IMPACT OF ENTREPRENEURSHIP IN ECONOMIC GROWTH "CASE OF A SMALL ECONOMY: ALBANIA"

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Abstract

Economic growth is a very important indicator, that shows the progress or the regress that a country experiences. It becomes a mean of comparison along with other countries in the world. There are many factors that contribute in this indicator. Entrepreneurship is a factor, one of those concepts which are very hard to define clearly and properly. Many interpretations can be given, and yet none that can summarize in one description.

In this paper, it will be introduced the impact of entrepreneurship in the economic growth of a country. There is an assumption stating that entrepreneurship or the formation of new enterprises has got a positive impact on the employment levels. Furthermore, the decrease in unemployment rates creates a very positive climate in the economic aspect of a country. It will be analyzed how these two: entrepreneurship and economic growth are interrelated in transitional economies like Albania. The model is going to comprise countries like: Albania, Macedonia, and Bulgaria; in order to make the comparison of the correlation's result within them. The data interval is going to include years from 2000 to 2010, and the main source of information will be INSTAT and World Bank.

Key Words: Albania, Economic Growth, Entrepreneurship, Innovation.

▪ 1. INTRODUCTION

When speaking of entrepreneurship, in itself it has different meanings in different countries. In developed western countries, during the history there has been a great number of entrepreneurs; of people who have invented great products, services that have been in the benefit of the people all over the world. In this context, entrepreneurship is defined as an "activity" of bringing new ideas in the market with the intention of creating something new, not brought before. Of course that it is accompanied with a great risk, due to uncertainty of how market will react to such product/service; but at the same time the profit is lucrative. In these developed countries, opportunities and possibilities were and are much higher than in any other country. People are more incentived and more courageous in taking entrepreneurial decisions; because it is also seen as part of culture: risk-taking, inventions, pay-off; and in cases of failure the process of re-taking is much more easier. There is flexibility, and the statement of having nothing to lose works quite well.

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When comparing this reality, with that of developing/transitional countries, the entrepreneur and entrepreneurship gets another meaning. In developing countries, it is obvious that standard of livings are low, and the economic environment lacks spaces and possibilities for creative thinking to trigger people into expressing themselves in terms of productivity. These countries are characterized by a high intervention of politics into the economical, social life of the population; by making possible the creation of a society that does not have many chances; and being fully dependent by a small group. This dependency and non-meritocratic system does not create a society that is free to "undertake" actions that can lead towards development. But even though, it can be seen that the two types of societies are different; in developing countries, in its own/specific way we can distinguish entrepreneurs. In this case, entrepreneurs come as a result of self-sustaining and surviving means. This is comprehensive, due to the fact that developed and developing countries do not have the same starting points; which then have brought to different levels of economic developments. The culture factor, which is inherited from the past, is also very important in explaining the different concepts and definitions arising for entrepreneurship.

In this paper, the focus will be in these two groups of countries, which provide their specific explanations when speaking of entrepreneurs, and especially Albania towards other countries. It will be discussed whether in this developing country is there any practices known with the term of entrepreneurship. Definitely, entrepreneurship has impacts in a country but also all over the world; especially entrepreneurs of developed countries. So, in this paper it is going to be included the impact that entrepreneurship has had in Albanian economy during the years. In many countries, the way how entrepreneurship is seen is tightly connected to the specifics of certain countries, cultures; and in Albanian case this is valid, too.

1. LITERATURE REVIEW

The beginnings of the theories of economy, market and other related subjects start with Adam Smith, the father of the economy. In his *Wealth of Nations* (1776), Adam Smith emphasizes the importance of entrepreneurs in expanding markets and as a result the growth of the economy, through the increase of division of labor. Division of labor increased productivity. Smith explains partially the economic progress at the time, but lacks the explanation that there is more than just division of labor to progress: like technology and innovation. Joseph Schumpeter provides a better insight and explanation in his *The Theory of Economic Development* (1911, trans. 1934) and other works of him. Schumpeter mentions the role of entrepreneurs in an economy as the driving engine towards leading the economy from one product or process to the next one. According to Schumpeter, an entrepreneur is someone who takes an idea and turns it into economic knowledge. Schumpeter defines development as "the creation of new combinations" and highlights five types of entrepreneurship:

1. New product, or a new quality of a certain good to consumers

2. New production method
3. The opening of a new market (even though did it exist before or not)
4. The conquest of a new source of supply of raw materials or half-manufactured goods
5. The carrying out of a new organization like creation/breaking of a monopoly position

Schumpeter looks at it in a broader spectrum, compared to Smith's model (time differences). According to Solow (1956) model, the factors impacting the economic growth were: capital accumulation, depreciation, income/per worker, population growth. Other studies conducted looked for expansion in those factors, and specifically inserting also entrepreneurship as a contributing factor. Arrow (1962) incorporated human capital via a process of learning-by-doing. Raising up the importance of knowledge stock from the practical implementations. Lazear (2004) stated that "the entrepreneur is the most crucial player in the modern economy". Hendersen (2002) stated that through new firm's creation, entrepreneurs create economic growth. Holcombe (1998) and Kirzner (1973) believe that when entrepreneurship is interacted with other factors of production: land, labor and capital produce growth in the economy. When entrepreneurship is incorporated in the neo-classical models, it becomes obvious that is the crucial factor impacting growth; rather than technology or investment in human capital per se. (Holcombe, pg. 60). Even though during the history, the impact of entrepreneurship have been known (e.g. Knight (1921), Schumpeter (1934), Kirzner (1973)) assessing through models this impact has been relatively new.

