

**CAN A CHANGE IN THE GROWTH PATTERN SPEED UP  
THE CONVERGENCE OF TRANSITION COUNTRIES  
TOWARD THE EU?  
— EXAMPLE OF CROATIA —**

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## **Abstract**

In the past, transition countries capabilities to produce goods and services demanded, basically depended on the employment growth and capital formation rate. The level of technological attainment under the central planning was low because of the firms' disincentives to innovate, leaving the nation's productive capacity far beyond EU countries. The same was for Croatia. With the present unemployment rate (21,3%), the actual GNP is largely beyond the potential with the convergence of gap deepening. This paper's aim is dual. The first is to investigate the major sources of the economic growth for Croatia in the past 40 years and the second is to compare actual growth pattern for Croatia with different growth strategies. Then, using the dynamic growth model we will simulate the speed of the Croatian growth convergence for two scenarios; leaving the overall growth strategy unchanged; revisiting the growth strategy and formulating the new one. After the key growth determinants identification, an alternative strategy for expanding and improving economy's productive capacity can be set. However, the economy's productive capacity evolution from actual will fondly depend on the private sector growth constraints; lack of capital and poor banking system functioning. The lack of the conventional wisdom in the mind of the macroeconomic policy creators is the principal reason for the unimpressive growth record of the Croatian economy. Historical but also present growth policies were based on the static growth theory of the resource allocation, labor intensive productive sector and without clear growth scenarios including the identification of the growth advancing production factors.

## **1. INTRODUCTION**

The growth strategy followed in the past in Croatia has been based on the traditional growth theory. The long run trend productivity therefore was mainly determined by the employment and capital spending augmentation. Fundamental macroeconomic decisions made at that time were not growth oriented leaving a trigger for economic growth to external and exogenous factors. Only departure from the traditional growth pattern was registered during 1970-1980 when a productivity growth can be traced to expansionary monetary policy (high foreign

indebtedness) leading the economy to a full employment level (unemployment rate was beyond 5%). Right now Croatian economy represents a stagnant one with the market/games rules are highly complicated, unstable and volatile. This is evident from the high credit risk assessment (low credit rating) from internationally monetary institutions. Croatia has to recreate a growth oriented economic environment that will support substantial levels of economic growth (6-7%).

To do so, Croatia has to change rules of the game through;

- ✓ rapid privatization, internal and external debt restructuring,
- ✓ encourage domestic investment, change the monetary and exchange rate regime,
- ✓ build a competitive platform for a tradable goods sector expansion,
- ✓ accelerate the public sector investments, promote infrastructure development,
- ✓ bring real interest rates to level that encourages savings and investment, boost investor confidence,
- ✓ boost social rates of return.

The results of the simulation model presented in the paper show that only a new growth policy with expansionary fiscal and monetary policy in the short run, massive domestic investments in capital spending, R&D, education, science, firms restructuring, market infrastructure building, could boost the GDP growth and speed up the convergence toward EU. The government must improve the conditions for economic growth or in the time ahead Croatia will experience future income gap widening and convergence speed slowdown.

## ***2. THEORIES OF ECONOMIC GROWTH***

After the endogenous growth model appearance at the growth theory stage in the mid - 1980s, the scientific discussion over growth oriented policy and new theory of economic growth suddenly appears after 30 years of Solow's model dominance. Could or could not different economic policies significantly affect future growth trend is in the center of interest for economist's and policymakers. The baseline vision of economic growth is that set out by Robert Solow in the 1950s. Solow's vision can be summarized in the statement /1/

$$y/l = \alpha \left( \frac{Y}{K} I - \delta - 1 \right) + \tau \quad (1)$$

with

$(y/l)$  = the rate of growth of GDP per worker,

$\alpha$  = share of GDP devoted to investment,

$I$  = investment,

$K$  = physical capital,

$\delta$  = depreciation rate,

$l$  = labor force growth rate,

$\tau$  = technology growth or total factor productivity.

