention toward their restaurant. They state that use radio advertising, are present at the trip advisors pages on internet and usually use leaflets particularly when they organize special events. An important mean of attracting customers is also the PR created by their owners or managers. They state to have an extended social network and this helps the restaurants in attracting customers. The actual customers, especially the repeated ones, serve also as a source of new ones as they usually bring other people with them when are pleased with the restaurant offer.

TABLE 5: The existence of the procedures for the employees

All of the restaurants parts of the study declare to have procedures about employees, although the majority of them state to don't have written or formal ones. Generally, they follow the basic steps of employee recruitment and selection while little is done about employee training, evaluation and compensation schemes. When there is shortage of employees they use announces in the restaurant ambience and rarely on the media. New employees are also recruited through their social groups of people and with the help of other employees. The manager checks for prior experiences, takes an interview with the recruit and after that observes the new employee during the first days. Based on some indicators (which are not formal or written) as time and accuracy of service deliver, the manager or owner decides about the employment of the recruit. Almost all the managers or owners who have responded to the questionnaires state that it is difficult to find the right employees especially when it is the case of the cuisine chief or a good waiter. Some of them have informal relationships with people working in the professional schools and have used these linkages to find trained people. This experience has yielded in good performance. Many of the respondents list the high turnover of the staff as a phenomenon that negatively impact to their business. In the past, they have had many troubles related to that and they are aware of the negative effect it may have transmitted to customers.

TABLE 6: The significance of the physical aspects of the restaurant

The physical aspect of the restaurant or tangibles is a very important element in the restaurant business. As the table shows, all of the restaurants have declared the maximum consideration toward it. The owners and managers consider it as a key element of their entire business. They relate this not only to the considerable sum of money invested in the building and its furnishing but also as a significant element that has a great impact on customers' frequentation of the restaurant. More than ten of them have used designers to design their restaurants and they think that this service has helped in attracting more customers. Meanwhile, the majority of the restaurants have been helped from their friends and relatives in restaurant's design. The responses about the physical elements are straightly related to the building and furniture without giving information about the cleanliness, order or atmosphere of the restaurant.

TABLE 7: Records taken about customers

As the tables above show, the majority of the restaurants do not take data about customers. The restaurants that have rated this indicator at 1 or 2 have based their ratings on the informal records about customers, so in the recognition of the repeated customers and their preferences. This recognition is closely related to employee turnover as it depends on the knowledge and relationship between the customers and the employees who serve them. No one of the restaurants in the sample had formal registration or databases where keeping records about their customers. In this way the main records the restaurants have are based on employees who have been for a long time working in the restaurant and knowing the frequency and preferences of loyal customers or on the knowledge of the managers or owners who spend most of the time in the business.

TABLE 8: Assessment of customers' service quality and satisfaction

formal but based on their memory) of the customers who use to frequent the restaurant. They state that as there are customers who continue to come back, they are satisfied with the quality of the food and service offered. Many of the answers relate the service quality with the fresh food used in the restaurants and with the tasty recipes they offer. They also state to offer good quality and customers' satisfaction as they offer different cuisines from the traditional one to the different international recipes (especially the restaurants whose chefs have international experiences). One way of increasing customer satisfaction is by offering special discounts or by preparing special recipes for repeated customers.

5. Conclusions and recommendations

The tourism industry is considered as a mean of economic development for every country and also for Albania. It has a main contribution in generating more incomes and on improving rates of employment. Tourism industry in Albania is mainly developed in the last 25 years. Albania has declared to rely in the tourism industry as an important mean of improving its economy. In the light of that, it becomes important to conduct studies which explore different sectors of this industry not only to understand how it has developed but also to help practitioners improve their performance.

The restaurant sector, within the tourism industry, is an important part of the entire tourism offer in Albania. This study aimed to offer significant information about the marketing practices used by restaurants from the management point of view. It showed that restaurants use some informal instruments to offer good service but they have not established adequate and formal marketing procedures. The restaurants rely less on advertising and promotional materials and activities while are more dependent on their managers and owners social networks on attracting new customers and attaining the actual ones.

As the number of these businesses has increased and competition has grown faster, it has become imperative for them to use marketing means and continually assess the way their service is perceived by customers. Businesses in the restaurant sector should reinforce their attention toward healthy and high quality food as a key ingredient of their offer and continually assess their employees' performance. They should be engaged on hiring the right people who will be the one to create and maintain valuable relationships with customers through delivering high quality and creating satisfaction. The restaurants should stress employee training and evaluation schemes in order to slow the employee turnover and continually deal with the high competition. The perceptions of management and staff only are not a good indicator of service performance. The most important assessment

would be the one from the customer point of view. So, restaurant businesses should pay attention to customers and the way they perceive the whole experience by continually asking them about their perceptions.

On the other hand, there is need for studies to explore different elements in the restaurant sector. Researchers in collaboration with practitioners should conduct empirical research and assess customers' perceptions about the variables that impact customer experience as service quality and customer satisfaction. Significant factors of the sector as the quality of food, the physical appearance, the atmosphere, employee behavior and kindness, trust and relationships created with customers, intentions to repurchase should be at the focus of future studies. There for, it could be created more insights in the restaurant sector and directions can be given to practitioners for improving their performance and increasing their competitiveness. In this way, this sector could positively contribute to the development of the tourism industry in Albania.

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Strategies for handling supply chain disruptions. A cross comparative case study approach

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Abstract

Interest in supply chain disruptions increased after 2001, due to the devastating effects of the recent disruptive event and due to the increasing vulnerability of the supply chains. Although research interest on this topic has been increasing, no such research has been done in Albania. Regarding strategies for handling supply chain disruptions exist different views in the literature, but nearly no one has considered why some companies were successful in handling the supply chain disruptions and some were not. To fill this existing gap, the actual research will attempt to give an answer to the question "Why the severity of the same supply chain disruption is different for companies in the same industry?" The methodology used was comparative case studies, respectively Dell, Nokia, Daimler, Meggle Albania and Fabjus case study. The analysis and comparison of the case studies concluded that the best strategy for handling supply chain disruptions is a combination of resilience and implementation of robust strategies. This research is important for managers as it will provide a specific framework for handling the disruptions. Managers should be aware that the severity of a disruption depends on the company background and organizational culture. These factors can increase the company resilience. Also, they determine the success in the execution of the strategies for managing supply chain disruptions.

Keywords: *Supply chain disruptions, Severity, Robust strategies, Organizational culture, Company's background*

1. Introduction

Supply chain disruptions begun to receive special attention after 2001. The main reason was the recent disruptive events, such as the terrorist attacks, earthquakes, tsunami and many others, which had caused devastating losses to global companies (Petit, Croxton & Fiksel, 2013). A second reason was the vulnerability of the modern supply chains. They have been always vulnerable but today they are more vulnerable, as firms are less vertically integrated, and their supply chain is located all over the world. A global supply chain can be efficient in term of costs, but it is more exposed to a high range of disruptions rather than a local supply chain (Tang & Musa, 2011).

Supply chain disruptions are becoming critical for many companies. A recent global report about supply chain disruptions reported that 81% of the companies considered had faced at least one supply chain disruption. All the disruptions had devastating financial and non-financial effects and so they need special attention (Business Continuity Institution, 2014).

Although research interest on supply chain disruptions has been increasing, no such research has been done in Albania. The Albanian companies had faced and also are facing many disruptions, and this research could offer to them some recommendations for handling the supply chain disruptions successfully.

This research is important because it will try to filling an existing gap in the literature.

Literature gap: Three different views exist in the literature regarding strategies for handling supply chain disruptions. The first view argues that companies have to be prepared to face disruptions, by increasing the resilience and robustness of their supply chains. The second view argues that the successful handling of supply chain disruptions depends on the reaction of the company after the disruption happened. The third view considers the first and second view together. Sometimes the same disruption hit companies in the same industry. Some recovered quickly from the disruption while the others recovered with huge loses. None of these views can fully explain why some companies were successful in handling the same supply chain disruptions compared to others. This research will try to fill this existing gap in the literature, by identifying the factors that determine the success in handling the supply chain disruption compared to the competitors.

This research is important for academicians because it is filling an existing gap in the literature, and also it will highlight some new areas that need further research. The research is even more important for the Albanian researchers because no such study has been done in Albania. The research is important for managers,

as it will analyze real-life case studies. The analysis of the case studies will provide a framework for handling supply chain disruptions.

2. Research aim, question and proposition

After the terrorist attack on September 2001, the managers have increased their awareness to supply chain disruptions. Many companies have special departments and specialist that forecast the potential disruptions and prepare the company to face them. Being prepared is the first step in handling supply chain disruptions, but sometimes it is not enough. Companies like Dell, Nokia, Chiquita, Toyota, faced disruptions and even if they were not totally prepared, they handled the supply chain disruptions successfully. Their competitors faced the same disruptions, but they recovered with significant losses or some did not recover. The research will try to analyze this puzzle, by addressing the following research question: Why the severity of the same supply chain disruption is different for companies in the same industry? To answer the research question, the author will analyze the strategies used by the companies for handling the supply chain disruptions and the factors that determined their success compared to the competitors.

To handle supply chain disruptions, it is not a matter of having a resilient supply chain or having implemented a robust supply chain strategy. To design a strategy is easy but the execution is difficult. The same strategy cannot work well for each company. There are cases when companies operating in the same sector were hit by the same disruption, but some survived and some did not. Their success was based on many factors, like company background and organizational culture. This discussion suggests the following research proposition: The severity of a disruption depends on the company background¹ and organizational culture.

The article outline is the following: After the introduction section, the relevant literature regarding strategies for handling supply chain disruptions is analyzed. Then, the methodology is explained. After the methodology section the findings are discussed, and the author concludes with limits of the study and recommendations for managers and future research.

3. Literature review

It is necessary to provide some definitions for the main concepts of this research. Supply chain definition: A supply chain consists of all parties involved, directly

¹ With company background the author means the past experiences of the company in handling disruptions.

or indirectly, in fulfilling a customer request. The supply chain not only includes the manufacturer and suppliers, but also transporters, warehouses, retailers, and customers themselves (Chopra & Meindl, 2012). Supply chain disruption definition: A supply chain disruption is an event that might happen in any part of the chain and causes undesired impacts on its (achievement of) objectives and performance (Behdani, Adhitya, Lukszo and Srinivasan, 2012).

3.1 Sources and consequences of supply chain disruptions

The sources of supply chain disruptions are infinite, but for the purpose of this study they are summarized in three broad categories: natural disasters, accidents and intentional disruptions. A natural disaster is defined as any event or force of nature that has catastrophic consequences (Sheffi, 2007). The natural disasters include earthquakes, flood, forest fire, hurricane, lightning, tornado, tsunami, volcanic, avalanche et cetera. Accidents include unanticipated events such as quality accidents, labor accidents, fire, transportation accidents, communication accidents and so forth (Schmitt, Sun, Snyder, & Shen, 2015). Intentional disruptions are the ones that are caused by conscious acts by a person or a group. They can be classified in terrorist and non-terrorist. The last ones include labor strike, adverse media coverage, management manipulations, cyber-attacks and many others (Steckea & Kumarb, 2009).

The consequences of supply chain disruptions can be summarized in financial and non-financial. The financial consequences include cost increase, decrease of incomes, drop in operating income and so forth. The main non-financial consequences are damage to brand reputation and loss of competitive advantage. The last ones are long lasting (Hendricks & Singhal, 2005; Sheffi, 2007; Business Continuity Institution, 2014; Bueno- Solano & Cedillo- Campos, 2014).

3.2 Strategies for handling supply chain disruptions

Regarding strategies for handling supply chain disruptions exist three different views in the literature, respectively supply chain risk management, supply chain disruption management and the integrative framework. Supply chain risk management: The authors of this view stress the importance of increasing the resilience and robustness of the supply chains, which in turn will enable companies to forecast disruptive events and reduce their impacts, in few words being prepared for the disruption. According to them the best strategies for handling supply chain disruptions can be classified in:

- Robust strategies: A robust supply chain strategy is a strategy that helps the company to reduce costs and improve customer satisfaction under normal

circumstances and also helps the company to manage small disruptions and major disruptions by being cost and time efficient (Tang, 2006).

- Security based strategies: The aim of these strategies is to increase the security in all the supply chain, in order to reduce the exposure to severe disruptions (Audry & Bobbitt, 2008; Hilletoft, 2009; Genus & Mafakheri, 2014).
- Resiliency strategies: They help the company to increase the supply chain resilience, which do not merely imply the ability to manage risks but even the capability to do it better than the competitors by gaining competitive advantage. Their aim is to increase flexibility, redundancy and control (Tomlin, 2006; Deane, Craighead and Ragsdale, 2009; Wang, Gilland and Tomlin, 2010; Colichia, Dallari and Melacini, 2010; Marques, Alves and Sousa, 2013; Roh, Hong and Min, 2014).

Supply chain disruption management: The authors of this view argue that a proactive approach to disruptive events is good, but sometimes the disruptive event hit the company when and where it is not prepared. In this case, a reactive approach is necessary. Companies should be able to design strategies that enable them to handle supply chain disruptions and to recover quickly after the disruptive event. For this approach, we can mention the contribution of (Blackhurst, Craighead, Elkins, & Handfield, (2005) . They provided a three-step process for handling supply chain disruption. Sheffi (2007) realized that corporate culture is an important factor in handling supply chain disruptions.

The integrative framework: For managing the disruptions, both the proactive and reactive perspective is important. By investing in supply chain risk management, many disruptions can be avoided and the supply chain disruption management will be faster if the company has proper planning. However, due to cost and time many risks cannot be always predicted, so more attention must be put to the response strategies. There have been some attempts to offer an integrative framework (Pyke & Tang, 2010 and Behdani et. al., 2012) to handle disruptions. The authors did not consider supply chain risk management and supply chain disruption management separately but interconnected.

4. Research methodology

The research strategy of this study is cross comparative by nature and relies on five case studies, respectively Dell, Nokia, Daimler, Meggle Albania and Fabjus case study. The first three case studies were analyzed separately because the aim of these case studies was to provide some important lessons from the experience of global

companies in handling supply chain disruptions. As the saying says “A wise person learns from other mistakes while a fool learns from his experience” (Sheffi, 2007).

The lessons from the experience of these companies in handling supply chain disruptions are crucial in the academic and real world. Many researchers have mentioned these case studies, as an example of success in handling supply chain disruptions, but very few have analyzed them in detail. Also, the lessons from their experience have been of critical importance for managers in different companies.

Dell and Nokia are electronics companies while Daimler is an automotive manufacturer. Electronic and automotive manufacturer companies are more exposed to disruptions as their supply chain is complex and global. Summarizing, Nokia, Dell and Daimler case studies do not only bring important lessons for managers and researchers but also they are relevant to the research aim of this study, because they handled the disruption successfully compared to the competitors.

Even, the two Albanian case studies were analyzed separately. The main reasons why the author has chosen these case studies were the availability of information from the managers of the companies and the compatibility of the cases with the research aim of this study. These case studies were compatible with the research aim of the study, as the same disruption hit two companies in the same industry, but one handled the disruption successfully while the other did not. Many companies did not offer information for this sensitive topic, while the plant manager of Meggle and the owner of Fabjus were very available and provided all the necessary information.

The most relevant data collection technique for this research was in-depth interviews face to face, for the following reasons:

- Interview is a data collection method used to gather qualitative data and this research is based mainly on qualitative information.
- For the topic of the actual research, not every person in the company has full information. Only the high level managers have all the necessary information for the disruptive event and the reaction of the company. So in each company, the author could interview only the high level managers.
- A supply chain disruption is a sensitive topic, and many managers do not like to talk about an event that causes them many losses. Some can say: “Why telling you how I handled the disruption? These are confidential information”. The interview cannot be the same for everyone, as someone can provide information freely, some are more conservative and each company reacted differently to the disruption. So, the researcher cannot have a list of questions, but only a clear idea of the topics she wants to explore. The interviews were conducted face to face in the period January 2015–June 2015, as sensitive information could not be provided via phone or internet.

5. Case study analysis and the research findings.

Firstly, a brief description of the case studies will be provided. Dell case study: Due to an earthquake in Taiwan, the production of chips in the Hsinchu Park decreased. At the time of the earthquake a high percentage of computer memory chips was produced at this industrial park. Major global companies in the computer industry, like Dell, Apple, Compaq and IBM, were affected by this disruption as they used to buy the specific chips by the Taiwanese suppliers. Dell handled the disruption successfully as it gained market share after the disruption. Apple, Compaq and IBM saw their revenues and market shares declining after the earthquake.

Nokia case study: Nokia was the leading company in the phone industry for a long time. Many years ago, it faced an inbound disruption, as the plant of its main supplier, Philips, was stroked by a lighting storm. Philips could not fulfill the orders of its main clients, Nokia and Ericsson. At a first sight, it was forecasted that the delay will be a week, but in reality it was more than a week. Nokia gained market share after the disruption while Ericson retreated from the mobile market.

Daimler case study: After the terrorist attack the security in the customs points was increased. Many car manufactures like Daimler, General Motor, Ford and many others relied on just in time inventory by keeping nearly zero inventories. As the shipment of many parts was blocked at the Canadian and Mexican board, these car manufactures were obliged to stop the production. Ford announced the closure of four producing plants and reported financial losses while the market share and profits of Daimler increased after the disruption.

Meggle Albania case study: Three years ago, the Kosovo Food and Veterinary Agency announced that the milk produced by two Albanian milk processing companies, Primalat and Fast (produced by Meggle Albania) contained two to three times higher levels of aflatoxin compared to the level allowed by the European Union. The media was immediately informed and these brands of milk were blocked in the Kosovo custom. The production was stopped in the two factories. Primalat reported huge losses and was not able to survive to this disruption. Meggle Albania stopped the production for two months, but it returned strongly in the Albanian market later.