There is another thought that was first developed by Schumpeter and then were Aghion and Howitt (1992), who expanded it. The two focused on the uncertainty of innovation in an endogenous growth model. They developed a model explaining that each innovation that a firm realizes makes that firm experience monopoly profits until another firm experiences another innovation. It is a cyclical process which makes possible a rotation. As the new innovation comes to practice, the previous one is considered as "common knowledge", as something that currently is "consumed" or well known. Periods are defined as the time between innovations, and so the fewer resources invested in research by other firms, the greater the profit for the current monopolist. The model results in creative destruction: innovating firms create monopoly profits while destroying the profits of a previous firm.

Caree and Thurik (2003) provide a review on how the economic growth can be affected by the entrepreneurship. In itself entrepreneurship does not enter in the model directly, but it affects the model indirectly. Entrepreneurship, as the two scholars' state, does not affect the factors of production in a direct way; rather it affects the process by which all those factors of production are brought together with the aim of making a product. Also, Audretsch, et al (2006) have backed up the up mentioned idea with their review literature.

Models undertaken in order to provide a correlation between economic growth and entrepreneurship have been many; trying to make entrepreneurship quantitative. The studies

conducted are cross-country studies to give the correlation often relied on GEM (Global Entrepreneurship Monitor Consortium), a survey based data set. Wong, et al (2005) uses sub-components of GEM index and reached a conclusion that economic growth is affected positively and at a relatively high amount only by entrepreneurships which are highly potential. There is also another way of conducting the study- based on the KIEA standing for Kauffman Index of Entrepreneurial Activity. This index is used to explain differences among countries in terms of entrepreneurship (Goetz (2008) and Hall and Sobel (2008)).

2. DATA AND METHODOLOGY

The main data sources for this paper are the statistical institutions of each country: Albania (INSTAT), Macedonia (SSO, state statistical office) and Bulgaria (NSI, national statistical institute), also World Bank and IMF. The methodology followed is creating a multiple regression model where it is shown a correlation between the dependent and independent variables for each country.

Countries taken in the model are part of the same region: Balkans, and as much as they are alike there are many differences that separate them: not only historical, but even economical and cultural. Finding of data was not very easy, especially for years before 2000. The model is made with data from 2000 to 2010; relatively a low sample, which makes the model not strongly reliable.

The variables taken are: the y variable, the dependent one which represents the rate of economic growth; the x variables, the independent ones. There are x1-GDP per worker, x2-growth in capital per worker, x3- new firm creation and x4- technological innovation intensity. The regression equation has this form:

Rate of Economic Growth = α0 + α1* Base year GDP per Worker + α 2 *Growth in Capital per worker + β 1 *New Firm Creation + β 2* Technological Innovation Intensity+ ***e*** (Controls-α / Predictors-β).

The hypothesis raised is: "Economic growth is expected to be highly affected by Entrepreneurship and Technology". In different countries, the results taken from the model, have conclusions which support the hypothesis and that do not support it. In Albania's, it is mentioned below in the analysis.

2.1. THE SUMMARY OUTPUT FOR THE REGRESSION ANALYSIS OF ALBANIA:

From the regression, the results generated below relate to Albania. The multiple R, which is an indicator of the correlation between the independent and dependent variables, is 82.5%. It gives a strong indication for the correlation of the variables. R square is 68.1 %, which is relatively high percentage. It means that 68% of the variance of the independent variable is explained by the independent variables. Adjusted R2 46.87% gives the proportion variance of y,

explained by x variables. The standard error is quite high: 1.1861. It represents the standard deviation of the error, the accuracy with which the sample taken represents the whole population. So in this case, there is a deviation from the sample to the mean population which is considerable. The number of the observations is 11, in lack of possibility to provide more data in previous years.

Table 1

Regression Statistics	Results
Multiple R	0,82537986
R Square	0,68125192
Adjusted R Square	0,4687532
Standard Error	1,18610207
Observations	11

The Anova table, gives the degrees of freedom, where in total are 10. The F significance, is 9.857 is less than 0.1 or 10%, which are close but still there is not a meaningful correlation. It can be seen although that they are very close to one another, as a result it can be seen as a meaningful correlation.

