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INVESTMENT AND GROWTH: A NEW APPROACH TO GROWTH IN WESTERN BALKANS

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Abstract

The aftermath of 2008 global economic and financial crisis, revealed existing vulnerabilities in the Western Balkan's model of growth. The robust growth prior to the crisis was above potential, driven by excessive domestic demand, with private consumption as its main contributor. Productive investment on the other hand, was not an essential contributor of growth in the region. In addition, the failures of the pre-crisis model of growth, pose the need for a more sustainable growth model that is driven by productive investment. This paper, by relying on a simple Harrod-Domar investment-growth model, attempts to address the following questions: First, if investment were to become the main engine of growth in the region, how much investment effort is needed? Second, is the actual level of investment sufficient to support the region's future growth prospects? The results indicate that the first scenario (high growth) would require an investment effort of USD 32.4 bn whereas the second (moderate growth) an average annual gross investment of USD 23.9 bn.

Keywords: Western Balkans, investment-led growth, ICOR, growth scenario

INTRODUCTION

Following the collapse of the former communist regimes, the countries of Western Balkans have undergone substantial economic transformation over the past 27 years. The gradual transition to market-oriented economies, posed the need for setting up institutions and reforming policy, so as to respond to the new conditions that came with open trade, the development of banking systems and free enterprise. As the conflicts that engulfed the region in

the 1990s subsided, the Western Balkans enjoyed remarkable gains in terms of incomes and living standards, with the average economic growth exceeding 5 percent per year between 2002 and 2007. The region's pre-crisis remarkable economic performance reflected the overall favorable international environment, which combined with strengthened EU accession prospects, boosted investor confidence and spurred large capital flows in the countries of Western Balkans. However, the severity of 2008 global economic and financial crisis and the double dip or even the triple dip recession (in the case of Serbia) that followed, revealed the vulnerabilities in the pre-crisis model of growth which turned out to be unsustainable.

First, the robust growth prior to the crisis was above potential, driven by excessive domestic demand, with private consumption as its main contributor (almost 80% of GDP in most of the countries in the region).

Second, the low level of domestic savings in most of the Western Balkans countries (close to 10% of GDP on average) pointed to a growth pattern highly reliant on foreign savings and external inflows. This pattern makes growth particularly vulnerable to a sudden withdrawal of capital, the risk of which becomes more eminent when the international flows reflect an artificial credit expansion rather than real savings EFCIN (2010).

Third, as pointed out by the European Commission (2009) productive investment was not an essential component of growth in the region. In line with international trends, capital flows, seeking higher investment returns, were channeled to non-tradable sectors such as construction (amounting to more than half of gross capital formation in all countries except Serbia), real estate and retail trade further soaring private consumption and real estate prices.

Moreover, the condition of production facilities in much of Western Balkans, pose the need for substantial new investment, in particular in the public infrastructure required to support them. According to the Regional Cooperation Council (2015), the region's physical capital stock per capita is estimated to be below 30% of the European Union average.

In this regard, many of the prevailing economic problems have their roots in the region's economic structure and as such, to some extent, reflect suboptimal patterns of growth. Hence, the failures of the pre-crisis model of growth, suggest that the countries of the region need to transform their economies and "change gear" from consumption to investment.

This paper attempts to address the following questions: One, if investment were to become the main engine of growth in the region, how much investment effort is needed (in quantitative terms)? Two, is the actual level of investment sufficient to support the region's future growth prospects (in terms of economic growth)? In addition, the article is structured as follows. Section 2 presents the methodology employed. Section 3 the estimations of the region's investment needs under different growth scenarios. Section 4 provides a comparison of

investment projections needed to prompt future growth prospects with actual levels. Section 5 finally concludes.

RESEARCH METHODOLOGY

The estimation of the region's future investment needs under different growth scenarios is a crucial step in terms of policymaking, for it allows governments to shape investment decisions both at a national and regional level in a way that prompts future growth prospects. In addition, to quantitatively estimate the level of total gross investment that needs to be induced in order to generate a pre-determined or alternatively desired rate of growth i rely on a simple investment-growth model as proposed by Harrod (1939) and Domar (1946):

$$\frac{\Delta K}{Y} = \frac{\Delta K}{\Delta Y} * \frac{\Delta Y}{Y} \qquad (1)$$

Where, ΔK represents the change in capital stock or new net investment and as such equals gross investment – capital depreciation, whereas $\Delta Y/Y$ the real rate of change in the gross domestic product (GDP).