Fabjus case study: Fabjus is an Albanian company, which operates in different sectors like production of plastic, construction sector and food sector (vinegar and lemon juice production). On June 2012, one client called Fabjus and its other main suppliers to postpone the delay by few days. Short time delays were normal in every business, but a small delay turned into a permanent delay. After three days, they received a second call. The orders were canceled. Fabjus was able to recover

quickly from the disruption, because it sold the major part of the products, whose order was canceled. The other companies recovered too late and with financial losses.

5.1 Structure of case study analysis

The analysis of the case studies was structured in four main parts. It started with the analysis of the company before the disruption. The analysis was focused on the following elements: company background, supply chain, organizational culture and organizational structure. Detailed information were collected for each element but in the dissertation were presented only the ones that were relevant for this research. In the second part, the disruption was analyzed. The author described how, when and where the disruptions happened and analyzed its effects in the specific industry. The third part was the most important. The author, firstly, analyzed in detail and chronological order the actions and strategies undertaken by each company after the disruption happened. Then, she attempted to understand why the companies have undertaken such actions and strategies. Lastly, the performance of the companies after the disruption and until now was analyzed. For the first three companies, the financial performance was analyzed as many financial indicators could be found easily. For the Albanian companies, this part was descriptive because it was difficult to find realistic financial information.

5.2 Research findings

All the companies studied in this research faced different types of disruptions. Each disruption happened in different parts of the supply chain and their impact sometimes was spread in all the industry and sometimes just on few companies. However, Dell, Nokia, Daimler, Meggle Albania and Fabjus handled the disruption successfully compared to their competitors. Their success relied on different factors. In table 1 are presented these factors for each company.

TABLE 1: The factors that determined the success in handling the disruptions

	Dell	Nokia	Daimler	Meggle Albania	Fabjus
The factors that determined the successful handling of the disruption	Awareness to risk Agile supply chain Company background Organizational culture Human resources Business model Robust strategy: revenue management Strong relationships with suppliers Human resources	Awareness to risk Agile supply chain Sense of urgency Company background Organizational culture Human resources Robust strategy: postponement Strong relationships with suppliers	Awareness to risk Agile supply chain Sense of urgency Company background Organizational culture Robust strategy: Flexible transportation	Sense of urgency Company background Organizational culture Human resources Full supply chain visibility Robust strategy: revenue management Strong collaboration with suppliers	Sense of urgency Company background Organizational culture Human resources Full supply chain visibility Robust strategy: revenue management and postponement Good knowledge of the customer market

Some companies handled the disruption successfully compared to the competitors due to the capabilities of their managers in analyzing the problem, finding a solution and executing it quickly. Global companies have agile supply chains and manifest a high degree of supply chain collaboration and risk awareness. These factors determined their success in handling the disruption. The Albanian companies do not rely on supply chain collaboration but on vertical integration to have full visibility over the supply chain. However, there are two factors that determined the success of the five companies in handling the supply chain disruption successfully compared to the competitors:

Company background: It refers to the company past experience in handling disruptions. Every company had faced at least one disruption. The disruptions small or big need special attention. After the recovery phase, each company should highlight the most important lessons from its experience in handling the disruption. Obviously, the company can face different types of disruptions, and there is no unique strategy to manage each of them. However, companies that have faced before disruptions, are more aware to risk so they invest more in increasing company resilience. Moreover, these companies react quickly when the disruption happens and they did not under evaluate any possible sign that can bring to a serious problem.

Organizational culture: The analysis of the case studies has shown that cultures that manifest the following elements: high level of uncertainty avoidance, high level of collaboration and sense of urgency can handle better disruptions. Companies that do not like uncertainty, try to increase the visibility over the supply chain. In this way, they can detect the weakest links in the supply chain quickly. Supply chain visibility can be increased through collaboration, but not every culture is collaborative. Some societies tend to work in group and to collaborate, while some other companies are more individualistic. The last one can increase supply chain visibility by relying on vertical integration. It is a costly and time-consuming option for global companies but maybe not for local ones.

Dell, Nokia, Daimler, Meggle Albania and Fabjus reacted quickly when the disruption happened while their competitors did not give the same importance to the disruption by reacting too late. The sense of urgency showed by these companies defined their success in handling the supply chain disruptions. Aggressive and active cultures tend to react more quickly than passive cultures.

All the companies analyzed in this research have implemented a robust strategy to handle the disruption. Robust strategies are the ones that help the companies to increase customer satisfaction and profits in normal conditions and also help them to handle small or big disruptions. Each company implemented the strategy that best fitted with its organization. Dell implemented the revenue management strategy as its business model allowed the company to impact directly the customer choices.

Nokia implemented the postponement strategy as it had a flexible supply chain, while Fabjusz implemented this strategy because it was the best strategy for the type of products it produced. So each company designs the robust strategy that according to them is the most suitable with their organization. To design a strategy is easy but the execution is difficult. This research revealed that the execution of the robust strategies depended on the company background and organizational culture.

6. Conclusions

Nowadays, companies are more vulnerable to supply chain disruptions. These disruptions can happen in different part of the supply chain and they can have different sources but in many of the cases they have devastating negative impacts and need special attention. Dell, Nokia, Daimler, Meggle Albania and Fabjusz were hit by the same disruption as their competitors, but they recovered quickly while their competitors recovered with huge losses or some did not recover. To find the reasons behind their success, this research attempted to give an answer to the following question: Why the severity of the same disruption is different for companies in the same industry?

To answer this question, the research strategy used was case studies. Five case studies were analyzed, respectively the success of Dell, Nokia, Daimler, Meggle Albania and Fabjusz in handling the supply chain disruptions compared to their competitors. The analysis of the case studies revealed that the severity of supply chain disruptions depends mainly on the company reaction when the disruption happened. Normally, the severity of the disruptions is low for resilient companies, as they are prepared to face disruptions. Resiliency can be increased through supply chain flexibility and supply chain collaboration.

Based on the discussion in section 5.2, the author can conclude that the severity of a disruption depends on the company background and organizational culture. These factors can increase the company resilience. Also, they determine the success in the execution of the strategies for handling supply chain disruptions. The research proposition of this study holds on, based on the analysis of the five case studies.

The best strategy for handling supply chain disruptions is a combination of resilience and implementation of robust strategies. The last one depends on company background and organizational culture.

6.1 A framework for handling supply chain disruptions

Every company has to be prepared to face disruptions, as in this way it will reduce its vulnerability to disruptions. This is the first step for handling supply chain

disruptions. The author recommends the following actions to decrease supply chain vulnerability:

Identify and prioritize vulnerabilities: The likelihood and consequences of a disruption are different for different companies, so each company should have a specific department that analyze the possible disruptions that can happen, their likelihood and their consequences. The companies can create a disruption catalog, which will categorize the disruptions based on their sources, consequences, likelihood of happening, and so forth. It is important that the information is updated at least on a yearly basis. It will be perfect if all the supply chain partners will have a disruption catalog. Based on this information the company can decide which disruption has the priority compared to the others.

After you have identified and prioritized the disruptions you should decide how you can reduce the probability of the disruption happening and its consequences. The following actions are recommended: **Increase flexibility:** Flexible companies can handle better disruptions. Companies should increase flexibility in production, inventory, supply and distribution. The author would like to stress that each company, based on its financial position, industry and type of product it produces, should decide in what part of the supply chain to increase flexibility. For example, flexible transportation is important for companies that sell products in different countries while flexible production is easier for firms that sell nearly standardized products.

Increase supply chain visibility: Today many supply chains are global and complex, so it is difficult to monitor and manage them. If one part of the supply chain is weak, all the supply chain will be weak. The best suggestion to discover the weakest link quickly is collaboration and continuously information exchange with all the companies in the supply chain. If supply chain collaboration is not easy, companies can try to do not outsource the critical parts of the supply chain or to be nearly vertically integrated. In this way, they can have full control and visibility over the supply chain, and the disruptions can be detected quickly.

Increase supply chain security: All the people in the company have to be trained in handling supply chain disruptions, and emergency teams have to be created. When the disruption will happen the emergency team will be focused on handling the disruption while the company will be focused on what it is good doing (producing or selling).

Understand your business model and culture: Companies have different cultures and different business models, which sometimes help them to face disruptions and sometimes impose limits in handling disruptions. So it is suggested to understand who are the strengths and limits of the company's business model and organizational culture. When managers have to design strategies for handling supply chain disruptions, they have to consider these strengths and limits as the last ones will determine the success of the strategy execution.

Learn from the other companies' experience: A wise person learns from the experience of others while a fool learns from his experience (Sheffi, 2007). A successful company avoids doing the same mistakes done by its competitors. So, managers have to be kept informed about their industry and competitors. They have to analyze how the other companies in the industry reacted to several disruptions and what can be learnt from their experience.

Being prepared is the first step to handle supply chain disruption successfully. But what managers can do when the disruption happens?

Organize internally and then externally: When the disruption happens the first thing to do is to analyze the potential effects of the disruption and the best strategy to handle it. You have to find the root of the problem and the possible solution. For example, Nokia first redesigned the chips (organize internally) and then it started to search for alternative suppliers (organize externally).

Teamwork: Work as a team not as a group. In a team people communicate freely with each other, give their opinion, have the same interests and objectives and trust each other. Nokia handled the disruption successfully compared to Ericsson, because it has worked as a team while Ericsson as a group.

Time is the scarce resource: When the disruption happens, there is no time to loose, every second is a matter of death or life. Companies have to react quickly when the disruption happens.

Supply chain collaboration: Supply chain disruption in many of the times did not happen to the focal company but to the supply chain partners. The actions and strategies of each partner should be coordinated and the decision-making process should involve all of them. This in turn will help the companies to recover quickly, and the collaboration efforts will be increased in the future.

The disruption happened, the company reacted and everything turned back into normality. However, the process of supply chain disruption management should not stop here. The managers should ask: What can be learned from this experience?.

In Figure 1 is presented the framework for handling supply chain disruptions, discussed in the previous paragraphs. Firstly, the company should invest in decreasing the supply chain vulnerability, by following the steps presented in the first box. All these steps can decrease supply chain vulnerability but also they can help the company to react effectively and efficiently to the disruptions. Secondly, the company should react quickly when the disruption happens, and it should collaborate with all the supply chain partners. Lastly, the company must be able to highlight the most important lessons from this experience, as they will help the company to improve its resiliency. The process of handling supply chain disruptions, is an ongoing process, when each step must be coordinated with the other steps.

FIGURE 1: The framework for handling supply chain disruptions



6.2 Recommendations for Albanian managers

The author thinks that there is need to invest in three specific directions in order to increase the efficiency and effectiveness of the supply chain disruption management process.

Investment in knowledge: Many Albanian managers were not accustomed with the term supply chain disruption. Supply chain disruption management was confused with crisis management or risk management. The managers should follow specific courses in supply chain disruption management. In Albania these courses are not present and this can be a limit.

Investment in human resources: Each company should have a supply chain trouble-shooter manager. This person would be engaged in the process of handling supply chain disruptions. He will work to increase the supply chain resilience and to recover quickly when the disruption happens.

Investment in collaboration: The analysis of the case studies has shown that collaboration makes easier the process of supply chain disruption management. Supply chain collaboration includes many elements like information sharing, incentive alignment, decision synchronization and so forth. These elements are interrelated with each other, so the Albanian companies should invest in all the elements not just in one of them. Collaboration is easy when you have the right supply chain partners, so invest more in the phase of supply chain partner selection. They should be selected not just on cost basis. Other factors should be considered like degree of integrity and existence of synergy.

7. Research limits and recommendations for future research

The main limit of this research is related with the Albanian case studies. It would have been better if more Albanian case studies would have been analyzed, especially case studies related to outbound disruptions.

Another research limit is the analysis of the case studies from the focus of the focal company due to cost and time. The impact of the disruption and the reaction of the other companies in the supply chain was not analyzed.

In the actual research was analyzed the success of five companies in handling supply chain disruptions. These companies were from different industries. This can be a limit because the result would have been more reliable, if they were related with a certain industry.

The last limit, but not the least, is related with the methodological choice. As the results derive from the analysis of only five case studies, they have a high degree of specificity. The results should be handled carefully, taking into consideration their specificity. Also, the data were collected using in depth interviews, a method that is affected by subjectivism.

As inbound disruptions were studied more in this research, it is better that the future researches focus on outbound disruptions. One option could be to analyse separately each type of disruption, or to analyse together cases of outbound and inbound disruptions to see if companies handle in the same way these types of supply chain disruptions.

Future researches could analyse a certain disruption during all the supply chain. In this case, it will be studied the impact and reaction to the disruption of all the companies in the supply chain from the suppliers to the customers.

Future researches could be more industry specific. A disruption can happen more often in one industry compared to another and some strategies for handling disruptions could be more successful in some industries, so it would be better to focus the analysis on a particular industry.

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The impact of individual factors in ethical determining of pharmaceutical marketing _____

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Abstract

This study provides the impact of individual characteristics, such as age and level of education, on issues dealing with ethical pharmaceutical marketing. The used data were collected from questionnaires distributed to doctors of the University Hospital Center “Mother Teresa” and pharmaceutical distributor companies operating in the Albanian market. This paper shows that in determining ethical pharmaceutical marketing, age group, has a statistically significant effect. For more, this paper shows that the 31–40 and 41–50 age groups are statistically significant different from 18–30 age group in terms on the determination of ethical pharmaceutical marketing. Also, is shown that the level of education (BA or Master), has statistically significant effect on the determination of ethical pharmaceutical marketing. Based on our results, recommendations are made to improve the ethical reasoning evaluation on issues related to marketing.

Keywords: *individual characteristics, ethical determination, pharmaceutical marketing etc.*

1. Introduction

Interest in thics problems has increased year after year. This is due to the growing number of observed unethical practices. As regarding the business area, the impact of individual factors on ethical problems has until now been the subject of many studies.

Lovisky et al. (2007) suggests that the complexity of the individual factors in ethical decision-making affects the ethical reasoning processes of directors and managers. While Arjoon (2007) states that the individual factors affect the proportional variations in ethical reasoning.

The complexity of personal characteristics plays a crucial role in ethical reasoning because it involves the process of choosing between ethical alternatives.

Studies conducted so far have shown that personal variations play a fundamental role in ethical reasoning as well as in the ethical decision-making in an organization (Mustamil and Quaddus, 2009). It has also been proved that personal factors such as gender, age and experience have different impacts on the individual ethical reasoning (Freeman, 2007; Costingan et al., 2007; Huang, 2006; Mustamil and Quaddus 2009, Khalid et al., 2011).

One of the identified factors affecting ethical reasoning is age.

Freeman (2007) stated that age is an important factor in determining the ability of ethical reasoning. Similarly, Ruegger and King (1992) found that age is an important factor in ethical reasoning: the older a person the more ethical his reasoning becomes. Another study carried out by Cannon (2001), Hyppolite (2003), Huang (2006) and Mujtaba et al. (2009) points out that one of the empirical findings, based on a comparison of individuals aged 30 years and above with individuals up to 29 years of age, is that the age of the individual has an important influence in his ability of ethical reasoning.

However, there are studies such as that of Bastons (2006), which indicates that age does not significantly affect ethical reasoning and concludes that there are other factors that influence ethical decision-making, such as life experiences and family environment. In their studies Christie et al. (2003) and Forte (2004), also support the conclusion that there is no significant link between age and ethical reasoning.

Another identified factor which has an impact in ethical reasoning is experience.

There are studies, such as Forte's one(2004) indicating that experience in a particular field of business has an important relationships with ethical reasoning. Furthermore, Forte (2004) stated that maturity reflects on moral issues encountered in business. This conclusion also supports the arguments given by Kolhberg suggesting

that „individual capacity of moral reasoning develops over time“ (Kujal, 1995). But what happens in the pharmaceutical marketing reality? Marketing is „everything that happens from production to the sale of a product (including even pharmaceutical ones). More broadly marketing in the pharmaceutical industry, includes:

- advertising of pharmaceutical products,
- purchase / sale of pharmaceutical products
- transport of pharmaceutical products
- storing pharmaceutical products
- planning of pharmaceutical products
- market research
- support of pharmaceutical products
- financing
- Customer service

Honest and clear communication is very important in pharmaceutical marketing, and this based on the pharmaceutical ethical code.

The sale of pharmaceutical products is essentially an extension of the marketing program where experienced managers directly introduce products that the market demands. Field Communication, conducted by marketing teams or certain groups in order to ensure the sale of pharmaceutical products, must always be in accordance with the rules of the Pharmaceutical Code of Ethics.

Nowadays there is an increase of unethical marketing in pharmaceutical activities by pharmaceutical companies, in collaboration with various doctors. These activities include: the distribution of gifts to doctors, sponsorship of social activities, sponsoring training seminars or conferences abroad, giving free samples etc. Ethical issues raised by the use of such marketing strategies are the focus of analysis and discussions in the medical literature.

This paper, driven by the studies made in this field for the impact of individual factors on ethics, makes modest efforts to investigate the influence of age and education level on some issues dealing with ethics and behavior of physicians and pharmaceutical companies regarding pharmaceutical marketing. The instrument used was the questionnaire, which was distributed in 30 pharmaceutical companies in our country and in 30 doctors of the University Hospital Center „Mother Teresa“.

2. The purpose and the objectives of this study

The main purpose of this paper is to analyze the impact of some of the individual factors in determining ethical pharmaceutical marketing.

Objectives of the paper:

1. To investigate whether age has an impact on the definition of ethical pharmaceutical marketing
2. To investigate whether the educational level has an impact on the definition of ethical pharmaceutical marketing.

3. The research question, the hypothesis and paper methodology

Research question

Do individual factors such as age and education effect in the ethical determining of pharmaceutical marketing?

Hypothesis:

1. H_0 : Individual factors do not have a statistically significant effect in the ethical determining of pharmaceutical marketing.