From (1) it follows that the Solow growth vision was quite pessimistic. Macroeconomic policy changes according to the above has only minor impact on the current and future growth rate of the economy. It seems, according to Solow model, that the growth could be boost only by some external or extra-economic factors - technology improvements and innovations that could not be manage by the policymakers through regular economic policies. The principal conclusion of the Solow model is that the accumulation of physical capital cannot account for either the vast growth over time in output per person and that the potential growth sources are exogenous or absent altogether /2/. According to the above model, the economy growth rate is strongly attached to investment GDP share, capital stock depreciation, faster labor growth rate, faster growth in technology or productivity.

However, different countries achieve different growth rates that cannot be accounted only to the factor productivity differences. To spurious conclusion of the Solow growth model encouraged the appearance of new and different growth models. The most popular one is the Mankiw - Romer - Weil (1992) model (MRW). This model is mainly the extension of the Solow model accounting for the importance of the education process and country human capital stock importance for the growth processes. The augmented production function model form is /1/

$$y/l = \alpha \left( \frac{Y}{K} I - \delta_K - 1 \right) + \beta \left( \frac{H}{K} E - \delta_H - 1 \right) + \tau \quad (2)$$

where

$H$  = human capital,

$E$  = investment in education.

The model extension in contrast to the Solow model is visible from the table 1.

Table 1

Potential Economic Growth Benefits from Deficit Reduction that Boosts Investment by Three Percent of GDP: One - Year, Five - Year, and Twenty - Year Increase in GDP

Model	1- Year	5 - Year	20 - Year
Solow Baseline	0.28%	1.21%	3.51%
Extended MRW	0.43%	1.98%	6.74%
Narrow EG	0.68%	2.82%	9.24%
Broad EG	0.74	3.05	10.46

Source: De Long, J.B., (1996): A Short Review of Economic Growth: Theories and Policies, pp. 32.

Table 1 shows the results for different growth models exploring potential growth rates as a result of the decrease in the Government spending and budget deficit reduction. The Neoclassical (Solow) growth model supposes that the benefits following from the deficit reduction are not overwhelming in terms of faster growth (0.28% GDP increase). However, the saving/investment shift coming from the deficit reduction and consumption movement toward saving and investment is still significant. The benefits in terms of faster growth in the "extended" version of the growth - theory - the version that takes account of investments in education and allows for somewhat higher return to capital - are half again as large (around 0.5%) /3/. More optimistic growth theories like the narrow and broad EG (endogenous growth) models suppose that changes in the economic policy significantly influences potential growth. The benefit in faster growth resulting from shift in the fiscal policy significantly boosts national product, around 0.7% per year. The faster national product growth according to the endogenous growth theory is spurring from the higher returns to human capital and investments in education (extended MRW model). In particular, endogenous growth theory seeks to bring technological change, innovation, institutions, international trade and education into the analysis as endogenous not exogenous factors in the growth process. /4/. Thus the growth process could be influenced through the big changes in the economic policy framework. A policy framework that crowd out investments from research and development area is even worse than the standard crowding out effect resulting from the budget deficit. Consequently, the question could change in monetary and fiscal policy boost growth still remains. A look at the table 2 brings some light in the growth theory tunnel.

Table 2  
Growth Characteristics of a Cross-Section of Countries 1960-1989.

Characteristics	Overall average n=97	Slow growth <.5% n=23	Fast growth > 3.5% n=14	Correlation with GDP growth rate
<b>Real per Capita GDP growth 1960-89</b>	2.03	- 0.26	4.88	1.00
<b>Investment share of GDP</b>	21	17	26	0.61
<b>Government consumption share of GDP</b>	15	15	14	0.10
<b>Inflation rate</b>	23	41.11	7.9	-0.17
<b>Exports as a share of GDP</b>	28	24	35	0.30
<b>Imports as a share of GDP</b>	33	30	40	0.31
<b>Secondary school enrolment rates 1960</b>	2,06	2.55	1.26	-0.36
<b>Primary school enrolment rates 1960</b>	74	44	98	0.54
<b>Population growth</b>	21	6	34	0.41
<b>Revolutions and coups per year</b>	.20	.35	.12	-.37
<b>Real per capita GDP in 1960</b>	\$1840	\$889	\$196	.20

Source: Plosser, C.I., (1992): The Search for Growth, pp. 75.

