

PAPERS

DETERMINANTS OF ECONOMIC GROWTH IN ALBANIA

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INTRODUCTION

The aim of this article is to analyse the sources of economic growth in Albania after transition. Determining the fundamental sources of economic growth is important in order to evaluate the role they have played in the past and what is the possible perspective of their development in the future. Economic growth in Albania compared to other countries of Central and Eastern Europe after '90s is impressive. Hence, excluding Poland and Turkey, which have showed a stable economic growth after '91, Albania is the first country amid the considered countries which in 1999 (along with Hungary) exceeded the real GDP level of 1990. For the rest, the transition shock resulted fairly strong and the recovery of the economy in order to succeed the level of 1990, begun only after the year 2003. In the meantime Macedonia, Bulgaria and Letonia have not reached the real GDP level they had in 1990.

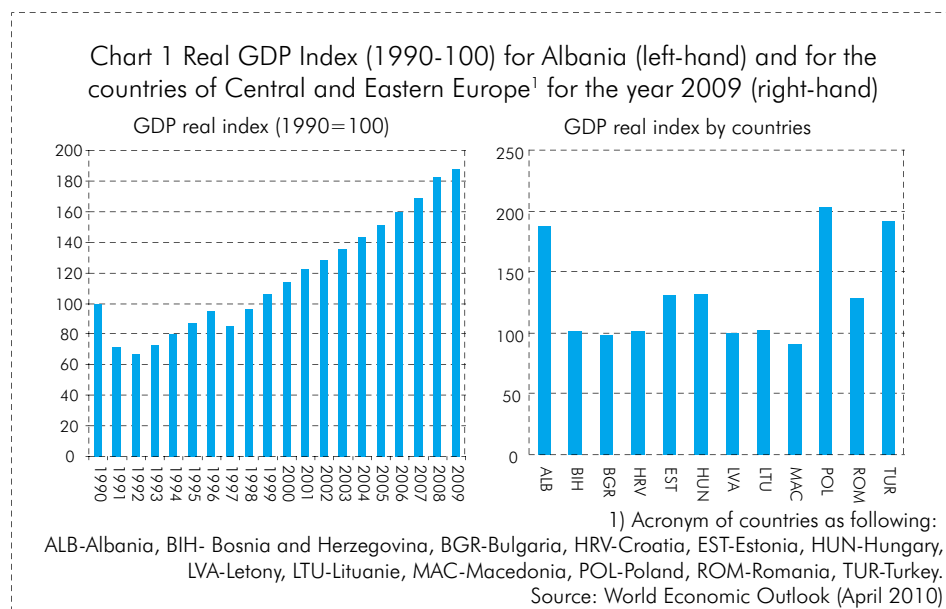
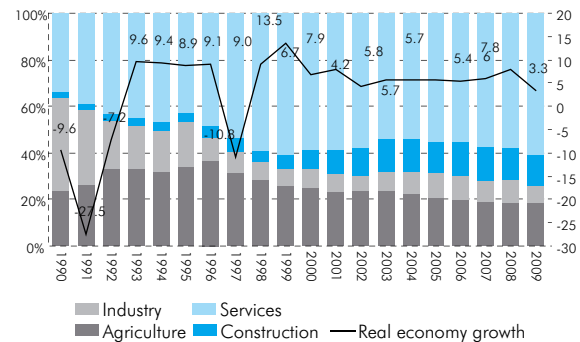


Chart 2 shows a more detailed outlook of economic growth in Albania. During the beginning of transition 1990-1992, the real GDP in Albania drooped by cumulative percentage of 39%. The policies implemented during 1993 aiming the macroeconomic stability of the country, helped the stable

economic recovery and growth. Between 1993 until 1996 the average annual growth pointed to 9.3%. The crisis of pyramid schemes during 1997 triggered an economic fall of 11%. Nevertheless, economy recovered rapidly and the growth rate of real GDP for 1998 pointed to 8.6 percent. This growth was higher for the ongoing years and was stabilised during 2001-2002, at an average rate of 6.5 percent. During the economic crisis of 2002, economy grew only by 4.3 percent. In the meantime, starting from 2003, the average annual growth pointed to 6 percent. After the annual growth rate of 7.85 % in 2008, the global financial crisis was reflected on the slowing down of the economic growth recording only 3.3 % in 2009.