Ethical issues appearing in the sales practices of pharmaceutical products are highly problematic because of their direct impact on citizens' lives. Hence the importance of this paper deals with the handling of the impact of individual factors in the ethical assessing or non-ethical assessing of pharmaceutical marketing.

The instrument used in this case was the questionnaire, which was distributed to 30 pharmaceutical companies which are present in the Albanian market and 50 doctors at the "Mother Teresa" University Hospital Center. Non probability selection techniques were used, operating with known persons. The data were taken from all the pharmaceutical companies and only 30 of the 50 doctors to whom the first questionnaire was distributed. Doctors who filled the form are of different specialties, of which 3 with the title of professor and 27 others with different degrees (15% margin of error). At UHC Tirana, there are already contributing a total of 190 doctors, of whom 44 titled professors and 146 are doctors of varying degrees. In order to process the data we have used the statistical package SPSS20. The statistical tests used in this paper are: Shapiro-Wilk test, Kruskal -Wallis test, Mann Whitney U test, as well as the multiple comparisons based on the ranks table.

4. Analysis and data interpretation

Develop now the sub-hypotheses to test whether individual factors have a statistically significant effect in ethical determining of pharmaceutical marketing.

In this paper we examine these individual factors: age group and educational level. The first sub hypothesis tests the influence of age group in ethical determining of pharmaceutical marketing. The tested variables are: The dependent variable: The ethical determining of pharmaceutical marketing. The independent variable: Age group. For the measurement of the dependent variable, in the questionnaire are used scenarios for which should be given the answer with the Likert's scale, if the issues they address are considered as ethical issues or not Scenarios include the following: party organization, sports activities, sponsoring training seminars or abroad conferences, providing free samples as well as cash prizes for doctors.

First, we test if the dependent variable is taken from normal distribution. The null and alternative hypothesis are written as follows:

H_0 : The ethical determination of pharmaceutical marketing (the dependent variable) is taken from normal distribution.

H_a : The ethical determination of pharmaceutical marketing (the dependent variable) is not taken from normal distribution.

To test for normality data, we use the Shapiro – Wilk test.

From the output below, we see that:

$$p=.000 < = 0.05$$

TABLE 1: The result from Shapiro-Wilk test

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
The ethical determining	.286	60	.000	.813	60	.000

a. Lilliefors Significance Correction

Since the p-value is smaller than , the null hypothesis is rejected and alternative hypothesis is accepted.

The result: The ethical determining of pharmaceutical marketing (the dependent variable) is not taken from normal distribution.

In these conditions, we use non-parametric tests to test the bellow hypothesis.

Sub-hypotheses1

H_0 : Age group has not a statistically significant effect in ethical determining of pharmaceutical marketing.

H_a : Age group has a statistically significant effect in ethical determining of pharmaceutical marketing. Based on data collected from questionnaires, ages of respondents were divided into 3 groups:

Group	Age group
1	Age 18-30
2	Age 31-40
3	Age 41-50

As the dependent variable was not taken from normal distribution, we use Kruskal-Wallis test. From the table below, we see that: $p = 0.012 < 0.05$.

TABLE 2: Kruskal – Wallis test

Test Statistics ^{a,b}	
	Ethical determining
Chi-Square	8.814
df	2
Asymp. Sig.	.012
a. Kruskal Wallis Test	
b. Grouping Variable: age group	

Based on p value, we reject the null hypotheses and accept the alternative hypotheses. The result: Age group has a statistically significant effect in ethical determining of pharmaceutical marketing. Let us see now which age groups differ from each other regarding ethical determining of pharmaceutical marketing. For this, we refer to the below table of ranks:

TABLE 3: Ranks Table

Ranks			
	Age-group	N	Mean Rank
Ethical determining	Age 18-30	6	50.42
	Age 31-40	20	28.70
	Age 41-50	34	28.04
	Total	60	

From the above table, it comes up that the age group 18-30 differs from age groups 31-40 and 41-50 regarding the ethical determining of pharmaceutical marketing, meanwhile the age groups 31-40 and 41-50 do not differ from each other.

This result shows that the age group 18-30, unlike the 31-40 and 41-50 age groups, does not define the issues presented as problems dealing with ethics in marketing.

Sub-hypotheses 2

H_0 : Educational level has not a statistically significant effect in ethical determining of pharmaceutical marketing.

H_a : Educational level has a statistically significant effect in ethical determining of pharmaceutical marketing.

The dependent variable: Ethical determining of pharmaceutical marketing

The independent variable: Educational level

In this paper, we have considered two levels of education: graduate and postgraduate level.

To compare the two levels of education if they differ regarding the ethical determining of pharmaceutical marketing, we have used the Mann-Whitney U test. From the table below, we see that:

$$p = 0.012 < 0.05.$$

TABLE 4: Mann-Whitney U test

Test Statistics ^a	
	Ethical determining
Mann-Whitney U	295.000
Wilcoxon W	730.000
Z	-2.302
Asymp. Sig. (2-tailed)	.021
a. Grouping Variable: Educational level	

Based on p value, we reject the null hypotheses and accept the alternative hypotheses. The result: Education level has a statistically significant effect in ethical determining of pharmaceutical marketing.

5. Conclusions / Recommendations

The findings of this study confirm the results of several previous studies made in different cultural contexts and different business areas. The study showed that age has a significant impact on the determination of ethical pharmaceutical marketing. Based on statistical tests carried out it was shown that 18-30 age group have

significant differences from 31-40 and 41-50 age groups and this concerning the definition of ethical pharmaceutical marketing.

Furthermore the study showed that the level of education (which in most cases is related to the years of experience), has a statistically significant effect on the determination of ethical pharmaceutical marketing.

Based on our findings, we give these recommendations to the relevant bodies in the field of education.

Recommendations for the ethical evaluation of pharmaceutical marketing:

- The application of a module as part of graduate studies at the University of Medicine, entitled "Ethics in pharmaceutical marketing and pharmaceutical management"
- The assignment of a number of credits for health professionals focused on ethical behavior for pharmaceutical marketing.
- Including questions about defining ethical behavior and ethical pharmaceutical marketing in the content of the licensing test for health professionals.
- The development of an oath about ethical behavior in the pharmaceutical business.
- Including specific topics in seminars and educational programs about setting ethical pharmaceutical marketing.

Paper restriction:

The lack of time and resources, obliged us to distribute the questionnaire only to wellknown doctors of the "Mother Teresa" University Hospital Center.

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BGP: A protocol for the “inter domain” routing

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Abstract

Border Gateway Protocol (BGP) is the current protocol inter-domain routing applied to the Internet. BGP, originally a simple protocol path-vector is always so incrementally changing over time through a number of mechanisms to support the policy, increasing significantly the complexity. Although the performance of the Border Gateway Protocol is always accepted, the size, the heterogeneity and variability that characterize the Internet today, constitute a challenge to maintain the quality of service (QoS) setting increasingly demands for BGP traffic distribution packages database. Many of the BGP mystery stems not only from the complexity of the protocol, but also by a lack of knowledge of the basic policies and the problems that ISPs face. Last security analysis obtained from research communities have reported clearly unsatisfactory characteristics of BGP such as low integrity and slow convergence through theoretical analysis and empirical measurements. Thus it is evident that Internet routing infrastructure is quite vulnerable. Misconfiguration of routers often brings injecting large routing tables in BGP routing system. In the paper are described theoretically the characteristics and the problems associated with BGP and also the expectations of today's Internet users to applications in real time.

Keywords: AS, BGP, Traffic Engineering, QoS.

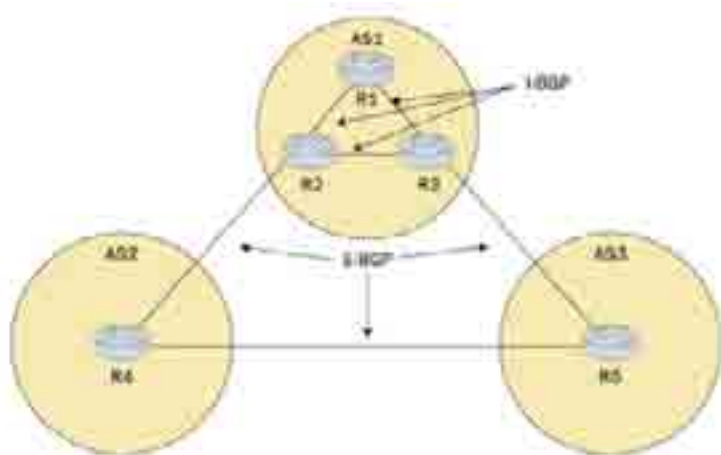
1. Introduction

Border Gateway Protocol (BGP) is simply another routing protocol, but with a very different role from others by serving as a connector that enables the functioning of the Internet. Moreover, the fact that each AS is managed by a different

authority complicates the situation compared with intra-domain routing. BGP is implemented in a router and the messages are exchanged through a sustained TCP connection between two routers (by simplifying the complexity of implementation so the reliability of transport). Routers executing a BGP routing process are known as BGP speakers. Two BGP speakers that create a TCP connection with each other, in order to exchange routing information, are regarded as neighbors or pairs in communication. The local traffic running through an AS is classified as local traffic or transit traffic. The local traffic comes from or ends in the AS where is the IP address of the source or the destination. Any other traffic that crosses the AS is qualified as "transit traffic". An important goal of BGP Internet traffic is precisely reduction of the transit traffic. According to what we discussed about the traffic, we can affirm that a BGP router can communicate with a BGP router that are in the same AS with it (known as I-BGP) or other various AS-es, (known as E-BGP). All routers that "talk" I-BGP Within the same AS should establish links with each other according to the model "fully connected mesh". These links do not necessarily have to be physical it is enough only that these routers have to establish a reliable communication channel, TCP, among them. With no mechanism to detect endless cycles in I-BGP, routers that "talk" I-BGP must not convey routing information to third parties against their neighbors. E-BGP routers, contrary to the previous, can alert information to third parties to their neighbors E-BGP.

The following picture shows R1, R2, and R3 routers that use I-BGP to exchange routing information inside the same AS, and the R4-R2, R3-R5, and R4-R5 routers pairs that use E-BGP to exchange routing information between AS-es.

FIGURE 1: Internal BGP (I-BGP) towards external BGP (E-BGP)



As we discussed above, BGP is a protocol which is used to maintain the routing information between AS's. Most of the routing protocols are based on intra-domain

algorithm Dijkstra. But BGP is a protocol based on "vector path" (path-vector), which means that the routing information contains a vector with ASN (each AS-es are made available to a number in order 0-65535) indicating the path of the AS-es that crosses a certain prefix (any AS also owns a sequence of IP addresses which may decide to allocate into more small groups that contain several continuous IP addresses, known as IP Prefix.). Based on the information exchanged between BGP routers is built a graph autonomous system (known and as tree).

2. BGP functionality characteristics

Regarding BGP: The whole Internet is a AS-s graph, connections between two AS-es form a path, the collection of information on paths forms a path to a specific destination and the routing within an autonomous system is realized through the IGP. Four types of messages are specified for BGP:

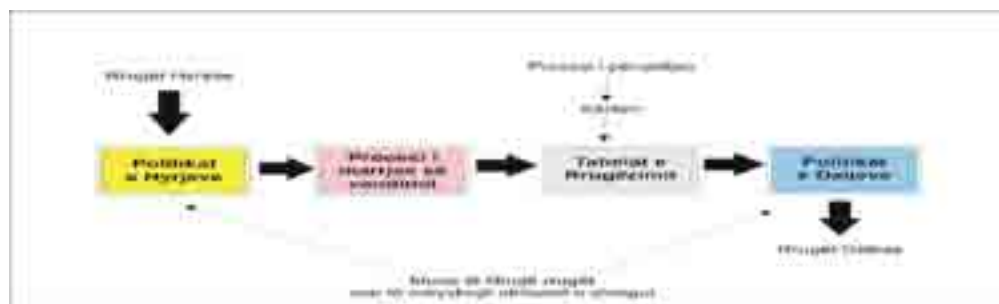
- Open message – which are the first messages that are sent and open a communication session between pairs.
- Update messages – provide updates on routing allowing the construction of a stable picture of the network topology. These messages enable the repeal of inappropriate roads and notification of new roads.
- Notification messages – Are sent in case of errors to inform the participants in the active session about the closure reasons of this session.
- "Keep alive" message – notifies the BGP pairs that an equipment is active dhe the session should not be closed. BGP routers don't have a complete view of the network topology. Every router knows only how to reach the neighbours directly and especially through which neighbour in particular can a network prefix be achieved.

3. BGP routing

Most of the routing protocols which receive the routing information, use it to create routing tables and share the tables (or parts of it) with a lot of other routers on the network. What makes a protocol BGP unique is its ability to enforce policy on the information contained in the update messages, and consequently refreshing the selected information based on the attributes of the information itself. Routing policies define how are managed the paths taken by BGP nodes and sends this information to these joints. In many cases, policy routing filtering consist of paths, some paths acceptance, acceptance and modification of other roads and

konështimin of some. When updating messages are obtained by a BGP router, they are subject to a manufacturing process in accordance with a series of policies that determine how and where the information will be stored. In order to allow the control over the selection of the routes, the BGP announcements have added some attribute that allow changing decisions based on their values. The router compares the values of those attributes for each route, according to a ranking list and selects the path that has acceptable values for the attribute. If the values are the same, passes to attribute pauses. The selected way it will be used to forward packets. Through attributes is made possible that a longer route (which passes through more AS) to be selected towards a shorter one (these are very useful attribute in ISP networks). Koncepti i funksionimit të BGP mund të përmbledhet në figurën më poshtë:

FIGURE 2: Funksionimi i BGP – Politikat e rrugëzimit



A one path BGP speaker (the preferred way) can be used for a purpose and it is forbidden to spread different paths from that of the preferred in use. When a new advert is received, are used the routing implemented policies to see if the new route is better than the existing one. If this is the case, the old path is replaced with the recently received one. Later, if the policies permit it, the path is announced to the neighbors. BGP is an incremental protocol (incremental). When a router is connected for the first time with a neighbor it is broadcasted the full BGP routing table. After that, they sent regular updates on the routing information unless there are changes on the way. In theory messages should be sent only when are notified of a new path, updated (reflected changes) or revoking a path. BGP requires each router to store the information received from each neighbor and sent the information to other neighbors.

In order to route a data packet in a particular network, is needed the identification and the determination of the location of the destination network. BGP uses the routing with prefix to address the nets. The prefix of a network is based on the idea of setting an identifier for any network so that each data package to be clear if the destination is located to a certain network. Prefixes do not provide any information

on how the network reaches its destination. This information should be obtained from the use of BGP protocol. In the context of BGP, the mainting information on the connections means being able to identify how a data packet is route to the destination.

In addition to the default route will be saved also all the alternative roads that lead to a particular network prefix from other neighbors. The reason for this is the need to restore the connection as soon as the predetermined path becomes unavailable.

4. BGP convergence

BGP is executed simultaneously in routers setted in different AS and therefore, the process of choosing an Internet path is filled out and distributed in a distributed way. The result of a distributed algorithm may depend on the initial condition of the system and the order execution process. In some cases, a distributed algorithm can achieve more stable condition although stable conditions are accessible in the initial state or another execution sequence would be chosen. When a router changes his best path, they can form closed loops, temporary and can lose packets. In the process of selecting the BGP path does not converge, some routers can continue to change their path infinitely better, which can have a devastating impact on Internet traffic. For this reason, the protocol convergence is an important issue in the design of the Protocol of inter domain routing.

As most of the specifications of routing protocols, BGP includes a “stopwatch” for each ad to limit the order of BGP updates. Without limiting element, a pair would send updates to its neighbors whenever the best path changes, even if the path to a prefix changes several times within a few seconds. In BGP, the “stopwatch” is called Minimum Route Advertisement Interval-timer (MRAI).

A “stopwatch” jittered type means using values that vary randomly. MRAI typical value is 30 seconds. Whether were used exactly 30 seconds for each router, it will be transformed to self-synchronization of routers. This in its turn implies sending update messages at the same time, every 30 seconds [19]. This is an undesirable effect for BGP. This can be avoided just by modifying the range of “stopwatch” randomly for each router but implemented in a way to achieve values between 25 and 30 seconds.

MRAI can trigger sending multiple updates in a section between the lateral communication as shown in Figure 3. AS1 has added a new prefix P and therefore is sending a BGP update message ddest AS2 and AS3 on the path P: AS1. This update is received from AS2, added to the routing tables, and sent to the AS4 because AS2 has not sent any update to AS4 within the last 30 seconds. AS4

receives the update, adds the code in the array and sends the updates to AS5. AS3 has also received information and updated the table, but can not send it to AS4 as long MRAI interval has not ended. Once the AS4 receives the update, it understands that this is a better path and updates the routing table for this prefix with new information and sends an update of another prefix P, AS. As noted, in a so simple example, AS1 served as a source for an update prefix P and AS4 has no need to send two updates for the same prefix.

FIGURA 3: Example for the spread of a BGP update

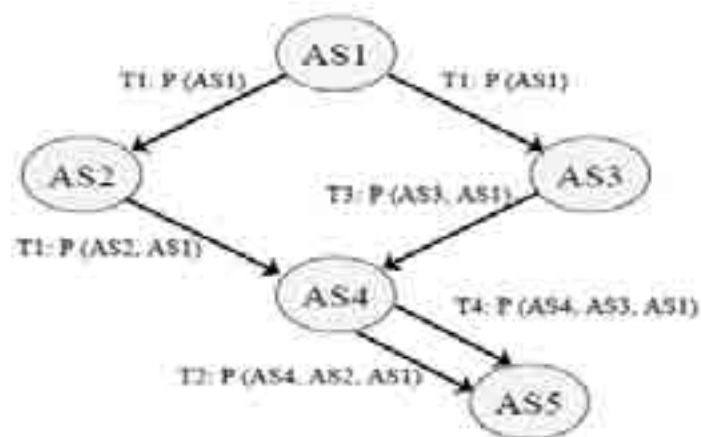


Figure 2.2: Example: BGP update propagation.