Anova Table	df	SS	MS	F	Significance F
Regression	4	18,040789 4	4,5101973 6	3,2059106 8	0,098571766
Residual	6	8,4410287 3	1,4068381 2		
Total	10	26,481818 2			

Table 2

The coefficients shown below, relate to each of the independent variables. The intercept shows the linearity of the regression. It explains the model when all the explanatory variables are 0. The standard error gives the deviation of each of the coefficients where for x1 and x4, it seems that standard error is quite high. P-value shows the distribution probability. The values are low, so as like this, the p-values are fine. Less than 10%. Lower and upper 95% relate to the fact that there exists 95% that the coefficients rely on the upper/lower 95%. It is high, but as much more higher as figure, than it is better for the model.

Table 3

	Coefficients	**Standard Error**	**t Stat**	**P-value**	**Lower 95%**	**Upper 95%**
Intercept	7,1818	1,8440	3,8948	0,0080	2,6698	11,6938
X1	(14,3748)	5,7424	(2,5033)	0,0463	(28,4261)	(0,3236)
X2	0,0366	0,0172	2,1222	0,0780	(0,0056)	0,0788
X3	6,2972	2,6149	2,4082	0,0527	(0,1012)	12,6956
X4	1.263,4824	5.010,8264	0,2522	0,8093	(10.997,5682)	13.524,5329

The fitted line goes as follows:

y= 7.1818 -14.37*x1 + 0.0366*x2 + 6.2972*x3 + 1263.48*x4 + e

2.2. THE SUMMARY OUTPUT FOR THE REGRESSION ANALYSIS OF MACEDONIA:

From the regression, the results generated below relate to Macedonia. The multiple R, which is an indicator of the correlation between the independent and dependent variables, is 88.32%. It gives a strong indication for the correlation of the variables. R square is 78%, which is relatively high percentage. It means that 78% of the variance of the independent variable is explained by the independent variables. Adjusted R2 63.33% gives the proportion variance of y, explained by x variables. The standard error is quite high: 1.9236. It represents the standard deviation of the error, the accuracy with which the sample taken represents the whole population. So in this case, there is a deviation from the sample to the mean population which is considerable. The number of the observations is 11, in lack of possibility to provide more data in previous years.

Table 4

Regression Statistics	
Multiple R	0,883184
R Square	0,780013
Adjusted R Square	0,633356
Standard Error	1,923578
Observations	11

The Anova table, gives the degrees of freedom, where in total are 10. The F significance, is 3.556 is less than 0.1 or 10%, as a result there is not a meaningful correlation. It can be seen that there is a very weak correlation. So, it is not a meaningful correlation.

Table 5

Anova Table	df	SS	MS	F	Significance F

Regression	4	78,71846	19,67961	5,318598	0,035558
Residual	6	22,20091	3,700151		
Total	10	100,9194			

The coefficients shown below, relate to each of the independent variables. The intercept shows the linearity of the regression. It explains the model when all the explanatory variables are 0. The standard error gives the deviation of each of the coefficients where for x1 and x4, it seems that standard error is quite high. P-value shows the distribution probability. The values are low, so as like this, the p-values are fine. Less than 10%. Lower and upper 95% relate to the fact that there exists 95% that the coefficients rely on the upper/lower 95%. It is high, but as much more higher as figure, than it is better for the model.

Table 6

	Coefficients	**Standard Error**	**t Stat**	**P-value**	**Lower 95%**	**Upper 95%**
Intercept	(1,870045)	2,735282	(0,683675)	0,519696	(8,563039)	4,822950
X1	28,699240	32,560071	0,881424	0,412002	(50,972384)	108,370865
X2	0,213759	0,060495	3,533501	0,012315	0,065733	0,361785
X3	(0,973977)	1,042299	(0,934451)	0,386135	(3,524392)	1,576437
X4	6.261,900489	2.317,683061	2,701793	0,035491	590,734350	11.933,066628

From comparison with the Albanian results, coefficients have positive impact on the dependent variable. Only x2 has a negative impact, showing contrary effect from independent to

dependent variables. While in Macedonia's case, starting from interception which is negative; only x3 affects negatively the dependent value, the others' effect is positive.

The fit in equation goes like this:

y= -1.87 + 28.699*x1 + 0.2138*x2 – 0.9739*x3 + 6261.9*x4 + e

2.3. THE SUMMARY OUTPUT FOR THE REGRESSION ANALYSIS OF BULGARIA:

From the regression, the results generated below relate to Bulgaria. The multiple R, which is an indicator of the correlation between the independent and dependent variables, is 93.64%. It gives a strong indication for the correlation of the variables. R square is 87.69%, which is relatively high percentage. It means that 87.69% of the variance of the independent variable is explained by the independent variables. Adjusted R2 68.12% gives the proportion variance of y, explained by x variables. The standard error is quite high: 1.55727. It represents the standard deviation of the error, the accuracy with which the sample taken represents the whole population. So in this case, there is a deviation from the sample to the mean population which is considerable. The number of the observations is 11, in lack of possibility to provide more data in previous years.