Chart 2 The real economic growth rate in Albania during 1990-2009 (right-hand axis) and composition of GDP by sectors (left-hand axis)



Source: World Development Indicator (2003) for GDP and composition by sectors for 1990-1995, INSTAT for the period 1996-2009. Composition of GDP by sectors for 2009 is a preliminary estimation based on INSTAT data on quarterly GDP figures for the first quarter of 2009 published in July 2009.

Due to the inefficient structure of the economy that Albania inherited from the communist regime, the transition process led to restructuring of the economy's composition. Starting from 1990 the share of the industry sector has dropped from 39% to about 7.6% in 2009. Meanwhile, the construction sector experienced a considerably expansion, from about 3% of GDP in 1990, to 14.5% in 2009. The narrowing of industry sector provided usable resources to the other sectors. The services sector experienced a great expansion, whose share to GDP increased from 33 % in 1990 to 63% in 2009. The share of agriculture sector first climbed from 23% to 32% up to 1997 and then decreased to 19 % of GDP in 2009. The financial crisis seems to have been reflected mostly on industry, which in 2009 reduced by 2.5 percentage points as a ratio to GDP, in the meantime the services sector continued to expand by 5.4 percentage points against GDP relative to year 2008.

After discussing the main development of economic growth in Albania, it is important to analyze the main sources of growth which have determined the economic development of the country. In order to explain the main determinants of economic growth, the empiric literature suggests two approaches (Khan, 2004):

- First, the neoclassic model sought to decompose economic growth into the contributions of a number of fundamental sources of growth, such as: human capital, physical capital stock and Total Factor Productivity growth (known as TFP).
- Second, cross country comparative analysis of economic growth, sought to identify a number of structural sources of economic growth, such as: investments rate, school enrolment, international trade integration; macroeconomic stability, infrastructure and quality of institutions. It is obvious that these structural variables provide a contribution to the development of one or some fundamental sources of economic growth, which are used in the first approach.

During the course of this article, economic growth in Albania shall be by identifying its fundamental sources through the first approach.

METHODOLOGY AND DATA

To identify the sources of economic growth, the first approach is based on the Solow model which is also known as the neoclassic model of economic growth. This model considers the labour productivity, the capital productivity and TFP rate, as determinants of the economic growth. TFP is determined as the residual of the model and it evaluates the change in Total Factor Productivity. TFP growth rate also reflect the methodological assumptions and errors in the measurement of production factors. This Solow residual is determined as the growth at output level occurring when factors of economic growth (labor and capital) do not change. Thus, its interpretation depends on the definition provided to labour and capital factors. Given that the basic Solow model does not identify variables such as education level or professional experience (which affects labour input) and the capacity of capital use (which affects the capital input), then automatically these latter are included in TFP assessment. Solow model is given as an aggregate output Cobb Douglass production functions as following:

$$Y = A \cdot L^{\alpha} \cdot K^{1-\alpha} \quad (1)$$

where A stands for Total Factor Productivity (TFP), L is the labour input, K stands for the capital stock and α is labour elasticity (also the share of labour income to total income). The linearization of output equation is obtained as follows:

$$\frac{dY}{Y} = \alpha \frac{dL}{L} + (1-\alpha) \frac{dK}{K} + \frac{dA}{A} \quad (2)$$

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where Total Factor Productivity (TFP) is obtained as a residual of the following equation:

$$A = \log(Y) - [\alpha \log(L) + (1-\alpha) \log(K)] \quad (3)$$

Due to the lack of data on the share of income arising from labor factor (α), we use the broadly known assumption, that 70 % of total income derives from labour input and only 30 % from capital stock.