Delivering the updating messages depends mostly from the topology and on the number of alternative routes. BGP previous works has shown that if there is not any restriction, nodes tend to share a large number of updates to the unstable paths (routes flapping). Through Route flap damping mechanism [20] is attempted to avoid an unstable path to make Internet overload update messages. The main idea behind it is to keep a history of updates for a specific prefix and updates refuse to believe that exceed certain predetermined parameters. For example, a number of updates for one hour may be too high. BGP is a protocol that sends incremental updates only if there are changes about the topology and / or the achievement. In theory, the changes are followed by some updating messages sent between nodes. Once the parties have renewed their favorite routes, BGP world turns quiet again. The time between the change and the time when all pairs have chosen new favorite paths represents the concept of convergence. The convergence process ends when all pairs have established their new routes, the preferred ones. This is a naive concept. In reality, due to the size of the Internet (about 15 000 AS, 120 000 prefix) and many other factors, it has a constant traffic noise of BGP. And

therefore the process of convergence has to be studied in more details. Whenever the ability to reach a network changes, there must be a reason for this. This is known as the event of instability. A partial list of the possible reasons is as follows:

- Failure or repair of a physical link.
- Restarting the router (eg. To update the software).
- Changes in the AS's policies.
- Addition / deletion of the prefixes of the grid.

The event of instability can affect the connection within or between AS's. When the interior connection of an AS is included, it triggers the convergence process within the AS, the IGP protocol [21]. Connecting events with BGP IGP (IGP redistribution in BGP), is inconsistent with the operational practices. BGP normally should not be involved in the event of instability.

When an instability event affects the connections between AS's, it causes the repeal of a previous path or the announcement of an alternative route. If we see the effects of instability in the BGP event we distinguish moment followed by the first update sent by BGP BGP node affected by the event. This new information spreads through the achievement-at BGP router and more preferably, there will be other updates and this is where it is said that the network has converged with regard to this prefix. From the perspective of a router, this can take a number of updates from each party, a new way to calculate the best and TJA notify other parties. All this procedure will be called in BGP convergence process.

5. BGP instabilities

BGP has met many of the requirements of today's Internet, but there are many weaknesses. Issues as diverse as programming errors, TCP attacks or network overload can cause instability in the routing tables of BGP routers.

- The phenomenon of "black hole" - One of the classic problems of BGP phenomenon known as the "black hole". In this problem, a mistake, an attacker or a misconfiguration causes a BGP router to announce mistakenly through which AS where taken part, eg AS X, there are treks to several networks at low cost. This in turn causes many-a BGP routers to update their routing table with this information. As a result, a large amount of traffic will pass through AS X. This unexpected traffic turn causes instability of the routing tables, large amounts of network packets and lost resources and ultimately a decline overload to AS X.

- b. The weaknesses of TCP - Another important weakness of BGP is connected with the transport relevant protocol used by BGP, which is TCP. This protocol is vulnerable to some types of DOS attacks, errors in programming and network congestion on the lines used. Eg. a type attack "SYN flooding" on a server, can cause that the connections provided between the BGP parties to not lose the existing ones, if the traffic generated by the attack causes overload of the network.
- c. Network overload - Network Overload can be pathological for BGP and cause instability in the routing tables. For example, if a very large amount of traffic is destined to pass through an AS-art specifically, it is likely that the links connecting the AS with the outside world to be overloaded and thus can pass messages keepalive exchanged through a TCP connection set to lose or TCP connection and detach itself. In this case will be losen the neighborhood between two BGP routers.
- d. Route flapping - routing instability can be described as a rapid change of the information on the accessibility of the destination information and network topology. It occurs when a path is repealed and then renotified, in this case we say that it fluctuates. Instable paths are costly because routers should calculate new paths whenever a new message is received. This causes high load on the router and can lead to a failure (crash) of it.

Several techniques have been developed to improve the instabilities of BGP. The two most important are:

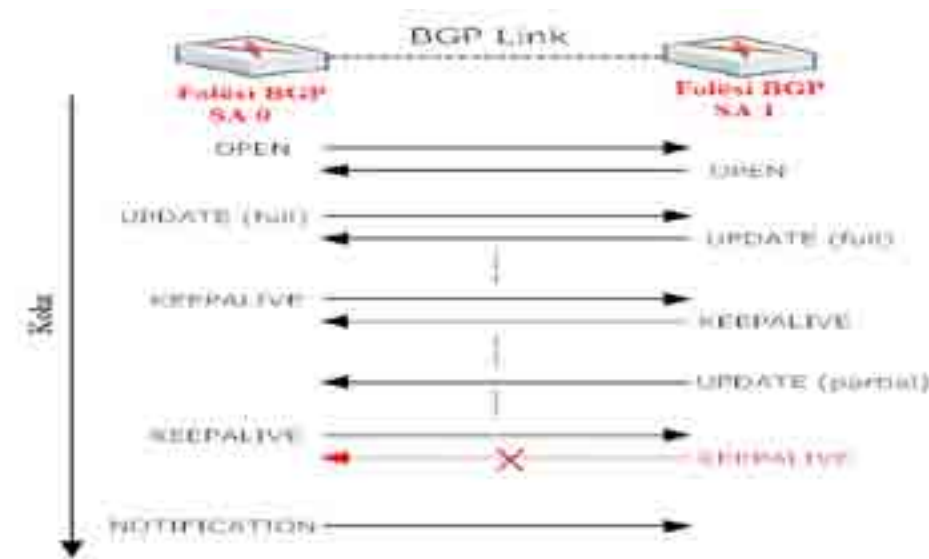
In the case of varying paths, some implementations of BGP, use a mechanism known as "path extinction" (route damping) – to a varying path is dedicated a punishment value and if that value exceeds a certain limit, this path is considered as invalid. The value of the penalty is reduced over time. Fluctuations in the path terminates, it punishment that was decided repealed.

Message aggregation often there is a link between the refresh messages and those of the revocation. Usually, when a path is repealed, repeal message directly associated with a notification message - the road may be subject to changes of behavior or a pathology. To reduce the traffic volume of that message is in our interest to not distribute it immediately after its generation, but preserve it for a long time and aggregate the information. In this way if the path it is repealed and then re-announced, it is correct to void the two messages so that the general situation remains the same. This method reduces the volume of traffic and the processing in the BGP routers. Unfortunately both of these methods brings delay in the path distribution. So regardless of the protocol and the paths stabilization, convergence time is increasing.

6. Session management between the "pairs"

When routers that support BGP want to open a communication session, then they open a TCP connection on port 179 with the match router. After the connection is established, any entity sends an opening message to negotiate the communication parameters of the session. In order to be aware of the validity of this relationship and to monitor router-at neighbors, routers often send keep-alive messages. During the opening of the exchange of the messages, BGP routers determine the waiting time, the maximum time to wait before sending a message successor. Lack of presence of a message in this interval indicates that another entity is not functioning normally. If an entity within the „couple“ communication takes a wrong message, badly formatted, or you get nothing within the time waiting then sends a message type notification entity neighbor, deletes all table of routes that take him and thankfully closed TCP session. Below are shown the steps used to achieve a communication session BGP.

FIGURE 4. BGP message exchange



7. Routing information exchange

Initially, before the exchange of routing tables, 2 BGP routers establish a communication session. Then the entities can exchange all routing table that dispose,

through a series of messages (UPDATE). Routers are supposed to memorize all paths offered by other entities in the session. After finishing all routers are sending updates to each other part of new paths on their tables.

Update type messages can cover 2 types of informations: 1) Announcement and 2) Retreat. An alert informs its recipient for a new path to the destination prefix, and a withdrawal cancels previously announced path. In addition to the coverage information, a message update contains a variable number of attribute paths, which describes the features of the path, from which we can mention: local preference, next-hop, Origin type, AS path and multi-exit discriminator (MED).

Let's see what describes each of them:

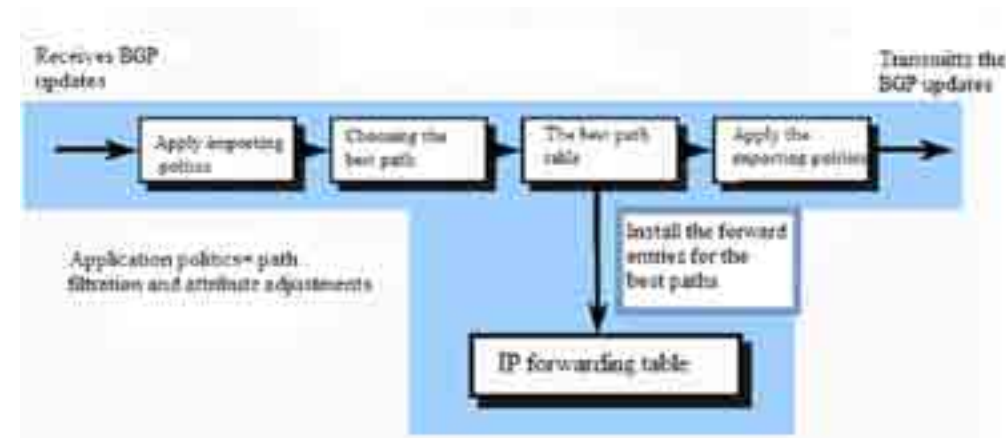
1. AS path attribute contains a list of all the autonomous systems that prefix described. AS path BGP uses to detect cycles as well as to choose the path. When a router receives a BGP update then examining whether the vector of the road and sees its number of Autonomous System then it invalidates this path.
2. Next-hop attribute represents the IP address of the router's to be used to achieve the desired network.
3. Origin type attribute identifies how AS beginners learned about the path, within the Autonomous System (static configuration), a version obsolete Exterior Gateway Protocol (EGP) or is injected by another routing protocol. Origin types are known as IGP, EGP, or unknown (incomplete).
4. Multi-Exit Discriminator attribute encourages the recipient to determine which of the exit points to guide the traffic to the neighboring autonomous system.
5. Local preference attribute may be included in iBGP messages (for which they will discuss below) to help the receiver to rank the paths taken from a different router in the same Autonomous System.

8. Path finding and processing

There are two types of BGP sessions between the entities: the external BGP (eBGP) for various entities between Autonomous Systems and the internal BGP (iBGP) for entities between the same Autonomous System. The Figure 2.3 shows the steps for BGP route finding. At first the router applies import policies to filter unwanted paths. For example, a BGP router can receive notifications from an AS path that contains a trusted set of autonomous systems. Then router calls a decision-making process to choose exactly a better path to any destination prefix, comparing the new path with all other routes previously recognized for the same

destination. The router applies a sequence of steps to tight the candidates set to 1 only. The best way of choosing this path will be installed in the distribution table, while other paths will be kept for backup purposes.

FIGURE 5. BPG path choice



In the end, the router applies export policy to manipulate attributes and decide whether to announce this path to neighboring autonomous systems. If yes, the router can modify some of the attributes of the path. It will eventually add its AS number to the AS path.

8.1. Path devaluation

If a router receives withdrawal information, first it removes the impaired path from his records. If the path that is removed is currently the best way, the router requires in its backups for the second best path and if that does not work then calls it as an unreachable destination. If the last one is applied, the depreciation notification must be brought to each entity that learned the path from previous announcements.

8.2. Path reflection

In the iBGP standard implementation, all BGP routers within the same autonomous system are so closely related to the routing information so that out of the distributed system among all routers within the AS. But this model can create problems with the scalability when AS has a large number of BGP speakers. Reflecting the road creates a way to reduce the BGP traffic control, this by minimizing the number of messages sent within the system update Autonomous.

The concept of route reflection is based on the idea of creating a node (router) concentration (reflective), which function as a focal point for iBGP sessions. In

the paths reflection, BGP systems are organised in batches (clusters). Each cluster consists at least one router acting as a path reflector, along with any number of client entities. Entities outside the cluster entities are not considered clients. Reflector paths redistribute routing information to any entity, whether or not a customer. Because of the way Reflectors redistributes paths within the cluster, BGP routers are not required to be fully connected.

When a path reflector receives a path, he chooses the best path. Later, if the path comes from a non-entity client, the reflector sends the path to any entity within the cluster client. If the path is from a client entity, the reflectors sends path to any entity not customer and not client except that the one from which is generated. During this process, no entity client sends paths to each other.

9. Conclusions

BGP is categorized as a path vector protocol (PV), a variant protocol distance vector (DV). Rather than transferring the information about the state of connectivity and cost, it leads the information on the full path to avoid excessive cycles. BGP contains communication protocol TCP as the transport layer, which is on his side secure protocol and eliminates the need for BGP assume retransmission, approval (ACK) and secuenciality. Routers using BGP as their protocol are called BGP speakers. Two BGP speakers participating in a session are called BGP neighbors or couple. Routers couple exchange 4 types of messages: open, update, and keep-alive notification. Of all these messages contain only update routing information while 3 others serve for managing the communication session.

Based on what is mentioned above, the characteristics of routing in the Internet today can be summarized in the following general principles, about the paths between two nodes u and v :

- If u and v are in the same AS, the path between them remains entirely within the AS.
- If he is in AS v U and V AS is the path between u and v moves from u to zero or more AS transits.

Initially, before exchanging the routing tables, 2 BGP routers assign a communication session. Then the entities can exchange all routing table, through a series of messages (UPDATE). Routers are supposed to memorize all routes offered by other entities in the session. Once all is completed, routers send to each other the partial updates of the new paths in their tables. At first the router applies import policies to filter unwanted paths. Next the router calls a decision-making

process to choose exactly a better way to any destination prefix, comparing the new path with all other paths previously recognized for the same destination. The router applies a sequence of steps to narrow the candidates set to 1 only. The best way of choosing this path will be installed in the distribution table, while other routes will be kept for purposes of backup.

In conclusion, the router's export policy is applied to manipulate the attributes and to decide whether to announce this path to neighboring autonomous systems. If yes, the router can modify some of the attributes of the path. It will eventually increase it's AS number to the AS path.

If a router receives a withdrawal information, first it removes the impaired path away from his records. If the path that is removed is currently the best way, the router requires its backups in a second best way and if that does not work as well then calls it as an unreachable destination. If the last one is applied, an impairment notification must be carried to every entity to learn the path of previous announcements. In the IBGP standard implementation, all BGP routers within the same autonomous system are so closely related to the routing information out of the distributed system among all routers within AS-es. But this model can create problems with the scalability when AS has a large number of BGP speakers. Reflecting the road creates a way to reduce the BGP traffic control, this by minimizing the number of messages sent within the system update Autonomous.

The concept of route reflection is based on the idea of creating a node (router) concentration (reflective), which function as a focal point for iBGP sessions. In reflection of the way, held in batches BGP systems (clusters). Each cluster consists of at least one router acting as a street Deliberators, along with any number of client's entities.

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Social media and brand management (literature review)

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Abstract

Social media use has expanded greatly in the last years in Albania. The development of different networks that offer online service all over the country has contributed a lot to it. Many people, particularly young ones, are very fond of it, are using heavily and social media networks are now part of their lives. Social media have changed the way people communicate and interact with each-other and the marketing done on social media has enriched their marketing mix and has transformed the way companies communicate to their customers. Companies and brand managers have the opportunity to benefit from the use of these new communication channels and boost their profits. The purpose of this study is to offer a review of the existing literature about social media use by companies. It focuses on the marketing generated through social media channels and the specific elements related to it. Extant research evidence the significant effect that social media marketing has on the overall communications between companies and customers and the benefits and challenges associated to it.

Key words: social media marketing, brand, consumer

1. Introduction

Technological developments in the last decades have offered new ways of communication between people and organizations. Internet is an innovative way for individuals and companies to communicate. Internet use has become a normal phenomenon during the last decade and an essential element of everyday life (Amichai-Hamburger & Vinitzky, 2010) as it influences many human and business aspects from the way in which organizations operate to the way people

communicate, shop and spend their leisure time. People can socialize, search and spread information online and this is a big transformation. The development of Web and especially Web 2.0, where there is a high level of interaction and users can gain and generate information has contributed to these changes. At the beginning of internet and social media use, the interaction between people through these media was unidirectional; one-to-many media content. While technology continually evolves, social media used today enables two-side interaction and peer-to-peer messages and communication between specific individuals and/or organizations in an online environment, so users and customers can generate the information. Internet is a powerful media that offers the opportunity for having public and private social interaction. There are huge amounts of information that can be distributed in a small amount of time. This element is very important in business and especially in marketing where communication is very important and key to create and maintain positive relationships between companies and customers. Hughes et al. (2011) stated that Internet is a strong mean of communication and it may reshape the way people and companies communicate by contributing to the reduction of the barriers to face-to-face interaction. Internet and social media marketing has greatly impacted the communication and marketing activity of companies and individuals by also multiplying their effects. Researchers state that there is an increasing need to update the understanding of social media and to develop knowledge which suits the imperatives of marketing in social media environments (Hennig-Thurau et al., 2013).

Social media are websites and softwares that serve a primary function of allowing users to "connect, communicate and interact with each other" (Correa, Hinsley & Gil de Zúñiga, 2010, p. 248). Saffo and Brake (2009) stated that social media has to do with the activities, practices and behaviors that are created among people who gather online to share information, knowledge and opinions. The use of social media is continually growing rapidly and data from different researches (ex. Pew Internet, 2016; Smartinsights, 2017) show that among the different social media, Facebook, Twitter, WhatsApp, Pinterest, Instagram and LinkedIn are among the most used.