Table 7

Regression Statistics	
Multiple R	0,936404
R Square	0,876853
Adjusted R Square	0,681219
Standard Error	1,557271
Observations	11

The Anova table, gives the degrees of freedom, where in total are 10. The F significance, 0.00213023 is less than 0.1 or 10%, as a result there is not a meaningful correlation. It can be seen that there is a very weak correlation. So, it is not a meaningful correlation.

Table 8

Anova Table	Df	SS	MS	F	Significance F
Regression	4	120,873434	30,21835858	16,6142624	0,00213023
Residual	7	16,9756566	2,425093796		
Total	11	137,849091			

The coefficients shown below, relate to each of the independent variables. The intercept shows the linearity of the regression. It explains the model when all the explanatory variables are 0. The standard error gives the deviation of each of the coefficients. P-value shows the distribution probability. The values are low, so as like this, the p-values are fine. Less than 10%. Lower and upper 95% relate to the fact that there exists 95% that the coefficients rely on the upper/lower 95%. It is high, but as much more higher as figure, than it is better for the model.

Table 9

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	1,491588	1,946868	0,766147	0,468632	(3,112024)	6,095200
X1	(0,000355)	0,000561	(0,633364)	0,546624	(0,001681)	0,000971
X2	0,209453	0,043345	4,832169	0,001895	0,106957	0,311948
X3	-	-	65.535	#NUM!	-	-
X4	0,485382	0,617388	0,786187	0,457541	(0,974508)	1,945271

From comparison with the Albanian results, coefficients have positive impact on the dependent variable. Only x2 has a negative impact, showing contrary effect from independent to dependent variables. While in Bulgaria's case, starting from interception which is positive; only x1 affects negatively the dependent value, the others' effect is positive.

The fit in equation goes like this:

y= -1.4916 + 0.000355*x1 + 0.2095*x2 – 0.0000*x3 + 0.4854*x4 + e

3. CONCLUSIONS:

In all the three cases: Albania, Macedonia and Bulgaria, there is a high multiple R, R2; meaning that there exists a strong correlation between the variables. The rate of economic growth has strong correlation with GDP/worker, capital growth/worker, new firm creation and technological innovation intensity. The standard error is quite high in all the three cases, the sample is not strongly accurate related to the whole population. The number of observations is quite low, which is a contributing factor for the model to be not reliable.

According to the Anova table, it can be easily seen that the F significance is relatively low, insinuating that the model is not totally meaningful in terms of the correlation between variables.

(1) y= 7.1818 -14.37*x1 + 0.0366*x2 + 6.2972*x3 + 1263.48*x4 + e
(2) y= -1.87 + 28.699*x1 + 0.2138*x2 – 0.9739*x3 + 6261.9*x4 + e
(3) y= -1.4916 + 0.000355*x1 + 0.2095*x2 – 0.0000*x3 + 0.4854*x4 + e

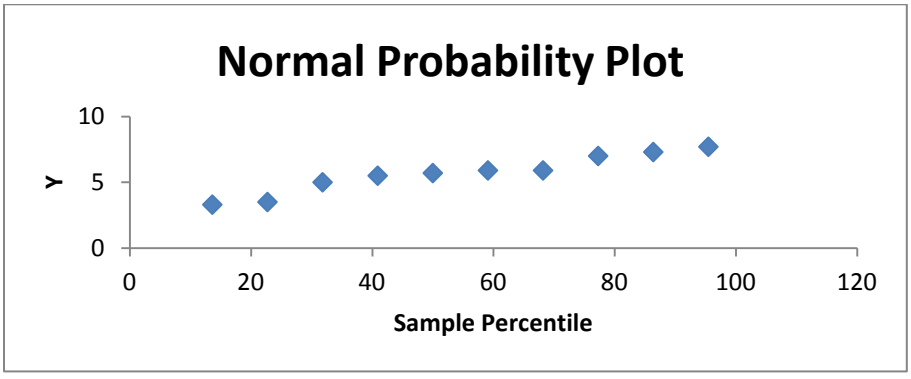
The three equations above are of Albania, Macedonia and Bulgaria. The coefficients are different from (1) to (2) and (3), having opposite effects on the dependent variable. In Albania's case GDP/worker seems to have negative impact on rate of economic growth. This comes a result such that lower income countries are experiencing currently higher GDP growth rates. Capital growth per worker is having positive impact on the three equations, and it makes sense. Capital growth represents in a way, increases in a country's economic growth since it is an expenditure in terms of productivity. New firm creation is having positive impact in Albania´s case. The increasing in the number of firms created and registered has an impact on the economic growth rate, while in Macedonia and Bulgaria the number of firms created does not seem to have a positive impact on economic growth rate. Meaning that as factor can/can not have positive impact on economic growth. When firms created are really innovated and have something new to bring to the market, than the impact can be positive, otherwise it has negative effect. Technology absolutely has a positive impact on economic growth. Bulgaria and Macedonia look like they have similiarities. New firm creation has huge impact on Albania's economy.