The second problem regards the assessment of capital stock, for in Albania there is a lack of data on this series. For this purpose, we use an assessment of initial capital stock of 1996¹ and add data on investments obtained from INSTAT. The annual depreciation rate of capital is assumed 8% and the stock capital investment is given as following:

¹ Data are an assessment and are provided based on the demand of the author submitted to Geoffrey B.Oestreicher, IMF.

$$K_{t+1} = K_t + I_t - \delta \cdot K_t \quad (4)$$

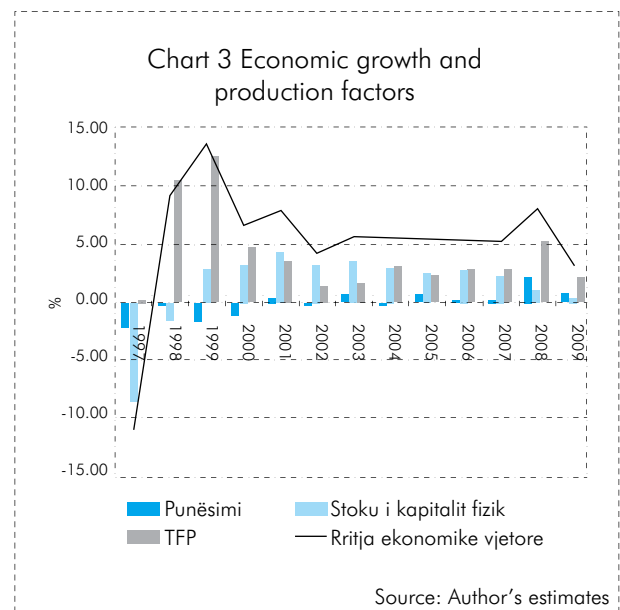
where K_t stands for capital stock in t , I_t is investments and δ stands for the capital depreciation rate. Kota (2009) presents more complete information as regards to the construction of these data.

The analysis of economic growth sources uses annual data for the period 1996-2009. Data on total employment for this period are obtained from INSTAT. Capital stock is assessed according to the methodology presented above for 1996-2007, as after this period no more data on investments are available from INSTAT. In the meantime the extrapolation of investments data for 2008-2009 has taken place by using calibration. The data provided by the Bank of Albania on the use of loans from banks' customers, reveal that about 1/3 of total loans goes for investments. Data on private investments during this period is extrapolated using loan growth for 2008-2009, and then are used to assess capital stock. Given that, public investments share about 15 % of total investments, the performance of private investments is crucial to set out the developments in stock capital. However, this remains an assessment of the real performance of investments over the period 2008-2009. Therefore it may be used just to create an idea on the contribution of production factors and the analysis must be considered preliminary.

SOURCES OF ECONOMIC GROWTH - RESULTS

The contribution of production factors (labour and capital) on economic growth, as measured through the growth rate of these inputs weighted by their share on total income, is introduced in chart 3.

The results suggest that up to 2000, TFP growth rate is the main contributor to economic growth, meanwhile the expansion of lending to economy, which started after 2000 is reflected on the elevated contribution of capital stock during the second period taken in consideration. Broadly speaking, during the economic recovery after the crisis of 1997 (1998-2000), when economic growth rate averagely pointed to 9.7 %, TFP rose on average by 9.3 %, meanwhile capital stock during the same period increased by 1.4 %. During the period 2001-2007, the annual average growth of economy points to 5.8 % and the capital stock provides the main contribution to economic growth, averagely by 3 %, while TFP growth is the second determinant factor with an average increase of 2.45 %. Labour input, measured through the official employment, has provided a rather low contribution to economic growth and in some cases even a negative one (prior to 2000). The problem of statistical data related to employment may be one of the main reasons, as they do not include assessment for the informal labor market being considerably present in Albania. Also, we should take into account that, labour in our case includes



the employment contribution to the economic growth, whereas the possible improvements at labour quality are reflected on the TFP upsurge.