These media offer a direct way to communicate and socialize with others and get their feedback, by influencing so on individuals' choices and self-esteem (Pempek et al., 2008). People communicate with each-other through these media and share elements of their personal, social and economic life. Social network sites are an important tool that satisfies communication needs and wants, a key element in the marketing of every business. This kind of communication allows their users to interact over social media not only with friends but also with unknown institutions as organizations and brands. Social network sites have received considerable attention from researchers, organizations and the general public because of the increasingly large user-base of their sites. They are thought

to help on creating and maintaining more extensive social networks and business relationships between people and organizations due to the reduction of costs (e.g., time, effort) for developing and maintaining relationships (Donath & Boyd, 2004) and their significant impact on exchanging valued information. Blogs and consumer generated information on social media are used as valuable resources of managing and evolving customer relationships with brands (Gensler et al., 2013). Social media marketing is relatively a new but rapidly growing platform for companies for creating and maintaining relationships with customers and forming customer positive image about the brand (Erdogmus & Cicek, 2012) and it is eagerly explored by academics and practitioners.

Users differ in their characteristics, their level of activity in the social media and their intentions to continue to use it. As new kinds of social media increase rapidly, it becomes significant for businesses to develop proper strategies to be in these media, engage actual users and acquire new ones. New social media can easily proliferate by imitating the functionality of existing ones as these media are characterized of information transparency, low barriers to entry in the social media industry as well as low customer switching costs (Pentina et al., 2013). Social media networks are a significant source of electronic word of mouth and this kind of communication is even more important than traditional one because the number of relationships created and customers reached is much greater. It is also more challenging than traditional communication as it is not a one-way company communication but customers can actively communicate impact and interact with each-other (Li & Bernoff, 2011).

In this challenging new environment, it becomes important for businesses to explore these communication channels and use them in their marketing and managing activities. Few studies have been conducted to assess the way social media affects communication and purchase behavior (Baker & Oswald, 2010) and other ones are needed to better understand this relationship. This study tries to offer a literature review on the use of social media in marketing, creating and managing customer relationship and brand management.

The introduction and use of internet and social media in Albania has happened after the year 2007, when the market was liberalized and the prices for internet services were reduced. Although it has been used late in time compared to other countries, it has experienced a significant growth in the last decade and has reached 60.10% coverage in June 2014 (Albanian Media Institute, 2015; IBNA 2014). These figures represent a huge opportunity for any company that operates in the Albanian market to engage in social media marketing and gain the advantages and positive results associated to it.

Social media use is changing the traditional marketing communication of companies. These networks offer customers the opportunity to interact not only

with the company but also with other customers, so the company is no longer the sole source of brand communication (Li & Bernoff, 2011). By doing so, marketing managers need to manage not only the communication of the company toward its customers but also the customers' communication about the company as they increasingly impact on company brand and product management. So, customer-generated communication and customers' online word of mouth should be carefully understood and managed by companies in order to continue to control their marketing communication and the way they want to be perceived by customers. Different studies have evidenced the need to analyze and understand the effect of company and customer communication on social media with a special focus to brand communication and management (Taylor, 2013; Smith, Fischer & Yongjian, 2012).

While there is evidence of the increase in the use of social media, there is also a higher attention of researchers about different aspects related to it. Despite the increase in empirical research in social media, there is still little understanding of how this company and user-generated communication influences consumer perceptions of brands and their behavior in the marketplace and other researches can enrich the literature about them (Schivinski & Dabrowski, 2016).

2. Literature review: Company generated social media communication

The domination of new technologies and social media offer the possibility to many people to be connected to each other. Many Internet users have the possibility to have a large amount of online exposure and to be part of different networks. One of the most important networks of engaging with many other customers is social networking. Social networking through online media is composed of a variety of different digital sources of information. Referring to Chauhan and Pillai (2013), these networks are created and used by Internet users as a way to educate one another about products and brands. Companies do not only try to offer significant information for their brands on these networks, they have also become aware now of the necessary need to monitor these flow of information and to foster the interactions of the company with the customers leading so to the development of personal relationships with consumers (Li & Bernoff, 2011). Social media offer to companies new ways of engaging with customers and the entire audience. As a result, the use of social media for marketing purpose and the social media communication delivered by the company is also considered to be a new and essential element of its promotion mix (Mangold & Faulds 2009). Marketing managers have established objectives to their social media use and they

expect their social media communication to engage with customers, to foster the interaction between the company and the customer, to create loyal consumers and to influence their perceptions of products, disseminate information and learn from and about their audience (Brodie et al. 2013). It is a powerful tool on attracting different kinds of audiences and orienting them toward company and audience interests of products and brands. Brand social media marketing is able to catch a vast audience with extensive demographic appeal (Kaplan & Haenlein, 2010) and that's another reason why many companies are increasingly using it. The ability to reach more people than traditional media and the popularity of social media and Internet use among people throughout the world is at the core of social media use by many companies (Li & Bernoff 2011) and different studies sustain the increase use of brand social media marketing by many companies. Internet users are turning away from traditional media and are increasingly using social media platforms to search for information regarding brands and companies (Mangold & Faulds 2009; Bambauer-Sachse & Mangold 2011). Consumers require instant access to information, information on demand, interaction with the brand management and all of this at their own convenience (Mangold & Faulds 2009) making it imperative for companies and brands not only to be found but to be very active on social media marketing.

2.1 Customer generated social media communication

The user generated content of brand social media marketing has attracted much attention among researchers. The inclusive of customers on offering information on brand social media marketing has been a significant development that has shaped the marketing of companies and also the consumer behavior toward brands. This is a consequence of the so called Web 2.0 era (consumer generated content) and of the continuous increase of the customers and companies which use these media. While trying to define the user-generated content, OECD (2007) defined it as the "i) content that is made publicly available over the Internet, ii) content that reflects a certain amount of creative effort, and iii) content created outside professional routines and practices". User-generated content is a significant element for consumer insights. They can engage with the brands and with other customers and have an environment where can share their thoughts and where can freely communicate and share their opinions. They exchange information about the brand and can create powerful communities where people with same interests can easily interact with each-other (Christodoulides, Jevons & Bonhomme 2012; Winer 2009). While studying on the issue, some researchers have highlighted that there is a difference between content creation and content dissemination, and that the user-generated content creation is conceptualized as similar to e-word

of mouth (Kozinets et al. 2010). Other researchers (Smith, Fischer & Yongjian 2012) go further by offering the differences between the two concepts; whether the content is generated by consumers or it is just conveyed and shared by them through social media.

Social media channels when used as brand marketing ones facilitate consumers' communication about the brand and accelerate communication among consumers about it (Duan, Gu & Whinston, 2008). Researchers (ex. Burmann & Arnhold 2008) think that the Internet and Web 2.0 have empowered consumer behavior, by significantly impacting not only on the information but also on all the phases of the purchasing process. They can undertake all the phases of the purchase process by using online mediums. They can search for the brand online, compare brands' qualities and prices, take more information about the brand and generate information to the company and to other customers by commenting, liking or disliking the brand. In the Web 2.0 era, when customers have needs and wants they go first online, gather information, compare alternatives, make their choices and buy online. Nowadays, customers use extensively social media networks in order to access the desired product, brand and company and all the necessary information about them (Li & Bernoff 2011; Christodoulides, Michaelidou & Siamagka 2013). Research (ex. Daugherty, Eastin & Bright 2008) shows that customers engaged in user-generated content actively share opinions about brands with other customers and can be brand advocates while the company is keeping marketing and communication costs lower than traditional one.

3. Role of social media in marketing

Social media offers to every business a new mean and marketing opportunity to compete in the market. It is one of the best ways for a company or brand to connect to its customers. Despite the positive results of using traditional media and traditional customer communication and promotional techniques, companies are continually reinforcing their engagement in the online word of social media marketing. The size of the company or business is not a condition in this case; whether it is a small familiar business or a big corporate the use of online communication has positive impact and can improve their performance. Despite other reasons, particularly small businesses use this kind of marketing communication to their audience as they may lack the necessary resources for using traditional forms of advertising. Practitioners and advertisers are increasingly using it and researchers are trying to explore its processes, elements and effects. Social media marketing is marketing using online communities and social networks and it is one of the latest trends in marketing and the marketing experienced in this way offer several benefits to both

the company and the customer (Kotler & Armstrong, 2013). Among other means of traditional marketing, marketers have used social media marketing in order to maintain brand loyalty from their customers. It contributes to the reduction of business costs, offers the possibility to interact with the customers and enables the company to gain more brand awareness and profits through a different marketing tool that can generate more sales. Customers who like the brand and follow it on social networks tend to visit the store more frequently, generate more positive word of mouth and are more emotionally attached to the brand (Dholakia & Durham, 2010). The attribute of user-generated social media in brand communication positively impacts every company. But at the other hand, because of this element, social media marketing should be managed carefully by companies. There may be dissatisfied consumers which may use social media sites to make public complaints to the company by generating in this way negative word of mouth. But managers have the opportunity to strategically manage this negative information and transform it to a possibility for brand building and reinforcement. Because of the extended use of these new communication channels and the significant impact of word of mouth communication on customers, it has a greater effect on consumers' overall perception of brands than using only company-generated social media communication. By using social media, organizations can effectively promote their products, offer immediate support to their customers, customers are more able to share information between each other about the company and its products, increase brand awareness and recognition through networking, conversation and online community by building so brand loyalty (Gunelius, 2011; Kaplan & Haenlein, 2009; Mangold & Foulds, 2009). Customers who use social media are more likely to talk about, recommend or purchase a company's products after they have been engaged with the company online. Small businesses use social media marketing for different purposes among which are to have a company page on a social networking site, to post status updates or elements of interest on social media sites, to build networks through different sites and to monitor customer feedback about the business. Social media marketing not only presents the company and its products to customers but it also helps to listen and understand customers, offer the possibility to identify opinion leaders and brand evangelists and all these can be done to zero costs. Social media marketing, as an effective mean of using time and resources, offer to companies a better way of communicating to its customers by representing in this way a new alternative method, despite the traditional ones, to build brand loyalty. As it is different from traditional marketing methods, it requires special attention and appropriate strategies to achieve positive results. Social media offers also the company the possibility to actively interact with its customers and it is strongly related and contributes to relationship marketing. Morgan and Hunt (1994, p. 22) defined relationship marketing as marketing

activities directed towards establishing, developing and maintaining successful relational exchanges. Social media marketing, being at the hand of customers is an important tool that positively impacts the creation and reinforcement of company-customer relationship. It offers more insights and feedback to the company about what customers want, think and say about the brand.

Social media are seen as service channels which can actively engage customers in every moment in real time offering so many benefits to customers. In this way customers are exposed to many different brands and they can evaluate and choose the right one that can be of their interest. By doing so, social media marketing poses new challenges for companies and marketers to continuously manage and update their sites in order to grasp customer attention and to be their first choice.

4. Brand management on social media

Today, almost every product and company operates by using brands. Brands are intangible assets and are one of the most valuable assets that a company may have (Zehir et al., 2011). Brand management has changed dramatically in the last decades with the use of internet and social media platforms. Social media have supplied the marketing of companies with new channels of brand communication by participating in online brand engagement (Schivinski & Dabrowski, 2016). At the beginning of internet use, managers were just replicating the offline marketing they were already applying on social media and offering one-way informational brochures (Chistodoulides, 2009), but today things have changed a lot. Brand managers were the only to offer and communicate the attributes and characteristics of brands to the customers and the entire audience. Their main aim was to create a powerful and specific image for the brand by using the company one way communication and evidencing the positive elements of brands. Internet has transformed this way of brand management and social media can have a dramatic impact on brand's reputation (Kim & Ko, 2012). Customers have become an important element of online brand management and companies engage in activities that positively involve customer-generated content. A specific strategy that has attracted managers' attention and has been used by them is to stimulate the creation and sharing of customer content which can enhance the relationships between brands and customers and lead to the creation and reinforcement of brand communities (Van den Bulte & Wuyts, 2007). By using social media, brands can communicate to their customers both individually and in groups. Researchers (Kaplan & Haenlein, 2010) encourage businesses to use social media and to take advantage of it as a significant tool of their marketing integrated communication if they want to survive and reinforce their position in the market. Different studies

(ex. Erdogmus & Cicek, 2012) have shown that brand loyalty is positively affected by different platforms and applications that are offered by the brand on social media. Brand managers should offer attractive online marketing and differentiate their brand and the communication about it.

But they should carefully manage customers' consumption experiences as they are exposed online to everyone and it may be more difficult to manage contemporary interactions with each single customer. Every element of social media should be thoroughly understood by brand managers while they want to or are using it. This will lead to positive results related to brand management in social media.

Brand managers often stress different aspects of social media use to be more important than others in their marketing activity. Some of them are more interested in the number and positive comments about ones brand while others are more interested on the presentation of products or the number of likes their brand receives. De Vries et al. (2012) studied different aspects of brand management using social media marketing and stated that not all the determinants which are beneficial for increasing the number of likes do also have the same effect on enhancing the number of comments about the brand, and vice versa. They also found that brand fans active on brands social media are significantly influenced by each other, enhancing in this way the effect of online word of mouth.

Different studies have tried to explore the impact of different aspects of the brand on brand equity while applying the marketing for their brands on social media. The study of Schivinski and Dabrowski (2016) about the impact of social media on brand perception in three industries found that both brand equity and brand attitude positively influenced the intentions of brand purchase of costumers. The effect of social media marketing on brand and brand loyalty have attracted many attention from researchers and practitioners (McKee, 2010; Kaplan & Haenlein,

2009). Different studies have shown that social media can create and reinforce brand awareness and increase sales (Fanion, 2011). But brand managers and marketers should carefully manage these relationships especially in the case of ineffective handling of online relationships with customers. These situations may lead to negative word of mouth about the company and the brand so online brand managers should develop appropriate response strategies to respond promptly and not let to negatively impact brand image and sales (Hennig-Thurau et al., 2010).

5. Conclusion

Social media and its use in business and marketing have received particular attention in the last years. It has been adopted by different kind of companies

from profit to non-profit ones, from small familiar businesses to big companies as an effective instrument of connecting to customers and managing their brands. Prior research has attempted to show the positive effect of social media marketing on brand management. Different studies have tried to assess the effects of social media communication on products and brands and have aimed to measure brand purchase intentions when using social media. Marketing and brand managers should focus on the proficient use of social media brand marketing in order to offer more value and generate more profits. They should also focus on building positive brand associations and on exploring which of the characteristics of their brands mainly influence the consumer's attitude towards the brand in order to reinforce these associations and create brand equity (Schivinski & Dabrowski, 2016). Different studies have indicated that positive attitudes toward a brand can positively influence brand management, customer's purchase intentions and their willingness to pay more for the brand (Folse, Netemeyer & Burton 2012). Despite that, different researchers (Schivinski & Dabrowski, 2016) suggest that social media marketing and brand management should not be used as a substitute for traditional marketing and advertising, but should be treated as one of the elements of the marketing communication strategy of every company. Companies should continually design their social media content to influence consumer's preferences and positive attitudes towards brands. Brand managers should offer attractive online marketing in order to benefit from positive word of mouth in the online medium.

Companies have to compete with other ones that are present in social media and they should also be careful on choosing among different platforms of social media that already exist. This is done by carefully analyzing each social media platform and its popularity in the market. The existence of many social media platforms poses many difficulties to companies. They should understand which platforms are used by their target market segments and participate in the right and most effective ones in order to create brand awareness and brand loyalty. Companies have to stay competitive on using social media so they need to develop solid and effective social media marketing strategies. Despite the benefits associated with the use of brand social media marketing, marketers and companies that are engaged in social media brand marketing should carefully manage their online customers. They should attract and maintain more and more customers engaged to the brand, control and guide the information they are generating and create loyal customers.

This study aimed to offer an empirical analysis of the existing literature on social media marketing and its use on managing brands. Despite the different studies about the use of social media brand marketing there is still a need to perform empirical studies in different context that explore the influence of this tool of promotion mix on customers' behavior and their purchase intentions toward the brand.

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Solomon's Judgement: The international law of exploration and exploitation of shared hydrocarbon resources or how to split the baby¹

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Abstract

Two States have both in the same time a valid title under international law to explore and exploit a hydrocarbon deposit. This situation occurs when the hydrocarbon deposit is located in an area where there are overlapping claims by two or more coastal states or when the hydrocarbon deposit straddles upon the maritime boundary between the two countries. The aim of this paper is to enquire the content of international law governing exploration and exploitation of common or transboundary hydrocarbon resources. It will carry out a survey of State practice in the field of joint development of hydrocarbon resources. The recurrent and extensive practice of entering into joint development agreements will raise the question whether it has crystallized in a customary international rule. If the answer to this question is negative, as argued by this paper, the focus will be to ascertain the content of the obligation to cooperate between States. This paper will come to an end with some concluding remarks on the legality under international law of unilateral exploration of transboundary resources and by suggesting a potential mitigation strategy that can be adopted by a State willing to go ahead in a unilateral manner.

Keyword: *Transboundary hydrocarbon resources, Offshore oil and gas, International law, Joint development, Rule of cooperation, Rule of capture (interdiction)*

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1. Introduction

The World Energy Investment Outlook 2014 Special Report, published by the International Energy Agency, forecasted that the world economy will need around \$23 trillion of investments in the oil and gas sector over the period to 2035 (WEIO, 2014, 11). More than 80% of this amount will be dedicated to the upstream part of the product chain, which includes exploration and exploitation activities (WEIO, 2014, 23). One of the major features that will characterize the petroleum sector is the end of 'easy' oil. As the existing fields are depleted, the industry will increasingly focus on remote locations, such as offshore hydrocarbon deposits (WEIO, 2014, 64).

This shift will understandably pose a number of challenges, from the technical to the economical. One of the most important challenges faced by States and industry actors will be related to the legal framework governing development of offshore oil and gas. It suffices to glimpse at recent articles in magazines or newspapers to grasp the sensitivity of the issue. (See, for example, *The Economist*, 'Vietnam and China: Hot oil on troubled waters', May 17th 2014 issue).