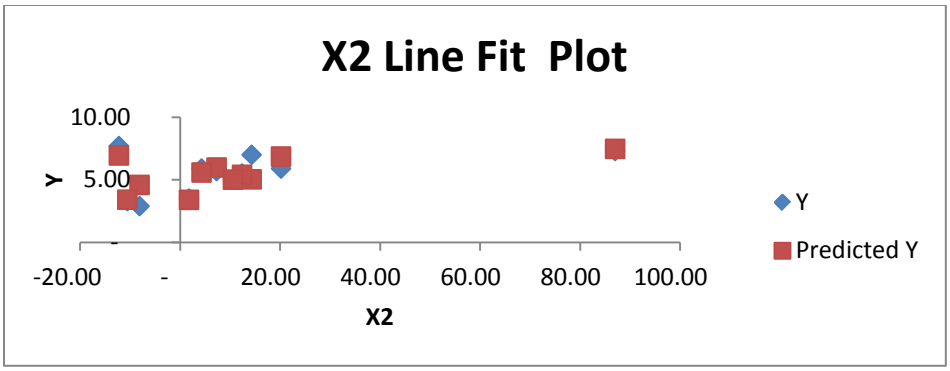
Appendix

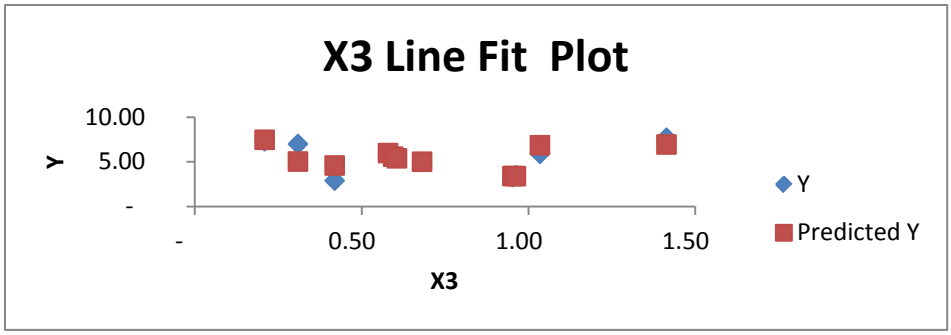
Albania:

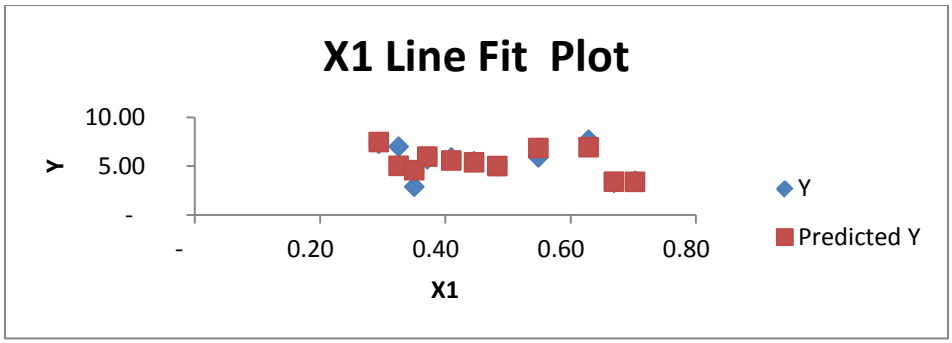
RESIDUAL OUTPUT

Observation	Predicted Y	Residuals	Standard Residuals
1	7,471748588	-0,171748588	-0,186937093
2	5,038500547	1,961499453	2,134963733
3	4,591516832	-1,691516832	-1,841105327
4	5,982259827	-0,282259827	-0,307221342
5	5,582966993	0,317033007	0,345069672
6	5,399998199	0,100001801	0,108845413
7	5,014473899	-0,014473899	-0,015753891
8	6,858648859	-0,958648859	-1,043426519
9	6,944441795	0,755558205	0,822375639
10	3,413638157	-0,113638157	-0,123687694
11	3,401806304	0,098193696	0,106877409









Albania

	Y	X1	X2	X3	X4
2000	7,30	0,29	87,03	0,21	0,0000066437
2001	7,00	0,33	14,35	0,31	0,0000488828
2002	2,90	0,35	(8,07)	0,42	0,0000802867
2003	5,70	0,37	7,34	0,58	0,0001741467
2004	5,90	0,41	4,33	0,60	0,0003045333
2005	5,50	0,45	12,43	0,61	0,0002817794