Other authors have proved similar outcomes as regards to the case of Albania. Here we may mention Khan (2004), who identifies the determinant role of TFP on the economic growth in Albania. As in the case of results presented above, Khan (2004) also concludes that TFP growth rates have been dropping recently. Lower TFP growth is accompanied by a modest improvement of labour and capital's contribution. According to Khan (2004) the sources of TFP growth in transition countries may be three:

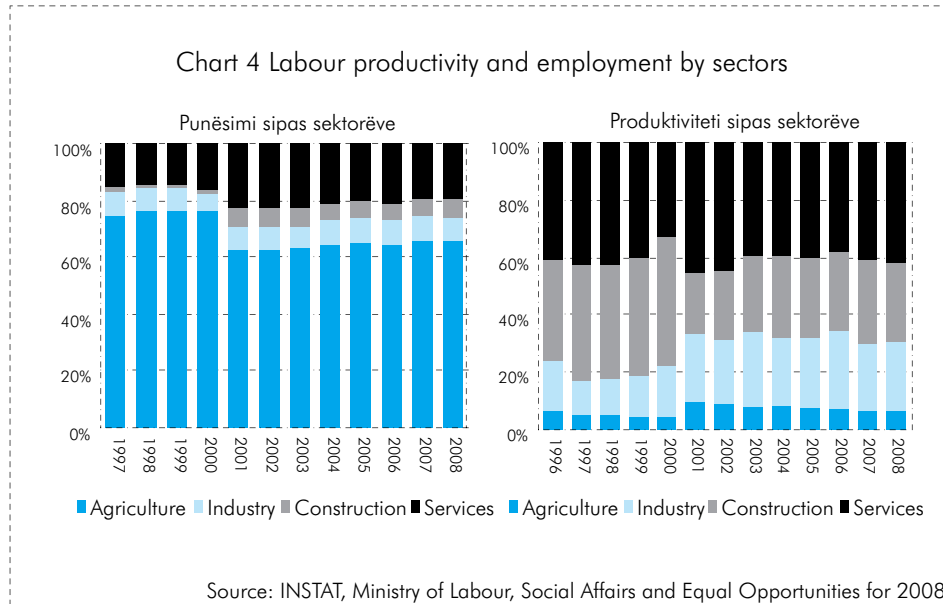
- Very substantial improvements in TFP due to production factors reallocation and economy's transformation during transition.
- TFP improvement that occurs as a result of improvement of sources' allocation due to the structural reforms.
- TFP improvement that occur as a result of innovation and learning on the part of entrepreneurs.

Findings suggest that the main contributor to TFP increase was the first source. At the beginning of transition, due to the reallocation of economy's sources, it is expected that TFP plays an important role. But the contribution of this input decreases as time passed and both capital stock and employment begin to contribute more to the economic growth. A similar outcome appears also for Albania, as sluggish growth of TFP was accompanied by higher contribution of capital accumulation. However, the important role of production factors combination through TFP is returned during the world financial crisis 2008-2009. Due to the considerable reduction of the credit growth rate, from 53 % in annual figures in 2007, to 44 % in 2008, whereas during 2009 this rate declined to 25 %. The contribution of capital stock slowed down.

Finally, the results of the analysis suggest that employment has not contributed to the economic growth (here we should remember again that labor quality improvement is reflected on TFP term). Also, an important process of supporting the economic growth through human resources is their use with productivity. Even though labour input has provided no contribution to total economic growth, according to Kota (2007) labour productivity in Albania is improved. This process is quite important for the convergence of the Albanian economy to more developed economies. Economies of countries with deferent development rate show a lot of heterogeneity and dynamic as regards to sectors or companies. These countries are characterised by different productivity levels whose upsurge is the main source of economic growth over the long - run.