A growth pattern from the table 2 could be set from the data interpretation. First of all, the hypothesis that changes in the macroeconomic policies could influence growth become more plausible looking at the data. Faster growth countries usually invest more and have lower inflation rates. They are open economies largely engaged in trade importing and exporting a significant GDP share. Educational system is a modern one coming from the generous educational expenditures devoted to the education process. Thus a highest return to the human capital is expected and attained in confront to the slow-growing countries. Political system and democratic norms are highly integrated in the day-to-day economic life. This is also visible from the data for government consumption expenditure to GDP indicating a secondary state presence at the market. /5/.

Growth pattern that emphasizes the most important growth issues can be expressed through the next summary: /6/ S. Fischer

- ✚ keep budget deficits small,
- ✚ keep inflation low,
- ✚ don't overvalue the exchange rate,
- ✚ open your economy: liberalize trade and integrate with the world economy,
- ✚ deregulate,
- ✚ with increasing emphasis, privatize,
- ✚ keep the tax system simple and collect taxes,
- ✚ invest in physical capital.
- ✚ invest in infrastructure,
- ✚ invest in human capital.

In the next section an overview of historical patterns of growth for the Croatian economy will be given in order to built in conventional and new growth theories advices looking for the best growth promoting economic policy in Croatia. Historical growth decompositions for the Croatian economy offer some interesting aspects for growth theorist and transitional countries analyst.

### ***3. HISTORICAL GROWTH DECOMPOSITION FOR THE CROATIAN ECONOMY***

Data used in this paper were derived from annual reports of Croatian Central Bureau of Statistics for the 1952-1990 period. The data after 1990 were not used for the historical decomposition model because of the possible measurement problem (spurious coefficients) resulting from the transitional crises and war aggression present in that period. The growth characteristics for the Croatian economy after 1990 are presented separately in the next chapter. Time series of variables used in the endogenous growth model creation process show the values for: human capital (H), forgone earnings (N), social expenditures on education (R), private expenditures on education (K), gross investments (I) and fixed assets (A) all expressed in constant domestic price 1972 level (Croatian currency = Kuna (HKN)) except for employment variable (E) expressed in employed working persons. A total of four variables with considerable impact on GDP were identified. Human capital, fixed assets, number of employed persons and gross investments in 99% cause GDP changes while the impact of all other economic phenomena in Croatian economy is less than 1%. The average GDP growth

change in Croatia could and should be attributed to the level change of mentioned variables.

In order to define different factors impact on Croatian GDP growth a growth model must be set. Croatian growth model can be set as follows:

$$Y = f(\text{Human capital}(H), \text{Employment}(E), \text{Investment}(I), \text{Fixed assets}(A)) \quad (3)$$

By the means of the multivariable OLS regression the following results were obtained:

$$Y = - 598 + 1,3004(H) + 0,11835(A) + 0,0032184(Z) + 0,87149(I) + u_i \quad (4)$$

From the regression model (4) returns to education, investment, fixed assets and employment expressed in the terms of Croatian real GDP growth (in domestic currency) can be marked. Educational returns are reported for secondary and higher education. Returns on education through human capital variable are substantially larger than that on investment, fixed assets and employment (see coefficients in the model). Variables in the regression (4) are expressed in real domestic currency (HKN). Increase in the human capital level around 1000 HKN would result in the increase of GDP around 1300 HKN. Multiplying returns coefficients of investment, fixed assets and employment we shall see how the increase in these variables would affect GDP. Returns coefficients from (4) however strongly indicate that higher GDP growth rates can be achieved by investing in human capital.