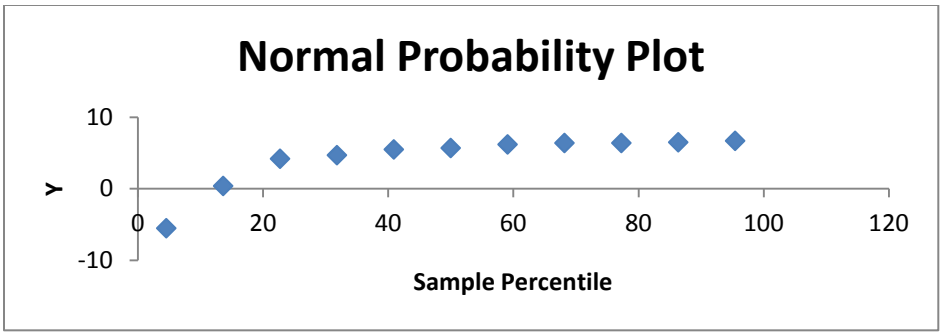
2006	5,00	0,48	10,61	0,68	0,0000760408
2007	5,90	0,55	20,22	1,04	0,0002414436
2008	7,70	0,63	(12,19)	1,41	0,0002703443
2009	3,30	0,67	(10,51)	0,95	0,0001881003
2010	3,50	0,70	1,82	0,96	0,0001544659

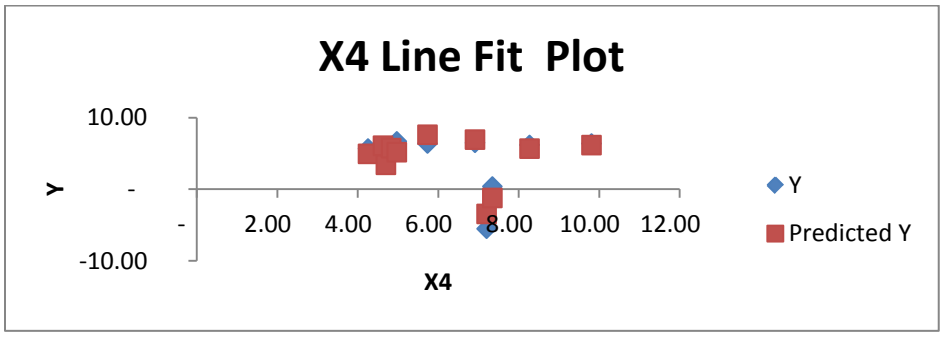
Source: INSTAT and IMF/World Bank

Bulgaria:

RESIDUAL OUTPUT

Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	4,95417263	0,74582737	0,600373301
2	6,09335503	-1,893355	-1,524105776
3	3,4234198	1,2765802	1,027616707
4	5,75523494	-0,2552349	-0,205458056
5	5,18664707	1,51335293	1,218213123
6	7,62230778	-1,2223078	-0,983928698
7	6,94253753	-0,4425375	-0,356232192
8	6,17578804	0,22421196	0,180485294
9	5,68417633	0,51582367	0,415225789
10	-3,4335463	-2,0664537	-1,663446126
11	-1,2040929	1,60409289	1,291256633


Normal Probability Plot
10
0
-10
Y
0
20
40
60
80
100
120
Sample Percentile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10.00
-
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Y
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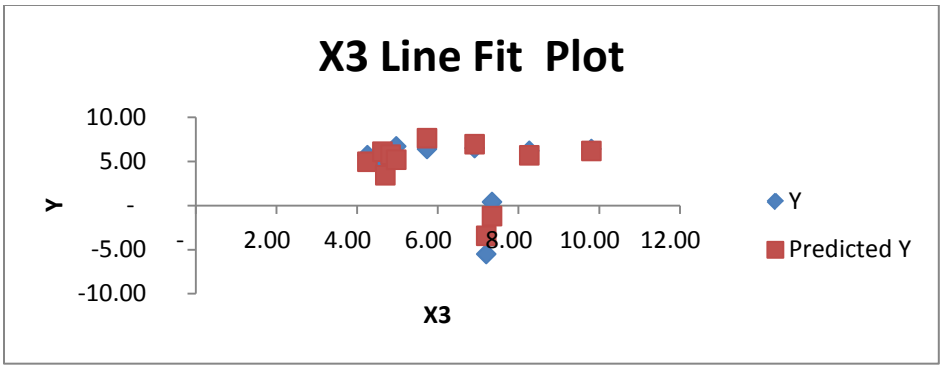
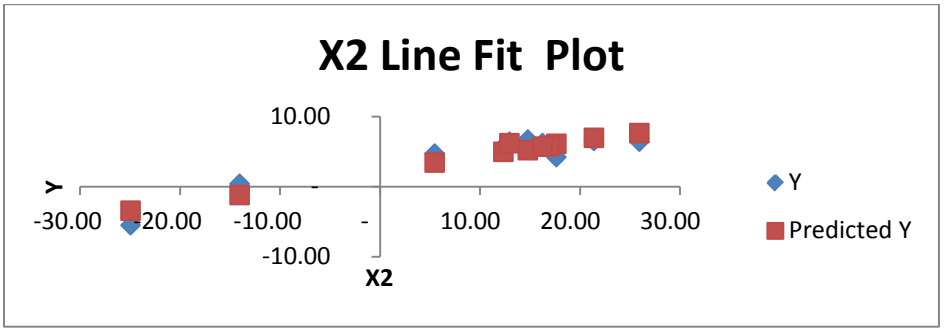
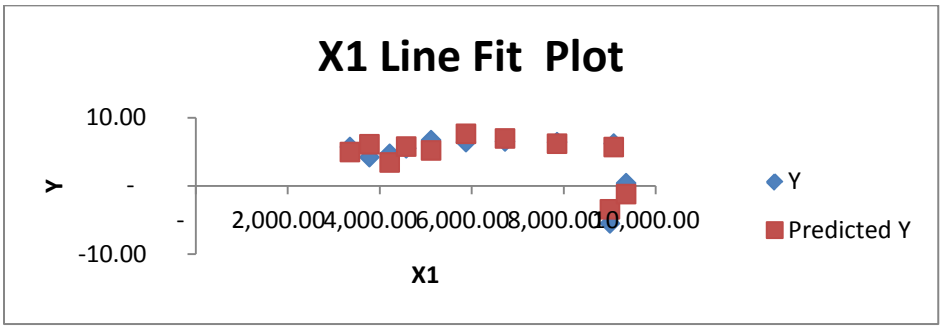
10.00
12.00
X4
Y
Predicted Y