If labour is concentrated in sectors of different productivity which is inefficient, then a re-structuring process will take place in order to enhance economic growth. Labor source will shift from less productive sectors to more productive ones. The process will lead to labour source reallocation resulting in higher aggregate and sectors' labour productivity, thus in higher economic growth of the country.

As discussed in chart 2, transition process in Albania was accompanied by the restructuring of economic activities. Such a restructuring should be accompanied with the re-organisation of labour market. Chart 3 shows the performance of both employment and labour productivity by sectors. Labour productivity is determined as the ratio between the added value and employment in each sector.



Agriculture with the lowest productivity appears to have the highest rate of employment. The problem here originates from the data regarding the employment rate, as INSTAT uses the assumption that any person who owns a land is employed. Overall a similar behaviour is manifested by the other sectors as well. Thus, services sector with the highest rate of labor productivity counts about 60 % of total employed persons. While, the construction sector, being listed the second one according to the high rate of productivity, covers only 6% of total employment. A simple observation of these data reveals that employment allocation by sectors is not efficient, at least by using the official data as regard to employment, which notwithstanding exclude the informal market. But at aggregate level (for the entire economy), labor productivity is averagely increased by 6.4 % throughout the period 1996-2008. Therefore it is interesting to trigger the main sources that have determined developments in labor productivity.

LABOR PRODUCTIVITY – ITS GROWTH SOURCES

The methodology applied from Kota (2007) is used to identify the main sources of developments of labor productivity in Albania. According to the author, the determinant factors of labor productivity improvement are: the growth of labor productivity within the sector, the reallocation of employment among sectors and the convergence of sectors towards an average productivity

level, which is considered as an equilibrium level. This methodology is originated by Maliranta and Ilmakunnas (2005) and is broadly used to analyse labor productivity growth (for example, Fagerberg, 2000; Timmer and Szirmai, 2000; Jalava and others, 2002; Van Ark and Timmer, 2003). The decomposition of the growth rate of labor productivity is as follows:

$$\frac{\Delta LP_t}{LP_t} = \underbrace{\sum_i \overline{LSH}_i \cdot \frac{\Delta LP_i}{LP_i}}_{\text{Efekti-brenda-sektoral}} + \underbrace{\sum_i \overline{LSH}_i \cdot \left(\frac{\overline{LP}_i}{LP_t} - 1 \right) \cdot \frac{\Delta LP_i}{LP_i}}_{\text{Termi-i-konverjencës}} + \underbrace{\sum_i \frac{\overline{LP}_i}{LP_t} \cdot \Delta LSH_i}_{\text{Efekti-i-rishpërndarjes-së-punësimit}} \quad (5)$$

where LP stands for labor productivity in economy at t time, \overline{LSH}_i is the average employment's weight of sector *i* for the periods 1 and 0, ΔLP_i is the difference of labor productivity for sector *i* for the same period, \overline{LP}_i is the average level of respective productivity and ΔLSH_i is the difference of employment's weight of sector *i*, for the periods 1 and 0.

The data used are the labor productivity, calculated as the ratio of added value to employment for each sector and the employment level. INSTAT and the Ministry of Labour, Social Affairs and Equal Opportunities have provided the annual data for the period 1996-2008 for the employment by sectors in 2008.

Regarding the effects that have determined the main sources of labour productivity development, they are determined as follows:

- Intra sector effect – labour productivity growth due to the improvement of sector efficiency.
- Convergence term –labor productivity growth due to the convergence of sectors towards the equilibrium level (average productivity level of economy)
- Labour shift effect –labor productivity growth due to the shift of employment from non-productive sectors to productive ones.

Based on these definitions and given that the agriculture sector ranks the last in terms of productivity performance, it is expected the developments of two possible processes:

- a) Low levels of agricultural productivity should lead to labor source reallocation from this sector towards more productive sectors.
- b) If there is a sectors' convergence process, then the agriculture sector should reflect higher productivity growth in order to catch the aggregate mean of labor productivity.