Table 3. Regression Results

Predictor variables	Coefficient	Student's t	R Squared	Adjusted R Squared
Constant	0,021184			
K	0,9998	249,54 > 2,724	1,0000	1,0000
N	1,0135	43,66 > 2,724		
R	0,9989	1110,77 > 2,724		
F test	Standard deviation	Residual mean square (MSE)	Correlation (Pearson)	Durbin-Watson test
6208640 > 3,91	0,4005	0,1604	- 0,9462 0,9663 0,9870	dl < 1,4161 < du

Source: Author's calculation Based on Data from Croatian Central Bureau of Statistics

Examining the factors contributions in output share for the 1952 -1990 period in Croatia we estimated that the share of human capital in GDP from 3,06% in 1952 augmented significantly to 11,17% level in 1990. Low disposable incomes and educational expenditures for the mentioned period were the cause of the low human capital output share. In the same period, share of the gross investments in output has significantly fallen from 19,26% in 1952 to 8,65% in 1990 (caused by inefficient and unprofitable investments during the state planned economy). Labour had a very significant share of GDP growth during the whole period (around 60%) while fixed assets creation on average captures about 25% of the total output. In Croatia on the contrary to the most economies where high labor coefficients and labor small share of output were registered, low labor coefficients together with the consistent labor share output exist. This is mainly due to the labor-intensive production methods implemented in Croatia after 1950.

Using the simple production function of the form /2/

$$Y(t) = f K(t), A(t)L(t) \quad (5)$$

growth accounting equation can be written as follows

$$\text{growthrate} = \sum \text{factorssharein GDP} \times \text{factorsgrowthrate} \quad (6)$$

$$\frac{\dot{Y}(t)}{Y(t)} = \alpha_K(t) \frac{\dot{K}(t)}{K(t)} + \alpha_L(t) \frac{\dot{L}(t)}{L(t)} + R(t) \quad (7)$$

with:

$\alpha_K(t)$  = elasticity of output with respect to capital,

$\alpha_L(t)$  = elasticity of output with respect to labor,

$R(t)$  = contribution of technological progress (Solow residual).

The growth decomposition for Croatia during over 1950-1990 is presented in the table 4.

Table 4.

Long-run growth sources in Croatia 1950-1990



<b>Source of Growth 1950 – 1990</b>		
	Average annual growth rate of output	Percentage Distribution
Real output growth	4,93	100,0
<b>Total factor inputs:</b>		
Capital	2,2	44,6
Labor	2,48	50,2
Human capital	0,55	11,1
Technological progress	- 0,29	- 5,9

Source: Author's calculation.

Data used for the historical growth decomposition were collected from the Croatian National Statistical Office annual publications while the data on human capital and technological progress represent personal author's calculation from the same data source.

For the 40 years growth period more than 50 percent of the growth in real output came from the using of more resources, mostly labor but also by the use of more capital. The overall growth record for Croatia represent the clasical growth theory approach with the major growth sources - physical capital and labor force. Human capital and advances in knowledge had only minor impact or even negative impact on output because of the desinvestment process in teh R&D area. Negative technological input share is the evidence for the long-run technological stagnation present in the Croatian economy. Direct consequences of such growth constraining macroeconomic policy are reflected in insufficient and slow growth rates (between 2 and 5%) for a middle income country like Croatia. Despite the "high" average growth rate of 4% over 1950-1990 the speed of the Croatian economy convergence toward EU still remains slow.

With the implementation of best subset regression model method we reached the conclusion that the endogenous variable variation (Croatian GDP) is in the large degree influenced by changes in human capital (significantly), gross investments, employment, fixed assets and that minimum residual (difference between regression and empirical GDP values) is achieved when all four above variables are included in the model. Period between 1952-1990 in Croatia

was characterized by intensive investments activity in fixed assets and capital-intensive activities while investments in education were pushed aside.

The results of such economic policy Croatian economic development was based on investments in fixed assets (neglecting quality growth factors - human capital) along with inadequate investment allocation, investing mainly in house and apartments buildings, operating and office appointments and barely in research and development, equipment and facilities, licenses and patents. The Croatian growth experience for almost 3 decade is presented in the table 5.

Table 5. Growth Characteristics for Croatia 1960-1989.