Bulgaria

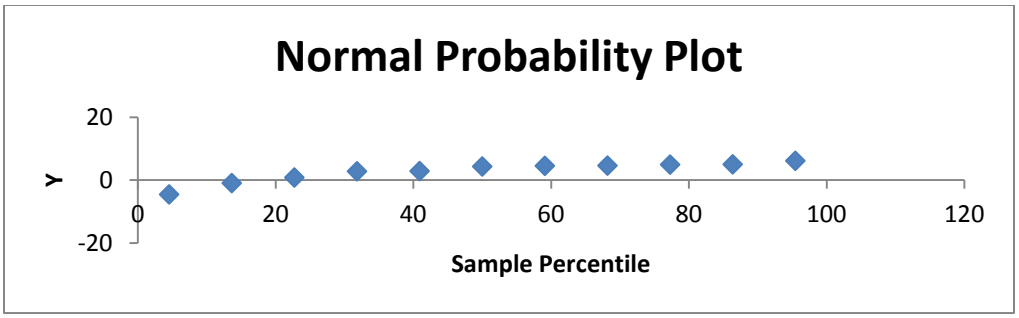
	Y	X1	X2	X3	X4
2000	5,70	3.353,50	12,35	4,26	4,26
2001	4,20	3.777,79	17,65	4,63	4,63
2002	4,70	4.217,95	5,48	4,70	4,70
2003	5,50	4.577,43	16,92	4,83	4,83
2004	6,70	5.117,95	14,80	4,97	4,97
2005	6,40	5.876,53	25,95	5,73	5,73

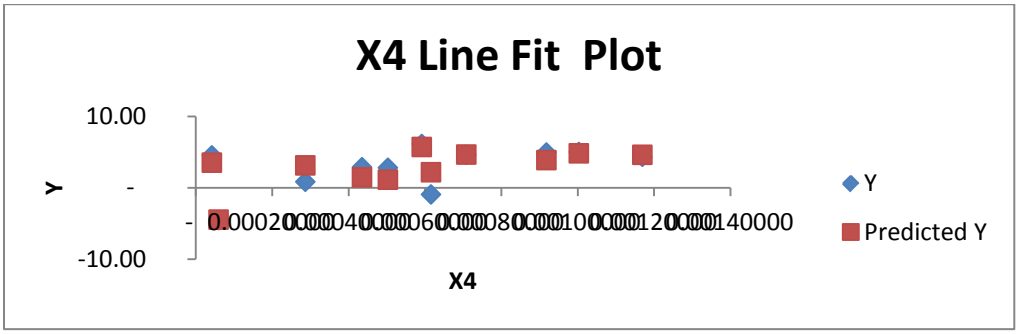
2006	6,50	6.725,93	21,41	6,91	6,91
2007	6,40	7.857,24	12,96	9,81	9,81
2008	6,20	9.089,79	16,26	8,27	8,27
2009	(5,50)	9.007,31	(24,93)	7,20	7,20
2010	0,40	9.358,71	(14,02)	7,35	7,35