Meanwhile, as regards to the other sectors, the development of these processes would depend on the performance of labour productivity at sectors level, also on the overall developments in economy. The implementation of the methodology introduced in this section shall be presented below.

RESULTS OF LABOUR PRODUCTIVITY DECOMPOSITION BY EFFECTS

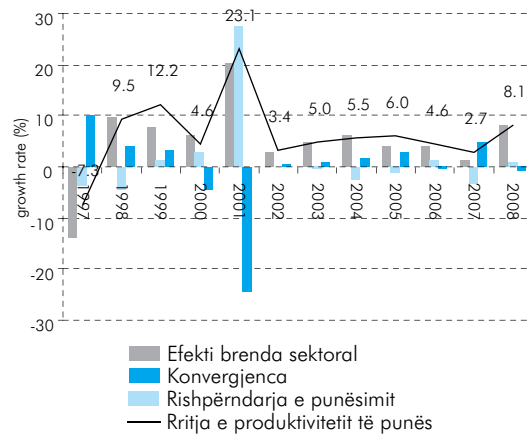
The results of aggregate productivity growth decomposition are presented in Chart 4, according to the intra sector effect, convergence term and the effect of labour reallocation across sectors.

The results suggest that Intra sector effect, that implies sector productivity growth, due to the improvement of sector's efficiency, is the major contributor to the growth of labour productivity. In 2001 there is a structural break of data due to the change of employment measuring methodology from INSTAT, therefore this year is not considered during the analysis.

The results of analysis suggest that the reallocation effect of employment has not provided a high contribution to productivity developments. Official employment by sectors from year to year appears to be stable and this may result from the exclusion of informal labour market. Excluding the agriculture sector due to high share it has on total employment, the major contributor on the employment reallocation effect is the services sector. The high productivity rate of this sector is accompanied by the higher employment level in this sector. Also, construction sector shows a positive effect of employment reallocation, particularly prior to 2001. Owing to the upsurge of profitability in this sector, its share to employment has considerably climbed by providing a positive contribution to the total growth of labour productivity.

An explanation why the agriculture sector is not characterised by high rates of employment shift as expected, is that the labour force that is shifted, does not possess the relevant skills required in the more productive sectors. This problem emphasises the need for skills upgrading to induce higher productivity, and consequently, also the economic growth in Albania. However, given that the agriculture sector is the only sector with productivity level lower than average aggregate rate, it has continuously converged towards the average of economy, thus experiencing positive rates of productivity growth. But, on the other hand, the most productive sectors (construction and services) continue to show high annual growth rates of their efficiency, and regardless of the agriculture convergence, the economy has not achieved steady state level of productivity. The process of ongoing productivity growth of the productive sectors together with the convergence process of inefficient sector is expected

Chart 5 Labour productivity in Albania



Source: Author's estimate

to induce a further growth of labour productivity in Albania. This will be a good basis for the improvement of contribution of labor input to the economic growth in the future.

CONCLUSIONS

The improvement of TFP has been the main source of economic growth in Albania, whereas after 2000 the capital stock has played an important role. Consequently, given that after transition TFP improvement due to economy reorganisation will gradually slowdown, and the developments at investments growth rates have been fluctuating from y-o-y, it is important that Albania creates alternative sources of economic growth. In this view, the capital accumulation via the stimulation of investments becomes of a particular importance. Also, the establishment of other TFP improvements arising from alternative sources than that of economy's reorganisation is important. Here we can mention improving the benefiting from technological knowledge, increasing the enterprising efficiency throughout the time, etc. Lastly, due to the convergence of sectors towards labour productivity growth in Albania, the improvement of this production factor quality is important to take place.

** The views expressed in this paper are those of the author and do not necessarily represent those of the Bank of Albania.*

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