Characteristics	Overall average	Correlation with GDP growth rate
<b>Real per Capita GDP growth 1960-89</b>	4.2	1.00
<b>Investment share of GDP</b>	18.3	0.45
<b>Government consumption share of GDP</b>	14	0.15
<b>Inflation rate</b>	43.6	-0.20
<b>Exports as a share of GDP</b>	19.3	0.12
<b>Imports as a share of GDP</b>	25.9	0.27
<b>Secondary school enrolment rates 1960</b>	34	0.83
<b>Primary school enrolment rates 1960</b>	78	0.50
<b>Population growth</b>	0.4	0.24
<b>Real per capita GDP in 1960</b>	2.324\$	0.20

Source: Author's calculation from the data of Croatian Central Statistical Office.

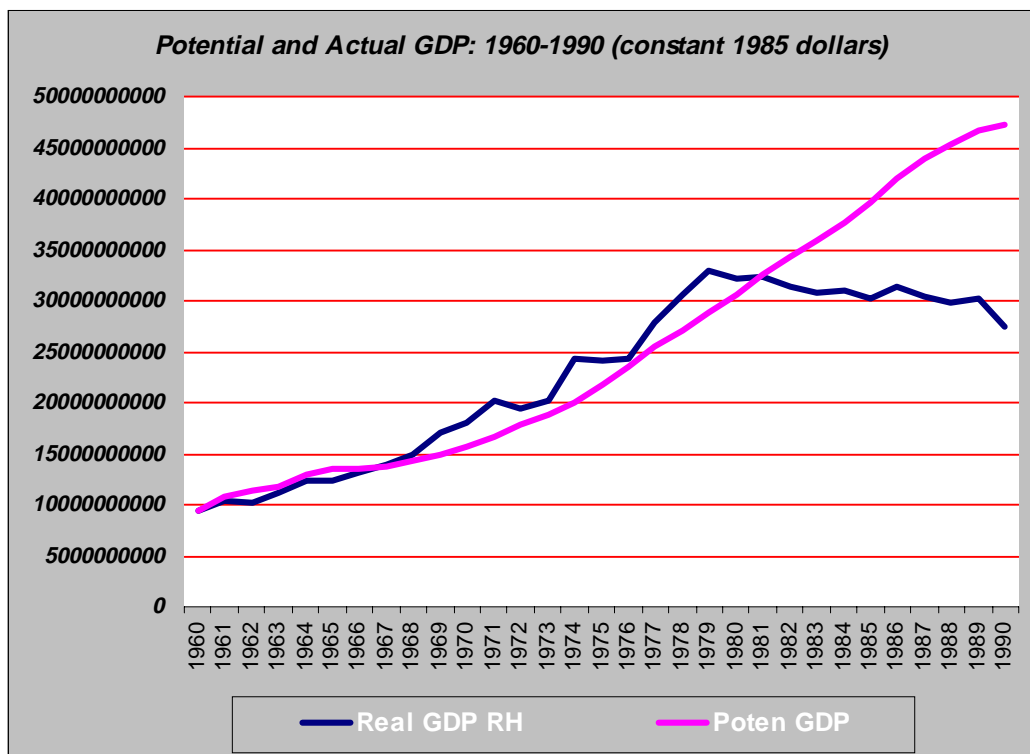
Over the time the Croatian economy's potential production expanded but the actual growth expansion in the 1980-1990 period was beyond the potential output reflecting the negative growth policy explained above. The exhibited growth pattern for Croatia shows consequences of the poor growth policy with the economy's productive increase based on the capital and labor force growth instead of the advance in knowledge (R&D) and growth promoting macroeconomic environment creation. Speeding up the economy's convergence toward EU

will need a fast and deep change in the growth policy or Croatia will experience future output and income gap deepening in respect to advanced economies.

#### 4. SPEEDING UP THE CONVERGENCE TOWARD EU

The past convergence speed as it can be seen from the figure 1 was by a large degree dependent on the employment growth. During the 1970-1980 period the average unemployment rate was close to the natural rate and this explains the positive GDP gap, expansion registered at that time. The serious decline in the productivity, price volatility, negative net export and personal consumption decline experienced in 1980-1990 period are in the heart of the growth crises at that time. Deepen analysis of the growth crises registered at that time is not a subject of this paper because it requires more detailed elaboration.