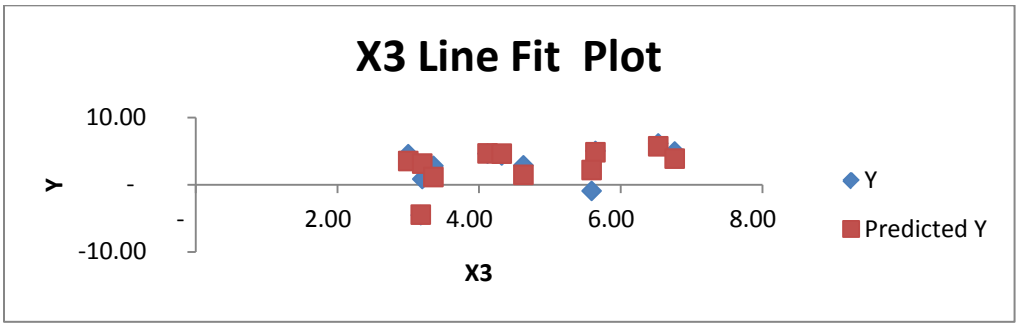
Source: IMF/World Bank and NSI

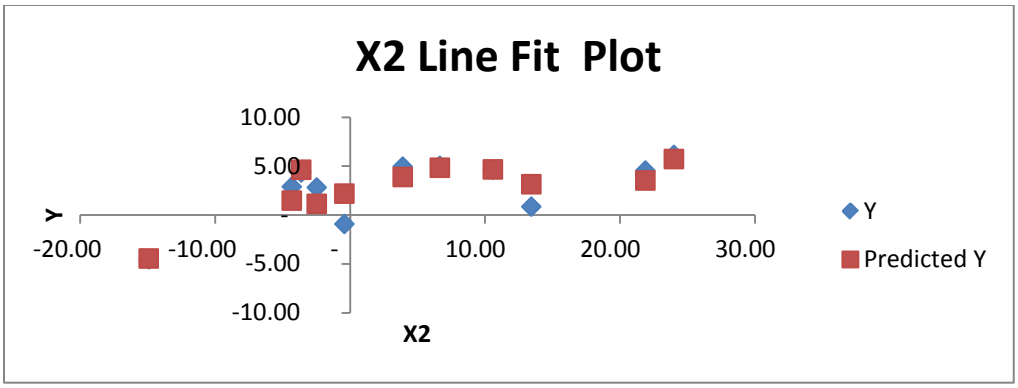
Macedonia:

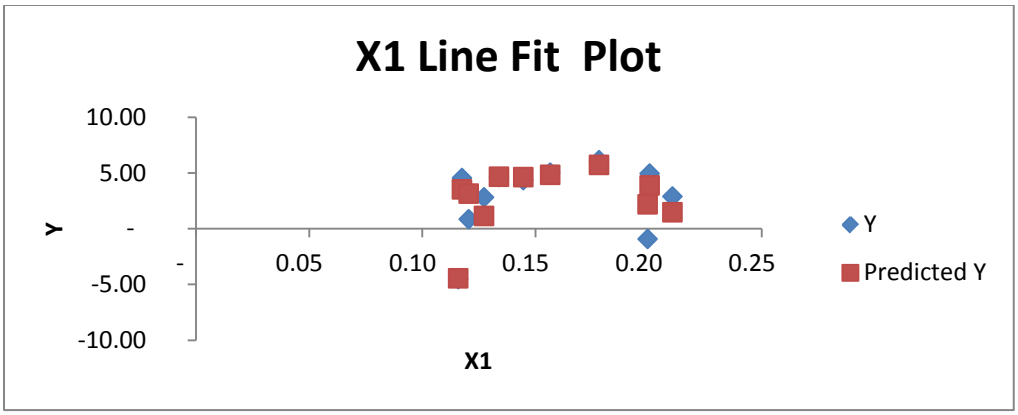
Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	3,52967786	1,019360509	0,68413603
2	-4,446678254	-0,078659654	-0,0527918
3	3,14815837	-2,294668193	-1,540049
4	1,144460182	1,672024951	1,12216679
5	4,663685126	-0,036388507	-0,0244219
6	4,628144806	-0,275978264	-0,1852207
7	4,835122643	0,195516021	0,13121909
8	5,722954716	0,425911588	0,28584731
9	3,886651797	1,063360396	0,71366622
10	2,187463959	-3,107731708	-2,0857304
11	1,476038122	1,41725286	0,95117844


Normal Probability Plot
20
0
-20
Y
0
20
40
60
80
100
120
Sample Percentile


X4 Line Fit Plot
10.00
-
-10.00
Y
X4
Y
Predicted Y


X3 Line Fit Plot
10.00
-
-10.00
Y
2.00
4.00
6.00
8.00
X3
Y
Predicted Y


X2 Line Fit Plot
10.00
5.00
-5.00
-10.00
Y
-20.00
-10.00
10.00
20.00
30.00
X2
Y
Predicted Y



Macedonia

	Y	X1	X2	X3	X4
2000	**4,55**	0,12	21,90	3,00	0,00004230
2001	**(4,53)**	0,12	(14,90)	3,18	0,00005987
2002	**0,85**	0,12	13,45	3,20	0,00028692
2003	**2,82**	0,13	(2,45)	3,36	0,00050316
2004	**4,63**	0,13	10,60	4,12	0,00070836
2005	**4,35**	0,14	(3,60)	4,32	0,00116929
2006	**5,03**	0,16	6,67	5,64	0,00100294
2007	**6,15**	0,18	24,02	6,53	0,00059180
2008	**4,95**	0,20	3,92	6,76	0,00091808
2009	**(0,92)**	0,20	(0,40)	5,59	0,00061597
2010	**2,89**	0,21	(4,30)	4,63	0,00043537

Source: SSO and IMF/World Bank

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