Schematically, the problem can be defined in the following terms: Two States have both in the same time a valid title under international law to explore and exploit a hydrocarbon deposit. However, if one of them proceeded to undertake these activities, the result could be the violation of the sovereign rights of the other State. Obviously, this situation creates considerable legal uncertainty. Which company would take the risk to invest huge amounts of money in a venture marred by the risk that the petroleum license or concession is void?

This situation is the result of, principally, two factors. In the first place, technological progress has enabled oil and gas companies to develop increasingly further offshore hydrocarbon deposits. The second factor, which interests us the most, is of a legal nature. The aftermath of World War II saw a growing interest of States in the resources of the continental shelf.

Following, the Truman proclamation,

"the Government of the United States regards the natural resources of the subsoil and seabed of the continental shelf beneath the high seas but contiguous to the coasts of the United States as appertaining to the United States, subject to its jurisdiction and control" (US Presidential Proclamation No. 2667/1945).

A State practice of extended jurisdiction on the continental shelf developed and, soon, became customary international law. It was incorporated first in the

Geneva Convention on the Continental Shelf and, at present, is comprised in the United Nations Convention on the Law of the Sea (UNCLOS).

The continental shelf is frequently very rich in natural resources, especially in oil and gas reserves. It is estimated that more than 87% submarine oil deposits are found in the continental shelf (Churchill & Lowe, 1999, 162) and around 70% of the world's undiscovered reserves lay offshore (Churchill et al., 1999, 141).

When the States decide to explore and exploit offshore resources, they are frequently confronted with two kinds of problems. The first occurs when the hydrocarbon deposit is located in or in the vicinity of an area where there are overlapping claims by two or more coastal states. This is not at all theoretical. It is quite frequent that two States have either adjacent coasts or opposite coasts of less than 400 nm of distance between each other. Thus, both States have valid legal claim to the maritime zone in question. The problem is compounded by the fact that more than half of maritime borders are not delimited (Blake & Swarbrick, 1998, 3).

The second hypothesis relates to the case when there is well an international maritime boundary between the states but it happens that the hydrocarbon deposit straddles upon this maritime boundary.

In both cases, the situation is aggravated by the physical characteristics of hydrocarbon deposits. In simple terms, hydrocarbon deposits are an accumulation of organic residues composed of carbon and hydrogen atoms located in a porous rock, called the reservoir rock. However, only if the reservoir rock is capped by an impermeable layer of rock it will give rise to a hydrocarbon deposit. In case of drilling, the pressure found in the reservoir rock is released so forcing the content to rise to the surface (Becker-Weinberg, 2014, 9; Robson, 1995, 3).

Due to the highly migratory nature of these substances, the exploitation from whatever side of the deposit is likely to cause the flow of oil or gas from one side of the deposit to the extraction point. This eventuality may prejudice the interests of the other State and the peaceful relations between the two countries (UN Doc A/CN.4/580, 2007, 3-4).

In addition, the concurrent drilling in the same reservoir may negatively impact the amount of oil or gas that can be extracted from the deposit. This gave rise to the famous adage of M.W. Mouton "never two straws in one glass" (Mouton, 1954, 421).

The legal problem arising from this situation was clearly defined by the International Court of Justice (ICJ) in the North Sea Continental Shelf case:

"it frequently occurs that the same deposit lies on both sides of the line dividing a continental shelf between States, and since it is possible to exploit such deposit from either side, a problem immediately arises on account of the risk of prejudicial or wasteful exploitation by one or the other of the States concerned" (I.C.J. Reports 1969, para. 97).

Despite some differences, the legal question is the same regarding the hydrocarbon deposits located in areas of overlapping claims (Ong, 1999, 775).

Thus, this Essay will enquire the content of international law governing exploration and exploitation of common or transboundary hydrocarbon resources. Our investigation shall be undertaken with a very clear and fundamental knowledge of the background upon which the legal discussion is unfolded. On the one hand, States enjoy a permanent sovereignty on their natural resources and they possess exclusive sovereign rights to explore and exploit the subsea non-living resources. On the other hand, States are bound to observe the territorial integrity and sovereign rights of the other States and they must refrain from causing transboundary harm.

With this background in mind, we shall begin our examination by making some introductory remarks on the law of transboundary resources in general (I). This will help us to understand the legal and practical reasons that pushed States to enter into cooperative agreements with each other, thus limiting their sovereign rights, with the view of developing common hydrocarbon reservoirs. The second section will also delineate the main features of the joint development agreements (II). The survey of State practice in the matter of joint development of hydrocarbon resources will bring us to the heart of this Essay. The recurrent and extensive practice of entering into joint development agreements has, for some authors, crystallized in a customary international rule (Onorato, 1985, 539). This Essay takes the opposite view. State practice is neither uniform nor consistent and it lacks *opinio juris* (Lagoni, 1979, 221; Miyoshi, 1988, 10). (III)

If a special rule of cooperation in the form of joint development has not yet crystallized in custom (Becker-Weinberg, 2014, 202-204), there exists, nonetheless, a general rule of cooperation between States in their dealings with common natural resources (Lagoni, 1984, 355). It will be the focus of the fourth and last section to ascertain the content of the obligation to cooperate between States. As negotiations can succeed or fail, this Essay will attempt to assess whether international law, in any particular circumstances, permits unilateral exploration of transboundary resources. International law in the matter is highly uncertain (Churchill & Ulfstein, 1992, 85-89). Therefore, rather than providing risk-proof legal advice, this Essay will come to an end with some concluding remarks on a potential mitigation strategy that can be adopted by a State willing to go ahead in a unilateral manner rather than leaving dormant the hydrocarbon resources lying on the continental shelf (Cameron, 2006, 583) (IV). As in the judgement of Solomon fable, if the claimants are unable reach an agreement by themselves, the baby should not nonetheless remain without a caretaker.

2. The international law of transboundary resources in general

This first section shall introduce the basic concept of transboundary resources in the international law of the sea. A satisfactory understanding of this notion requires a minimal knowledge, first, of the sovereignty, sovereign rights and jurisdiction exercised by coastal states in different maritime areas and, second, of the exploration and exploitation activities on the continental shelf. Having dealt with these preliminary notions, the focus will be directed towards the concept of shared or transboundary resources.

A. Sovereignty, sovereign rights and jurisdiction of coastal states

The international law of the sea is principally contained in the UNCLOS, which has received almost universal acceptance (Churchill et al., 1999, 22). For the purpose of this Essay, it is sufficient to take from the law of the sea the following. The seas and oceans of the planet can be divided into two geographic areas on a legal point of view: on the one hand, the maritime areas where coastal states exercise jurisdiction and, on the other hand, the maritime zones beyond national jurisdiction (Becker-Weinberg, 2014, 23-24).

The focus of this Essay is in the maritime areas where the coastal state exercises jurisdiction and can conduct oil and gas exploration and exploitation activities. These zones include, principally, the territorial sea, internal waters, the continental shelf and the Exclusive Economic Zone (EEZ). A further distinction exists between the areas where the coastal state exercises full territorial sovereignty, i.e. the territorial sea and internal waters, and those areas where the coastal state exercises functionally limited sovereign rights, i.e. the EEZ and the continental shelf. Both the EEZ and the continental shelf legal regimes provide the coastal state with the right of exploring and exploiting the natural resources (Articles 56(1) and 77(1) of UNCLOS, respectively).

The rights conferred to the coastal state by the EEZ regime are not exclusive but should rather be regarded as preferential for the purpose of developing the natural resources. By contrast, the rights of the coastal state over the continental shelf are exclusive (Article 77(2) of UNCLOS). UNCLOS ensures the compatibility of the two regimes by providing that the coastal state shall exercise its rights in the seabed and subsoil in accordance with the continental shelf regime (Article 56(3) of UNCLOS). Had it not been for the ambition of several coastal states to include within the continental shelf regime parts of the continental margin extending beyond 200 miles, the legal regime of the continental shelf would have

been incorporated within the EEZ (Churchill et al., 1999, 166). Regarding the exploitation of non-living resources in this outer portion of the continental shelf, the Coastal state has to pay to the International Sea Bed Authority a proportion of the value or volume of the production (Churchill et al., 1999, 156).

Henceforth, apart from this exception, this Essay shall not make any difference between the EEZ and the continental shelf regime. It goes without saying that the coastal state enjoys the sovereign rights to explore and exploit its natural resources in its territorial sea and internal waters in which areas the state is provided with full sovereignty (I.C.J. Reports 1982, para. 104.).

Exploration and exploitation are comprised in the upstream segment of the product chain of petroleum, which includes acts related to the discovery and development of hydrocarbon reservoirs. UNCLOS provides the coastal State with exclusive rights to this effect. This includes the right to use artificial islands, installations and to authorize drillings (Articles 60, 80, 81 of UNCLOS). The continental shelf is rich with hydrocarbon resources and coastal States are willing to exploit these opportunities. In 2005, there were around 4100 offshore oil and gas fields operating in the seas and oceans of the planet (Churchill et al., 1999, 141).

B. The concept of shared or transboundary natural resources

Henceforth, the hydrocarbon resources lying across maritime boundaries have attracted greater attention since the early sixties. These resources have been qualified as “shared” or “common”.

To deal first with this terminological issue, the concept of “shared natural resources” was used for the first time in General Assembly Resolution 3129 of 1973. The same terminology was later used by the International Law Commission (ILC) (Res. (UNGA) 57/21, 19 November 2002). The qualifier “shared” is somewhat unfortunate because it implies a joint ownership of resources which is not the case at all. Although physical characteristics may have given place to a naturally shared resource, such as a hydrocarbon deposit, on the legal plane, it is not shared. The coastal state’s sovereign rights on the part of resources lying within its borders are exclusive. Henceforth, the more neutral term of transboundary resource is preferable (Székely, 1986, 735). In this Essay, both terms are used in their neutral meaning.

The legal regime of transboundary resources has firstly been addressed on the level of the United Nations, through the 1972 Stockholm United Nations Conference on the Human Environment. It is also worth mentioning the Resolution 34/99 of the General Assembly which stated that the economic cooperation between States in the borderline should be underpinned by the principles of equity, equality and mutual advantage from the development of common resources (Res. (UNGA) 34/99, 14 December 1979).

The notion of shared natural resources was later taken into consideration by the ILC. The Commission, firstly, focused only on shared watercourses before deciding to include into its scope of work the case of the shared natural resources. Subsequently, the ILC examined the relationship existing between transboundary watercourses and shared oil and gas. It considered that existed many differences between the two regimes: first, the continental shelf regime provides for exclusive rights to the coastal state; and, second, the hydrocarbon resources are non-renewable. Therefore, their exploitation is governed by different economic considerations. It would have also taken a very long time for the ILC to gather and examine the whole range of State practice in the field of offshore oil and gas development (Becker-Weinberg, 2014, 42). Therefore, the ILC decided to take a resource-specific approach (Juha, 2006, 329).

More surprisingly, the UNCLOS does not contain any regulation at all regarding transboundary hydrocarbon deposits. Articles 64 and following deal only with living resources. Article 82, the only one addressing the issue of non-living resources, regulates the exploitation of natural resources in the continental shelf beyond the 200 nm. It regulates the payment and contributions due by the coastal state to the International Seabed Authority.

However, this absence should not be interpreted as if states were unaware or uninterested in the potential transboundary resources. As the ICJ expressed it in the Libya-Malta Continental Shelf case, “...resources are the essential objective envisaged by States when they put forward claims to sea-bed areas containing them” (ICJ, Libyan Arab Jamahiriya/Malta case, 1985, para. 50).

In fact, States chose to follow another path. Their focus was on the delimitation rules regarding the continental shelf and EEZ, which delimitation would in turn resolve the problem of the sovereignty on the natural resources (Székely, 1986, 742). It is not within the scope of this Essay to dwell on the delimitation rules and principles comprised in international law. It is sufficient to state here that the compromise reached by the States is comprised in Articles 74 (concerning EEZ) and 83 (concerning the continental shelf) of UNCLOS, which are almost identical. Article 83(1) provides that

“[t]he delimitation of the continental shelf between States with opposite or adjacent coasts shall be effected by agreement on the basis of international law, as referred to in Article 38 of the Statute of the International Court of Justice, in order to achieve an equitable solution” (Article 83(1) of UNCLOS).

The vagueness of these provisions has been a source of interpretation by international courts and tribunals. These articles do not adopt a method of delimitation but rather state that the outcome of the delimitation proceedings

should be equitable. This formula has been criticized by leading legal commentators (Churchill et al., 1999, 191).

The best summary on the state of international law was provided by the International Tribunal on the Law of the Sea (ITLOS) in the Delimitation case between Bangladesh and Myanmar:

“The Tribunal observes that the issue of which method should be followed in drawing the maritime delimitation line should be considered in light of the circumstances of each case. The goal of achieving an equitable result must be the paramount consideration guiding the action of the Tribunal in this connection. Therefore the method to be followed should be one that, under the prevailing geographic realities and the particular circumstances of each case, can lead to an equitable result.”

International jurisprudence has used the concept of ‘special’, ‘particular’ or ‘relevant’ circumstances in order to achieve an equitable outcome in the specific cases submitted to international courts or tribunals. A number of circumstances have been considered relevant, such as the length of the coastlines, coast configuration, and presence of islands (Becker-Weinberg, 2014, 176). The question that interests us here is whether the presence or potential existence of transboundary hydrocarbon deposits could qualify as a special circumstance to be taken into account during negotiations or judicial proceedings concerning delimitation.

In the first case dealing with transboundary resources, the ICJ listed among the number of factors to be taken into consideration in case of delimitation negotiations “the natural resources of the continental shelf areas involved” (ICJ, North Sea Continental Shelf cases, para. 101). The Court held that, in case of an overlapping area, the States have to proceed with its division by agreement or equally, or they may choose to enter into “agreements for joint exploitation, the latter solution appearing particularly appropriate when it is a question of preserving the unity of a deposit” (ICJ, North Sea Continental Shelf cases, para. 99).

Much ink has been spilled on this obiter dictum of the Court. It seemed as the adoption of the position advanced by Mouton who considered the unity of the hydrocarbon deposit as a special circumstance justifying the non-application of the median line between States with opposing coasts (Becker-Weinberg, 2014, 178). Nonetheless, despite the stark expression of the Court regarding the preservation of the unity of a deposit, no particular legal consequence was attached to it. In the same judgement, the ICJ held that it considered the unity of a deposit nothing more than a fact to be considered in the delimitation negotiations (ICJ, North Sea Continental Shelf cases, para. 97).

The conclusion to be drawn is that transboundary resources do not necessarily constitute a special circumstance capable of changing the boundary to be delimited.

As a consequence, it may frequently occur that a hydrocarbon deposit be found straddling a delimited maritime boundary.

Similarly to the ILC later in the 2000s, the jurisprudence adopted the approach that the matter of transboundary resources was better left to the States to address in the course of their negotiations with each other. In a sense, the issue of transboundary resources was sacrificed in the name of reaching a boundary agreement. The consequence is that afterwards the States would find themselves again in the negotiating table to decide about the management of straddling resources (Székely, 1986, 755).

3. State practice and transboundary resources: the pursuit of cooperation

Clearly, case law and treaty law have reinforced each other. The willingness of the ICJ and other courts and tribunals to leave the matter of transboundary resources in the hands of the States may be interpreted as a simple reflection of State practice on this issue. This jurisprudence, in turn, has strengthened the trend of bespoke bilateral agreements between States with adjacent or opposite coasts. One can perceive without much difficulty that, regarding transboundary resources, State practice in the form of treaties is much richer than international jurisprudence (Székely, 1986, 758).

The purpose of this Section is, precisely, to explore, State practice in different scenarios. In the second part, this Section will draw an outline of the main characteristics of joint development agreements and unitization agreements.

A. State practice in three different scenarios

The cooperative efforts of States in the field of transboundary resources has developed in three factual and legal situations: first, in the course of negotiations for the delimitation of the EEZ and continental shelf; second, in the circumstances where hydrocarbon resources straddled a delimited maritime boundary; and, third, in the case of natural resources located in the subsoil of maritime areas subject to overlapping claims.

In the first place, it is remarkable to notice how uniform State practice has been in the matter of delimitation in the presence of potential transboundary resources. The States have not considered that the hydrocarbon deposit, which might be discovered in the future, should necessarily be included within the maritime boundary of one single coastal State.

In the majority of cases, these delimitation treaties have included a so-called “natural resources clause” which can be summarized as a treaty provision requiring the

cooperation of the treaty parties if hydrocarbon resources are discovered that straddle the delimited maritime boundary. The first and most well-known treaty establishing this rule is the Anglo-Norwegian treaty of 1965. In order to acknowledge its influence on subsequent treaty practice, the natural resources clause is cited below in extenso:

“If any single geological petroleum structure or petroleum field, or any single geological structure or field of any other mineral deposit, including sand or gravel, extends across the dividing line and the part of such structure or field which is situated on one side of the dividing line is exploitable, wholly or in part, from the other side of the dividing line, the Contracting Parties shall, in consultation with the licensees, if any, seek to reach agreement as to the manner in which the structure or field shall be most effectively exploited and the manner in which the proceeds deriving there from shall be apportioned” (Emphasis added) (Article 4 UK-Norway Delimitation agreement, 1965).

The triggering factor for this provision to come into play is “exploitability” and not the mere fact that oil and gas might exist on the other part of the boundary (Cameron, 2006, 580). Although natural resources clauses are quite frequent, they do not provide more than an obligation to cooperate between the parties. They have a programmatic character and usually provide for an obligation to inform on the presence of a straddling hydrocarbon reservoir and, sometimes, a duty of restraint (Becker-Weinberg, 2014, 58). In a few cases, mineral resources clauses might provide for a mandatory unitization or joint development of the hydrocarbon deposit (Article 4 of the Denmark-Norway Delimitation Agreement).