Figure 1



Source: Author's calculation, for a methodology see /4/.

Starting in the 1990. Croatia introduced reforms moving away from central planning to market economy. The price of transition for Croatia undergoing structural reforms most

dramatically reflected in the large output drop and market lose. The country's progress in the transition process can be measured in several key dimensions of transition: /7/

- ✓ price liberalization,
- ✓ privatization of state-owned firms,
- ✓ macro stabilization,
- ✓ market infrastructure development.

In thinking about the transition processes in Eastern Europe, is useful to view transitional countries starting position in the pretransition time. Table 6 shows some interesting aspects.

Table 6

Per capita GDP in transition economies and in EU in 1990.

(in USD, purchasing power parity)

	GDP per capita	EU average = 100	TE = 100
Czech Rep.	9308	60	157
Hungary	5712	37	97
Poland	4192	27	71
Slovak Rep.	7263	47	123
Slovenia	9163	59	155
Bulgaria	4457	29	75
Romania	3966	26	67
Croatia	4700	30	79
Russia	5954	39	101
Ukraine	4460	29	75
EU -15 average	15426	100	38

Source: Nĕmec, J., Prachár, I.; To the evaluation of preconditions for integration of the SR and other transition economies into the EU /8/

Table 6 reveals relatively good starting position for Croatia (a golden mean) compared to the rest of the transitional countries. In the pretransition period, former socialist economies

production level accounted for 40% of the advanced European economies potentials. Country's progress in moving to the market economy could be easily evaluated by the income convergence speed of transitional economies toward EU average.

The chosen transitional model efficiency and progress in economic adjustment toward EU is visible in table 7.

Table 7. Per capita GDP in transition economies and in EU in 1999. (in USD, purchasing power parity)

	GDP per capita	EU average = 100	TE = 100
Czech Rep.	11700	54	178
Hungary	7800	36	119
Poland	7200	33	109
Slovak Rep.	8500	39	129
Slovenia	10900	50	166
Bulgaria	4300	20	65
Romania	3900	18	59
Croatia	5100	23	78
Russia	4200	19	64
Ukraine	2200	10	33
EU -15 average	21815	100	31

Source: Eurostat Database i CIA World Factbook 2000.

According to the data in table 7 transitional economies entering the transition process experienced deepening of the existing lags compared to the EU average. Two countries Czech Republic and Slovenia have avoided drastic deepening of the existing lags in comparison to the income level prior to the EU accession processes start. The Czech economy before the transition start was at 60% percent of the EU average income level compared to the 54% in 1999. In the rest of the transitional economies a sharp decline in the convergence speed was experience. In the 1990 average income level for TE was at the 38% of the EU average failing to 31% in the 1999. The sharper decline was registered for Ukraine from 29% in 1990 to 10%

in 1999. Czech Republic and Slovenia adopted organized and functioning market system capable to sustain keen market competition to the EU guaranteeing national economies development. Unfortunately, most of the transition economies, and among them is Croatia, have a long road to cross in reaching Czech and Slovenia present level. Convergence dynamic to the EU income level for several transition economies is presented in figure 2.

Figure 2



Convergence dynamic toward present EU income level (starting point: year 2000)

Source: Eurostat Database i CIA World Factbook 2000.

Figure 1 clearly illustrates the reforms in the transitional economies undergoing structural changes. The dashed line represents the Croatian economy's performance (in terms of income level) for the year 1990 whereas the full line shows the same for the year 1999. After launching the transition reforms, Croatia from the initial income level in 1990 with GDP per capita averaging 30% of the EU income level declined to 23% in the year 1999. This was a consequence of the improper reform policy and war damages. Evaluating the present Croatian economy's performance, two questions arise

- 1) what time period Croatia will need to reach the EU average income level?
- 2) what is a required rate of growth for (1)?

Table 8

Various scenarios for Croatia's convergence toward EU with different growth rates

<i>Required growth rates / Needed time horizon (years)</i>					
<i>3</i>	<i>5</i>	<i>7</i>	<i>9</i>	<i>10</i>	<i>15</i>
<i>50</i>					
	<i>30</i>				
		<i>22</i>			
			<i>17</i>		
				<i>15,5</i>	
					<i>10,6</i>

Source: Author's calculation.

\* Needed time horizon (years) =  $\log(\text{EU average GDP per capita}) - \log(\text{Croatian GDP per capita}) / \log(1 + \text{growth rate}/100)$ .

This table shows that the long and uphill road is ahead of the Croatian economy's attempts to get to the EU average performance. Starting from the realistic future growth rates (between 3-5%) the needed time horizon to reach the present EU potentials is from 30 - 50 years. Speeding up convergence toward EU is possible to attain only through extremely high growth rates between 10 - 15% with 10,5 or 10,6 years required to reach the EU present income level. Is this likely to happen to the Croatian economy in the years ahead? Not likely. Croatia has to adopt a new growth policy oriented toward massive domestic investment to R&D, technology and human capital. The current economic slowdown in Croatia is owed to the slow response of monetary policy to the gathering recession in 1998. Faced with the recession, Croatia must be willing to raise deficit in the short run because tightening fiscal policy reduces growth. Macroeconomic stability is important for the long run growth, but facing the recession, more expansive fiscal and monetary policy is the only way out. Balanced budget is of no importance if it is achieved through lowering of R&D and capital spending reduction, as it

is the case in Croatia. Potential economic growth benefits from short run expansionary fiscal and monetary policy is visible from the table 9. The results presented in the table (permanent GDP increase per year) provide an overview of the simulation model based on the income-expenditure function, equation (4) and developed with Vensim PLE Plus.

Table 9

Potential economic growth benefits from growth policy changing (per year growth)

Model	1 year	5 year	20 year
Actual growth policy	0,98	2,51	4,43
New growth policy	1,83	6,58	9,80

Source: Author's calculation.

The results of the simulation model presented in the table show that only a new growth policy with expansionary fiscal and monetary policy in the short run, massive domestic investments in capital spending, R&D, education, science, firms restructuring, market infrastructure building, could boost the GDP growth and speed up the convergence toward EU. The government must improve the conditions for economic growth or in the time ahead Croatia will experience future income gap widening and convergence speed slowdown.

## 5. CONCLUSION

Improved competition's needed for economy's higher growth demands the existence of the competitive, efficient and leading sectors. Economic development history proves that. Innovations like coach, telegraph, steam machine, electricity, cars and microprocessors were the key growth success factors for today's world leading economies. Potential growth was turned into reality by the means of economic growth engines - advance of knowledge, efficient limited natural resources utilization, well-organized production and communication, better machines creation and usage. Conversely, Croatia never identified own potential, growth supporting sectors. Instead, economic growth was fully based on obsolete and low productivity sectors such agriculture or technologically outmoded manufacturing industry. The same growth policy is present today. Actual Croatian growth policy identifies tourism and manufacturing industry as a main growth engines. The situation is even worse because



the long-run growth of the Croatian economy as defined by the actual growth policy will exclusively depend on the foreign investments entrance. Obviously, tourism can give a mass support for the growth in the short run, but it surely is not the engine that will guarantee required growth rates between 10 and 15%. Advance "tigers" economies can be seen as excellent prove for such hypothesis. Through the research and technological infrastructure development (state of the art) and pure research support "tigers" manage to achieve extremely high growth rates. Not long ago they were mostly agriculturally oriented economies.

How can Croatia boost its economic growth?

Croatian economic growth boost requires massive investments in science, research and technological infrastructure. Only a state of the art technology (capital stock increase) and highly skilled work force can promise a badly needed growth incentive. Judging from the announced economic policy design for a three-year period it is not likely to happen.

First of all, clear and positive main growth engines identification is needed. Fast and modern growth cannot be built on a partial growth policy and "mishmash" production. Only a new growth policy with easier fiscal and monetary policy (to some degree) in the short run, massive domestic investments in capital spending, R&D, education, science, firms restructuring, market infrastructure building, could boost the GDP growth and speed up the convergence toward EU. The government must improve the conditions for economic growth or in the time ahead Croatia will experience future income gap widening and convergence speed slowdown.

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