However, the bulk of State practice concerns two kinds of situations. The first concerns the hypothesis when the hydrocarbon deposit is located in a disputed maritime area. Shelving aside the matter of delimitation, the States engage into a cooperation agreement whereby they jointly exploit the common reservoir and allocate the proceeds. The second situation occurs when a hydrocarbon deposit is found astride a maritime boundary. In this instance, States in order to preserve their mutual sovereign right to a share of the reservoir and in the name of efficiency, agree to jointly explore the transboundary deposit. The different legal and factual situation has led to two main different forms of joint development.

B. The forms of cooperation: Joint development agreements and unitization agreements

More than half a century ago the Netherlands and Germany entered into the first joint development agreement concerning the exploitation of “all solid, liquid or gaseous underground substances” (Ems Estuary Treaty, 1960). As it was positively supported by the ICJ in the North Sea Continental Shelf cases (para. 97), the idea

underpinning the joint development in the Ems estuary inspired the application of similar regimes on the continental shelves (Miyoshi, 1988, 2). A key moment in the history of joint development agreements is the conclusion of the South Korea-Japan treaty whereby the parties decided to develop the offshore oil reservoir while shelving the delimitation issue (Miyoshi, 1999, 1).

In this context, joint development received an increased attention in the circle of lawyers and policy-makers. The British Institute of International and Comparative Law drafted a model agreement (Fox et al., 1989 Vol. I). It was followed by a second volume dedicated to its discussion (Fox, 1989 Vol. II).

The drive behind the growing number of joint development agreements comprises motives that are technical (progress in the development of subsoil resources), economic (cheaper access to energy resources), security-related (energy independency), environmental (improved marine pollution prevention), conservationist (greater hydrocarbon efficiency), political (avoid political confrontation) and legal (willingness not to cause an illegal harm to the sovereign rights of the other party) (Cameron, 2006, 560; Bastida, Ifesi-Okoye, Mahmud, Ross & Wälde, 2006-2007, 357).

The successful negotiation and agreement to jointly develop transboundary resources depends on many factors, which include knowledge about the hydrocarbon deposit, the validity of claims under international law, the quality of political relations, the presence of disputed islands etc. (Valencia & Miyoshi, 1986, 217-223).

It is not within the scope of this Essay to enter into the details of each joint development agreement. For this, we refer to the abundant literature existing on the subject (See, for example, Becker-Weinberg, 2014).

First of all, there is disagreement on what the concept of joint development precisely covers. For a group of authors, JDAs comprise only inter-state agreements for the development of hydrocarbons in disputed maritime area, at the exclusion of unitization agreements entered into when a petroleum reservoir is straddling a fixed boundary (Bastida et al., 2006-2007, 358-359). There is no reason to make such exclusion and this approach is contradicted by State practice. Miyoshi enumerates at least six JDAs concluded where boundaries are delimited (Miyoshi, 1999, 27-35).

This disagreement on the scope of joint development causes, in turn, a conceptual confusion regarding its proper definition. Gao, an author, has reviewed and enumerated at least five different definitions of joint development (Gao, 1998, 110-11). For the purposes of this Essay, we will retain the following definition of joint development proposed by Miyoshi:

“An inter-governmental arrangement of a provisional nature, designed for functional purposes of joint exploration and/or exploitation of hydrocarbon resources of the seabed beyond the territorial sea” (Miyoshi, 1999, 3).

According to Gao, the most prominent distinction between joint development and unitization is the existence of a territorial dispute as it concerns the former. Furthermore, unitization applies only to an identified hydrocarbon deposit whereas joint development may be concluded even regarding potential reserves. Unitization is an agreement of a rather commercial nature aimed at resolving the question of the natural unity of the deposit. It is similar to a “pooling” contract that we may find in a municipal law (Gao, 1998, 112). The only difference is that in an international unitization, States are also parties, beside licensees or oil companies, to the agreement. By contrast, joint development agreements have a political nature, are broader in scope and can regulate matters outside hydrocarbon development, such as the protection of the marine environment or safety of navigation (Becker-Weinberg, 2014, 20). Unitization has turned out to be the most adopted and successful form of cooperative agreement (Robson, 1995, 3-6).

There is a significant difference between joint development agreements entered into as part of, or immediately after, a delimitation treaty and cooperative agreements concluded in connection with the exploitation of transboundary hydrocarbon deposits. The purpose of the latter is the efficient development of the oil or gas reservoir and the respect for the sovereign rights of the other coastal State. By contrast, the aim of the first is to “unblock” the delimitation negotiations that might have resulted in an impasse because of the parties’ will to have a share in the hydrocarbon deposit located in the submarine area subject of delimitation. Finally, both of the above differ from joint development agreements established by parties in the absence of a maritime boundary and usually take the form of provisional arrangements pending delimitation (Churchill et al., 1999, 198-200).

The conclusion of so many joint development agreements in all regions of the world is a sign of their evident advantages. However, the entering into such agreements requires a high level of cooperation between the interested parties. According to Onorato, writing in 1977, there had not been a single “case of deviation from the principle” of cooperation by States dealing with a common transboundary deposit (Onorato, 1977, 329).

At this stage, the authors have divided in two different schools concerning the question whether the conclusion of joint development agreements has crystallized into a customary international rule (Gao, 1998, 121).

4. Normative status of state practice

The extensive and recurrent State practice has prompted the legal community to wonder whether States are perhaps adopting this conduct because they are compelled by an international norm. Due to the almost unanimous consensus on

the interdiction of the rule of capture, this approach seemed to be the only viable solution to the development of common hydrocarbon deposits (Onorato, 1977, 329).

A. *The interdiction of the rule of capture*

The rule of capture has appeared concomitantly with the first commercial exploitation of oil and gas in the United States in the middle of the 19th century. One of the most straightforward definitions was given by Robert E. Hardwicke who expressed the rule in the following terms: “The owner of a tract of land acquires title to the oil and gas which he produces from wells drilled thereon, though it may be proved that part of such oil or gas migrated from adjoining lands” (Hardwicke, 1935, 393).

The acknowledgement of the right of the owner to reduce into possession the oil and gas deposits found beneath the surface of his land, even though the hydrocarbon extracted might have been found originally in the subsoil of an adjacent plot of land, necessarily affects in a negative manner the latter owner’s rights. This legal framework caused the commencement of a drilling competition among owners, who either wanted to have a first mover’s advantage or were afraid of losing the amount of extractable resources if their neighbour started drilling.

In the absence of conservatory measures, the rule of capture, not only affected the private interests of another owner, but resulted also in higher costs and lower production of oil and gas, so negatively affecting the overall market. In these circumstances, several authors suggested the mandatory unitization of the oil and gas deposit in order to reduce waste and to promote its efficient development. Many different oil producing countries have introduced in their legislation, in a way or another, some form of unitization (Becker-Weinberg, 2014, 17).

On the international plane, the rule of capture may have a role to play when a State proceeds unilaterally to exploit either a deposit located on both parts of a maritime boundary or a reservoir found in an area claimed by multiple States. For some authors, the question whether international law allows for the rule of capture depends on the type of legal title that coastal States possess upon seabed natural resources. For Higgins, the State can exercise on the continental shelf only its laws relating to exploration and exploitation activities. As the State does not have full territorial sovereignty on the continental shelf, it cannot apply its property law. By contrast, Redgwell underlines the absence in UNCLOS of any qualification regarding the title on natural resources in the continental shelf from which she concludes that, in practice, States have assimilated the continental shelf to their land territory for jurisdictional purposes (For a summary of the discussion, see Loja, 2014, 483). The same idea is taken by Onorato who considers coastal State as joint owners of the hydrocarbon deposit (Onorato, 1977, 328).

On the contrary, this Essay takes the view supported by Lagoni that the sovereign rights enjoyed by States don't live well with the idea of shared or joint ownership (Lagoni, 1979, 221). On the one hand, a firm assertion of the principle of permanent sovereignty over natural resources could be seen as supporting the rule of capture (Ong, 1999, 777). Nevertheless, the principle of exclusive sovereign rights on the continental shelf excludes the rule of capture in international law as the effect of the rule would constitute a prejudice to the other State's sovereign rights (Becker-Weinberg, 2014, 17).

The other argument advanced to sustain the interdiction of capture is the principle of efficiency: unitization would maximize the amount of hydrocarbon exploited in a specific field. However desirable this outcome might seem, it has not found a legal basis in international law (Swarbrick, 1995, 49-50).

State practice of entering into cooperative agreements suggests that the rule of capture is not countenanced in international law. However, one might argue the contrary: that States are concluding joint developments in order to avoid the potential exercise of the rule of capture by one of them, henceforth damaging their mutual interests (Ong, 1999, 778).

B. Mandatory nature of joint development

Before addressing the status of joint development agreements *stricto sensu*, a preliminary issue arises regarding the State practice of including mineral clauses in delimitation treaties.

We mentioned earlier that most of the world's maritime boundaries have not been delimited. The States' interest in the development of the maritime natural resources can play in both senses regarding delimitation. On the one hand, it can entice the coastal States towards negotiating or judicially settling their maritime boundaries. On the other hand, the willingness to appropriate most of the maritime area (together with its natural resources) claimed by both parties may lead negotiations to a deadlock. Furthermore, as we are reminded by the tribunal in *RSM Production vs Grenada*, States are not required by international law to settle their maritime territorial disputes (ICSID, no. arb/05/14, para. 339).

Even less are States required to include natural resources clauses in their delimitation agreements. In the same time, at least since the Anglo-Norwegian treaty, it is quite common for States to include such clauses. Nevertheless, the State practice is neither consistent nor uniform as it concerns the content and scope of the clause. Therefore, there is definitely no obligation for States to include cooperation clauses in delimitation treaties (Becker-Weinberg, 2014, 58-59). In this regard, even in the absence of mineral resources clause in the delimitation treaty, general international law provides for a duty of cooperation between the interested parties.

We shall turn at present to the issue of joint development in the proper sense. The general consensus on the interdiction of capture immediately raises the question whether joint development agreements are required under international law. This happens because, if unilateral action is forbidden, then it is difficult to perceive another viable route, beside joint development, for the exploitation of common hydrocarbon resources. As we have proceeded all along this Essay, we shall make a distinction between the case when the hydrocarbon deposit lies across a maritime boundary agreed by the parties and the situation when the reservoir is found in an area of overlapping claims. This second hypothesis is encapsulated in the notion of provisional arrangements.

Joint development as an obligation to enter into provisional arrangements

The tremendous extension of maritime areas where States can exercise jurisdiction has increased the eventuality of greater or lesser overlapping between the areas claimed by States with adjacent or opposite coasts. International law makes direct negotiations between States the privileged mean of delimitating maritime zones (Articles 74(1) and 83(1) of UNCLOS). Maritime delimitation of the continental shelf and the EEZ differs from territorial boundaries. The territory is an essential element of the sovereignty of the State. By contrast, the coastal State exercises only functional jurisdiction, i.e. for the purpose of exploitation of natural resources, in the continental shelf and the EEZ. Despite this difference, delimitation of maritime boundaries has proven to be as delicate as territorial borders. Maritime delimitation negotiations have frequently been charged with nationalistic feeling (Ong, 1999, 776). In addition, the actual or perceived riches of the sea raise the stakes for the interested States. Unsurprisingly, then, delimitation negotiations take a very long time and there is some evidence that the time needed to reach an agreement is growing (Lagoni, 1984, 346).

While negotiations have become more prolonged, the hunger for cheap and secure energy resources to fuel economic development has increased. The intensification of offshore activities in maritime areas of overlapping claims makes of interim measures an indispensable tool to defuse tensions. Acknowledging the relationship between delimitation and interim measures, UNCLOS has included both concepts in the same provisions (Articles 74 and 83, regarding the EEZ and the continental shelf, respectively). What is the nature and scope of these interim measures or provisional arrangements?

The scope of the rule can be defined on three different levels. First, the area of application of provisional arrangements is limited to the maritime zone which is subject to overlapping claims. The State claims have to be founded on international law and States are entitled to refuse abusive claims made by another State (Lagoni,

1984, 356). Second, the temporal scope of the interim measures referred to in article 83(3) begins with the identification of an overlapping area and ends with the delimitation treaty entered into by the parties (Lagoni, 1984, 357). Third, *ratione materiae*, the scope of the obligation is limited to those uses of the sea which the parties have agreed upon. For example, the coastal States can agree on joint development of hydrocarbon resources without making any specification about the management of living resources (Lagoni, 1984, 358).

As it concerns the nature of this obligation, according to article 83(3), “the States concerned, in a spirit of understanding and cooperation, shall make every effort to enter into provisional arrangements of a practical nature”. (Emphasis added). There are two important elements in this phrase. The words “in a spirit of understanding and cooperation” have to be interpreted as meaning that the coastal States, in their relationship to each other, have to deal in good faith. Turning to the other group of underlined words, “shall make every effort” has to be analysed in two steps. Firstly, the use of the verb “shall” implies that the conduct required by the States is mandatory under international law. Secondly, the use of the term “effort” means that the normativity of the provision applies only to the process rather than to the outcome of the negotiations.

Therefore, pursuant to article 83(3), States are bound to negotiate in good faith with the view of reaching an agreement regarding one or more uses of the maritime area subject to overlapping claims. Provisionally leaving aside the issue of delimitation and focusing rather in the exploitation of their common hydrocarbon resources, joint development has been one of the preferred interim measures adopted by States. However, an obligation to negotiate does not imply an obligation to enter into a joint development agreement. Joint development may be one of the outcomes of the negotiations (Lagoni, 1984, 360). States can also decide to adopt a provisional moratorium. Besides, negotiations may always end without reaching an agreement.

Joint development as an obligation under general international law

The obligation to cooperate regarding shared natural resources is not straightforwardly provided by international conventional or customary law. Nevertheless, the principle of cooperation in this field finds indirectly expression in different sources of law as we mentioned in the first section of this Essay (Ong, 1999, 784).

UNCLOS lacks any provision governing the issue of transboundary hydrocarbon deposits, except the specific case when the reservoir would be found straddling between the Area and the maritime zone under national jurisdiction. In such circumstances, activities in the Area have to be carried out “with due regard

to the rights and legitimate interests” (Article 142(1) of UNCLOS) of the coastal State. The second paragraph of the Article provides:

“Consultations, including a system of prior notification, shall be maintained with the State concerned, with a view to avoiding infringement of such rights and interests. In cases where activities in the Area may result in the exploitation of resources lying within national jurisdiction, the prior consent of the coastal State concerned shall be required. (Emphasis added).

According to Ong, the requirement of prior consent should be applied, by analogy, to the situation occurring between two neighbouring coastal States (Ong, 1999, 784).

Another provision of UNCLOS requiring cooperation between States is Article 123 which provides that “States bordering an enclosed or semi-enclosed sea should co-operate with each other in the exercise of their rights and in the performance of their duties.” (Emphasis added). However, the obligation to make efforts to coordinate is only limited to the exploration and exploitation of the living resources of the sea. Nothing is specified regarding non-living resources. In addition, the used terminology – “should”, “shall endeavour” – undoubtedly make of this provision an exhortatory obligation.

On the level of international case law, the North Sea Continental Shelf cases are particularly important. The ICJ pointed out to the practice of States in the North Sea as an encouraging conduct in order to ensure the most efficient exploitation of the common deposit. Judge Jessup, in his separate opinion, was even more supportive of joint development considering this form of cooperation as being able to have a broad application in areas subject to overlapping claims. Expressed in the form of *obiter dicta*, the pronouncements of the Court and Judge Jessup clearly do not amount to an expression of established law. Nevertheless, they identify some favourite State behaviour which could crystallise, in the future, in an international norm (Ong, 1999, 785). Onorato suggests that joint development has already developed into a fully-fledged customary international rule (See Onorato, 1968; Onorato, 1977, and Onorato 1985). This view is bitterly disputed by other segments of the doctrine.

Crystallization of a new rule of customary international law

One of the sources of international law is “international custom, as evidence of a general practice accepted as law” (Article 38(1) of the Statute of the ICJ). Traditionally, custom has been conceived as composed of two elements: general practice and practice accepted as law. The first component refers to the question of

uniformity and consistency of behaviour, such as an extensive pattern of treaties in the same terms. Absolute uniformity is not necessary but substantial uniformity of practice is required. Complete consistency is not required either. It is sufficient to show an extensive and substantial uniformity, especially among specifically affected States (Crawford, 2012, 23-25). The second element necessary to establish the existence of custom is the belief that States are adopting a specific conduct as required by law. This psychological or subjective element is usually formulated through the Latin expression *opinio juris sive necessitatis*. The frequency of the usage, though necessary, is not enough because the behaviour may be dictated by political expediency or out of comity (Crawford, 2012, 25-27).

Against this theoretical background, it is useful to analyse consecutively the two elements compounding a customary international norm concerning joint development agreements. First, is State practice in the field of joint development agreements sufficiently uniform and consistent? On the one hand, joint development has been largely used by States to cooperate in the exploration and exploitation of common hydrocarbon resources. The number and geographical distribution of State practice is significant. On the other hand, contrary to the view of some authors (Ong, 1999, 788), there has not been any noteworthy increase in the number of joint development agreements since the first such agreement was signed in 1958 (Bahrain - Saudi Arabia Agreement, 1958).

Furthermore, joint development in State practice has adopted different structures and a varied content regarding the terms and conditions. The cooperative arrangements put into place by the coastal States have involved agreements of a wide-ranging spectrum: from agreements providing for consultation to compulsory unitization through joint development frameworks divided in autonomously managed and exploited parts (Becker-Weinberg, 2014, 46). To quote the British Institute of International and Comparative Law: "Each of these models has a number of possible variations yet none seems capable of commanding universal acceptance due to differing political and economic systems, traditions of conflict and degrees of national sensitivity" (Fox et al. 1989(I), 115). The dissimilarities existing between the various joint development agreements are dictated by the difference in circumstances – political, legal, economical, technical etc. – under which each agreement has been negotiated.

The inconsistency of State practice is an important factor militating against the finding of a customary international rule requiring joint development. Nevertheless, the absence of *opinio juris*, the second necessary element in the creation of custom, is an even more powerful argument (Ong, 1999, 788). Henceforth, we can conclude that the choice of States to engage into joint development has been dictated by a willingness to develop the natural resources, through a method that ensures maximum efficiency, and not by any belief that this conduct is required by a customary rule.

In spite of some authors holding an opposite view, the majority and the most recent doctrine is of the view that cooperation between the States in the form of joint development is not mandatory under customary international law.

In his well-known paper of 1968, Onorato, while recognizing that unitization had not yet accessed the status of an international norm, considered that it was applicable by analogy to municipal law and judicial awards. He was even bolder in his second paper of 1977 where he professed that only a coordinated and agreed development of a common deposit could fulfil the requirement for the apportionment of the reserve to be fair and equitable (Onorato, 1977, 337). At the second East-West Centre workshop in 1983, Onorato emphatically declared that "whatever the circumstance that gives rise to the claim of a common interest between States in a single petroleum reserve, the legal rule for its apportionment remains consistent. Joint development is mandated." (Onorato, 1985, 337).

The other school of thought is represented, especially, by Lagoni and Miyoshi. Lagoni asserts that States are not under the obligation to preserve the unity of the deposit and, as we have seen, their delimitation treaty can leave the petroleum reservoir straddle the maritime boundary (Lagoni, 1979, 221). Miyoshi, for his part, concurs with Onorato on the desirability of joint development agreements, but boldly denies that this practice is mandatory under customary international law. If it was so, then the refusal by one State to conclude a joint development would constitute an illicit act engaging the responsibility of the State (Miyoshi, 1988, 10).

A special rule of joint development has not yet arisen in international law. There is no uniform and consistent State practice, nor can one distinguish *opinio juris* in the behaviour of the States. Furthermore, a rule of joint development would disrupt international law as expressed in Articles 74(3) and 83(3) of UNCLOS that clearly do not make provisional arrangements mandatory. It would also have as a consequence to narrow down the scope of the sovereign rights enjoyed by States to explore and exploit their natural resources (Becker-Weinberg, 2014, 202-204).

5. Shared transboundary resources: can we split the baby?

The conclusion that States are not required by international law to conclude joint development agreements does not exclude the applicability of a general principle of cooperation, of an increasing importance in international law (Lagoni, 1984, 355).

A. *The obligation to cooperate*

There is sufficient evidence in case law, general assembly resolutions, state practice and publicists' opinions that States are required to cooperate with the view of developing their transboundary natural resources (Miyoshi, 1988, 12).

The obligation to cooperate with the concerned State or States may find its expression in a natural resources clause found in a delimitation treaty. In the case of the exploration and exploitation of hydrocarbon deposits located in areas subject of overlapping claims, art. 74(3) and 83(3) of UNCLOS require States to cooperate in the effort to conclude a provisional arrangement. However, these procedural obligations to cooperate are merely expression of a general international obligation requiring States to cooperate with respect to transboundary natural resources (Ong, 1999, 798).

It follows that the concerned States have to comply with the rule of cooperation even in the hypothesis when a hydrocarbon deposit is found straddling an already delimited maritime boundary and the relevant delimitation treaty did not contain any natural resources clause. According to this interpretation, a natural resources clause in a delimitation treaty is interpreted as only a reinforced, and sometimes more specific, obligation to cooperate (Becker-Weinberg, 2014, 58).

What is the substantive content of the requirement to cooperate? The obligation to cooperate can be divided in three distinct sub-rules: the duty to inform and consult; the obligation to negotiate in good faith; and the obligation of mutual restraint.

In the absence of further obligations in a treaty, international law seems to require only a duty to inform and consult in the case of transboundary hydrocarbon deposits (Fox et al. 1989(I), 35). This principle was eloquently put forward in the Eritrea-Yemen arbitration, where the Tribunal held that

“having regard to the maritime boundary established by this Award, the Parties are bound to inform one another and to consult one another on any oil and gas and other mineral resources that may be discovered that straddle the single maritime boundary between them or that lie in its immediate vicinity” (1999, para. 86).

The obligation of information and prior consultation applies not only to straddling natural resources, but also to hydrocarbon deposits located in areas of overlapping claims (Lagoni, 1979, 237).

Regarding the scope of the information to be provided, it should be sufficient for the other State to protect its own sovereign rights (Lagoni, 1979, 238). The informing State should notify the other party of the existence of any resource that may be of interest to the other party. Moreover, the informing State should share information regarding any intention to develop said resources (Becker-Weinberg, 2014, 66).

The duty of information originates also from the principle of good faith (Lagoni, 1979, 237), which is a general principle of international law (Cameron, 2006, 567). The obligation to negotiate in bona fide means that States must take part in effective

negotiations with the view of reaching an agreement. This duty does not require States to necessarily conclude an agreement. It is an obligation to negotiate with the aim of reaching an agreement (*pactum de negotiando*) and not a duty to conclude an agreement (*pactum de contrahendo*). The obligation to negotiate in good faith entails a duty not to unjustifiably delay or break away from negotiations or not to take into account reasonable proposals (Becker-Weinberg, 2014, 63).

In non-delimited maritime areas, the obligation to negotiate in good faith in order to reach a provisional arrangement is included in articles 74(3) and 83(3) of UNCLOS. In such a hypothesis, States may agree not only to joint development of natural resources, but also to a provisional moratorium on the exploitation of hydrocarbon deposits (Lagoni, 1984, 360).

The third aspect of the rule of cooperation is the duty of mutual restraint, which is arguably the single most complicated issue in the matter of the exploitation of transboundary hydrocarbon resources. On the one side, the obligation of self-restraint has gathered much doctrinal backing (Ong, 1999, 798). It is found in article 74(3) of UNCLOS which provides that “the States concerned [...] shall make every effort [...] not to jeopardize or hamper the reaching of the final agreement.”

Concerning hydrocarbon deposits, the meaning of this provision is that a State cannot carry out activities in a disputed maritime area which might impair the other State’s ability to exploit its natural resources. There has been a discussion concerning the scope of the rule of mutual restraint. Article 74(3) seems to forbid only acts that would jeopardize or hamper the reaching of the final agreement.

At this moment, it is useful to ask the question whether there is any difference in international law between activities undertaken in a hydrocarbon deposit straddling a delimited maritime boundary, on the one hand, and activities carried out in a maritime area subject of overlapping claims, on the other one. As previously mentioned, activities conducted in the latter case and that undermine the reaching of an agreement are forbidden by a specific provision in UNCLOS, i.e. Article 74(3).

According to Onorato, the state of international law is straightforward: one State cannot exploit, unilaterally and without prior consent, a transboundary hydrocarbon deposit (Onorato, 1977, 328). This position is supported by Ong, who deems that Article 142 of UNCLOS is applicable to any common deposit (Ong, 1999, 800).

As a matter of fact, it is impossible to give a definite and straightforward answer to this question. However, there are a number of principles which shed some light on this complex issue.

First, under UNCLOS, States are bound to negotiate in good faith for the delimitation of their continental shelf. Arguably, drilling or any other form of

exploratory activity violates good faith because it can be interpreted as an attempt to affect the outcome of the negotiations. The reason behind this is easy to perceive. Through the conduct of exploratory activities in the continental shelf, one State behaves as if the disputed area was under its jurisdiction. As a matter of international law, there is no doubt that as long as negotiations between the two States are on-going, each of the States is under an interdiction to undertake unilateral activities in the disputed maritime area (Churchill et al., 1992, 85-86).

A second connected argument is related to the exclusivity of the sovereign right to explore and exploit. Let us take the following example: one State proceeds with the unilateral exploration of a hydrocarbon deposit located in an area claimed by both States. Subsequently, through negotiations or judicial settlement, this area is finally decided that pertains to the other State. This latter State's rights to this area of the continental shelf exist *ab initio*. This implies that, on the legal plane, delimitation is nothing else than a confirmation of the pre-existing sovereign rights of the State. Therefore, the other State's unauthorized activities would be in clear breach of the exclusive sovereign rights of this latter State (Churchill et al., 1992, 86).

In the Aegean Sea Continental Shelf Case, the ICJ made a distinction between acts of a transitory character and activities of a permanent nature (I.C.J. Reports 1978). Thus, the Court considered that seismic exploration activities do not mandate the adoption of an interim protective measure. This issue was further elaborated in an arbitral award rendered in the Case of Continental Shelf Delimitation between Guyana and Surinam (2007, para. 467). The Tribunal duly recognized two types of activities that can be conducted in disputed maritime areas. The first includes activities carried out in conformity with joint development agreements. The second comprises unilateral acts which do not "cause a physical change to the marine environment" (Guyana-Surinam Delimitation, 2007, para. 467). Consequently, exploitation of hydrocarbon deposits, as it leads to a permanent physical change, would be forbidden, whereas seismic exploration would be permissible.

The Tribunal was completely aware that a very stringent interdiction of activities in a disputed maritime area would be prejudicial to the economic development of the interested party. However, according to the Tribunal, the criterion of the physical impact on the marine environment – permanent or not – strikes a fair balance between the two interests involved, i.e. resource exploitation by one State and preservation of sovereign rights of the other State (Guyana-Surinam Delimitation, 2007, para. 470).

Churchill and Ulfstein enumerate further five examples of State practice which seem to support the proposition that unilateral exploration in disputed maritime areas is forbidden (Churchill et al., 1992, 87-88). Thus, it is reasonable to conclude that there exists a rule of international law prohibiting unilateral activities in

maritime areas subject to overlapping claims. Nonetheless, the scope of the rule is subject to debate. The coastal State enjoys exclusive rights concerning exploration and exploitation of its continental shelf. Why then, as the ICJ and the Tribunal in the Guyana vs Suriname arbitration suggest, should there be a distinction between the two? According to Lagoni, the reason lies with the fact that States are under the obligation not to aggravate disputes, which, unless in exceptional circumstances, is likely to be caused by exploitation and permanent exploratory activities and not by transient exploratory efforts (Churchill et al., 1992, 87).

Nevertheless, it can still be asked whether the sovereign rights of a recalcitrant state are such that it can virtually veto any proposed arrangement to which it does not consent. Or should its refusal to negotiate deprive it of its equitable share of the common deposit? (Miyoshi, 1988, 14). This issue is particularly relevant to disputed areas because, even if a state decides to explore and exploit its share of the deposit unilaterally, it cannot determine exactly where its right to exploit ends in the absence of an agreed boundary.

B. Breakdown of negotiations: multilateral when possible, unilateral when necessary?

When the continental shelf between two States is delimited, the obligation of mutual restraint originating from Article 74(3) is not applicable. Nonetheless, as we have seen, there is a general principle of cooperation regarding transboundary resources and the obligation not to cause transboundary harm or violate the sovereign rights of another State.

If we pursue this principle of mutual restraint to its logical end, one question immediately arises. What happens if negotiations fail? If we accept that one State has to exercise self-restraint in the development of a common deposit until it has reached an agreement with the other coastal State, then this latter State has, in practice, a right of veto towards any exploratory effort of the oil and gas reserve (Ong, 1999, 800). The consequence is that the deposit would have to remain unexploited, maybe, for decades due to the fact that negotiations in this matter take a very long time (Cameron, 2006, 568).

Hydrocarbon deposits may constitute a considerable source of wealth. They may also contribute to the energy independence and security of a country, which are particularly important goals in the current geopolitical context. Taking into consideration these factors and the fact that the international legal framework is so unsatisfactory, one might well conceive one State deciding to proceed with the unilateral exploration of a common deposit (Cameron, 2006, 569).

It is obvious that the interdiction of the rule of capture, which we saw earlier, is closely interconnected to the obligation of self-restraint in the development of

common hydrocarbon resources. The question, then, arises whether the interdiction of unilateral exploration or the obligation of self-restraint are so absolute that, in no circumstances, one State can legally exploit a common reservoir without the agreement of the other State.

According to us, there is an important conceptual distinction between the interdiction of the rule of capture and the obligation of mutual restraint, although their practical implications are frequently the same. Interdiction of capture implies that there does not exist in international law an absolute, positive, substantive right of the coastal State to unilaterally exploit a common hydrocarbon deposit. By contrast, the obligation of restraint is a relative, negative, procedural obligation requiring the concerned State not to proceed unilaterally without first complying with the international legal framework governing cooperation in the matter of transboundary natural resources (Contra Onorato, 1977, 332).

There are a number of differences between the hypothesis when the deposit is found in a non-delimited maritime area and the circumstance where a maritime boundary has been agreed.

Let us assume that one State decides to unilaterally explore a common deposit while the other coastal State remains inactive. What are the legal consequences of this inactivity? For Onorato, it is necessary for this latter State to raise a timely protest if it is to preserve its title to the resources (Onorato, 1977, 329). We find more convincing Lagoni's viewpoint which states that the inactivity of one State does not give the right to the other State to exploit the totality of the common deposit. An argument of estoppel or acquiescence may, however, arise (Lagoni, 1979, 238). Due to the fluidity of the hydrocarbon deposit, any exploratory activity is likely to be prejudicial to the exclusive sovereign rights of the other State. Therefore, it is prohibited according to Ong (Ong, 1999, 800). We disagree with this view. The consent of the other State is not mandated anywhere in international law.

If the hydrocarbon reserves are found in a disputed maritime area, States are found under a double obligation. They have to negotiate in order to agree on maritime delimitation and, in the meantime, they have to endeavour to conclude a provisional arrangement. As long as negotiations concerning delimitation and/or provisional arrangement are on-going, there is a general consensus that the duty of restraint, except transitory exploratory activities, is absolute.

What happens to the natural resources if there is a final breakdown of the negotiations or they are rendered evidently useless and meaningless? Are there more than practical reasons for the States to cooperate as suggested by Ong? (Ong, 1999, 799).

We consider that such a hypothesis would rarely happen in practice. Due to the complexity of the negotiations, it would take years for one party to prove that negotiations are fatally failed due to the intractability of the other party.

Furthermore, the uncertainty connected with the status of international law plays in both ways. If one State demonstrates that negotiations failed because of the other party, then this latter State could be estopped to demand compensation.

In any event, it is excluded that the development of natural resources be stopped indefinitely.

The way ahead

One way to the development of transboundary resources in the absence of agreement is advanced by Cameron taking inspiration by the enhanced cooperation framework adopted by the Norway and the UK (Cameron, 2006). We already know that the pioneering UK-Norway agreement of 1965 provided that, if a hydrocarbon reservoir is found straddling the delimited boundary, the Parties would cooperate as to the manner of its developments in conformity with the principle of unity of the deposit.

In the Frigg agreement of 1976, the parties included Article 2(3) which, basically, provides that if the two States do not agree on the apportionment of the deposit, production will proceed on a provisional basis according to the apportionment proposed by the licensees, or in its absence, on an equal basis. This *modus vivendi* would be replaced by the final agreed apportionment (UK-Norway Frigg Field Reservoir, 1976).

Taking into consideration the uncertainties of international law on this matter, the best alternative is the adoption of a "mitigation strategy" as suggested by Cameron, who enumerates three main measures: First, the acting State should conduct an assessment of the part of the reservoir that lies across the border and it should transfer a percentage of the revenues to an escrow account for the benefit of the other State; second, it should keep an open and on-going dialogue with the view of reaching an agreement; third, this State should provide access and full transparency to the financial data of the petroleum operations (Cameron, 2006, 583).

There are strong arguments supporting the viewpoint that this way of proceeding is respectful of international law. In front of a deadlock in negotiations and having to choose between resource development and inactivity, this solution is arguably the safest to adopt in the current state of international law, at least in the case of a common deposit straddling an already delimited boundary.

6. Conclusion

Offshore oil and gas are arguably the most important resources of the sea. Because of this, States have been unwilling to consider hydrocarbon deposits as a special

circumstance justifying the allocation of the entire reservoir to only one or the other of the coastal States having a valid claim under international law. As a consequence, more than one State has the sovereign right to explore and exploit the same petroleum reservoir. This plurality of legal rights stands in blunt contradiction with the inherent physical unity of the deposit. Exploitation from one side of the maritime boundary may lead to the dwindling of the share of resources pertaining to the State on the other side of the boundary. Concurrent drilling makes both parties worse-off, increasing costs and diminishing production rate.

A preferred alternative has arisen for the exploration and exploitation of transboundary hydrocarbon resources in the form of joint development, replicated in State practice and encouraged by international jurisprudence. As *lege ferenda*, joint development has a number of significant advantages: it promotes efficiency and respect of mutual sovereign rights of States. It helps also to defuse tensions by shelving delimitation disagreements.

Nevertheless, joint development is not mandated by international law. It has not crystallized yet in a customary international rule. It lacks the uniformity and consistency required by international law to give rise to a custom (Becker-Weinberg, 2014, 202). Furthermore, it cannot be substantiated that States are entering into cooperative agreements as an expression of a requirement by international law. The determinant psychological element of *opinio juris* is absent. As intelligently underlined by Ong, the threshold for finding a new custom is higher when the purported customary rule requires positive behaviour rather than abstention by States (Ong, 199, 794). Moreover, State practice in one region cannot give rise to a custom in another part of the world where States exhibit diametrically different behaviour (Miyoshi, 1999, 4).

However, as the rule of capture is interdicted, States have to engage in meaningful negotiations with each other with the view of reaching an agreement as to the manner of developing common resources. The conclusion of an agreement, though desirable, is not obligatory. If the parties do not agree how to split the baby, should the baby remain nevertheless not catered? We do not think so. Through the adoption of a mitigation strategy, one State can proceed with the unilateral development of the hydrocarbon deposit while, in the same time, reducing the maximum the risk of infringing the other party's rights. At the end, shouldn't the baby be catered by the "mother" who loved her the most?

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