Following the approach of a vast number of international institutions (World Bank, IMF, UNDP, EBRD), to determine the required level of new investment i utilize the ICOR coefficient (Incremental-Output Ratio) as a moderator variable that connects the two pieces of the same puzzle: the pre-specified growth rate with the compatible level of new investment:

$$\Delta K/\Delta Y = ICOR \qquad (2)$$

$$\frac{\Delta K}{Y} = ICOR \frac{\Delta Y}{Y} \qquad (3)$$

$$\Delta K = I \qquad (4)$$

$$\frac{I}{Y} = ICOR \frac{\Delta Y}{Y} \qquad (5)$$

In addition, ICOR coefficients are computed for each of the Western Balkan countries (Albania, Serbia, Montenegro, Macedonia, Bosnia and Herzegovina, Kosovo and Croatia) and for the region as a whole (WB6 and WB6+Croatia). However in distinction from previous works[1], the calculations are conducted taking 2002-2015 as the period of reference, Fig.1.

[1]Antiochou (2011) uses 1998-2009 as a reference period when calculating ICOR measures for five WB countries (Albania,Croatia, Bosnia and Herzegovina, Macedonia and Serbia).
Gabrisch (2014) computes average ICOR coefficients for WB6+Croatia for the period 2002-2013;
Berthomieu et. al (2016a) use 2001-2012 as a reference period when computing ICOR coefficients for WB6 countries/ WB6+Croatia.

Following the baseline model, in this section i explore two different growth scenarios that can be of interest in terms of policymaking:

First Scenario: The high-growth scenario which assumes that the countries of the region return to their pre-crisis mean growth rates. Additionally, this scenario relies on the assumption of a uniform annual growth rate of 5% in all Western Balkans countries (WB6).

Second Scenario: The moderate growth scenario, in which it is assumed that the countries of the region maintain the current pace of growth: a uniform annual growth rate of 3% (close to their post-crisis recovery mean growth rates).

Under these scenarios, two questions are explored:

First, what level of gross investment (total) should be induced in the region so that it can return to the pre-crisis performance, with an average growth rate of 5% per year?

Second, alternatively, if the countries of Western Balkans were to remain in their post-crisis mean growth rates of 3% (throughout their recovery), what level of gross investment shall be needed?

Prior to addressing these questions, two empirical issues have to be considered first.

1) The value of the ICOR coefficient
2) The depreciation rate that shall be used to calculate capital consumption.

Berthomieu et. al (2016) suggest taking normative values for both ICOR and the depreciation rate, arguing that in transition economies there is a tendency to give a value of 0 to the inherited capital stock even though it may still be productive, which can lead to an overestimation of capital consumption and result in a biased ICOR coefficient. As for the depreciation rate, normative values are favored over observed ones since the high rates of the past ought to decrease in the future.

In addition, in accordance with the specified growth scenarios, I follow Berthomieu et. al (2016) and assume the depreciation level to be 10% of GDP which was the mean value for Albania, Bosnia and Herzegovina and Montenegro for the past decade.

As for the ICOR, I allow each of the WB countries to have specific values of ICOR in line with those computed based on observed data Fig.1.

RESULTS: Investment Needs under distinct Growth Scenarios

Table 1 presents the projected investment needs (in nominal terms) for the “high growth” scenario, estimated for each of Western Balkans countries and for the region as a whole (with and without including Croatia) for an additional 15 years period (2017-2030). The projections suggest that in order to return to the pre-crisis robust growth rates (a uniform growth rate of 5%

per year for each of WB countries), the region (WB6) needs an annual average investment of USD 19.5 bn (10 year average, until 2024) and of USD 32.4 bn when Croatia is included.

Table 1. Projection of Investment Needs for the High Growth Scenario (5% per year)
(in USD bn)

Years	ALB	SRB	MNE	BiH	MKD	HRV	KSV	WB6	WB6+HRV
2015 (observed)	2,608	4,607	655	2,393	1,186	8,080	1,281	12,732	20,813
2016	3,767	5,462	865	3,056	1,372	10,733	1,792	16,316	27,049
2017	3,955	5,735	908	3,209	1,440	11,269	1,881	17,131	28,401
2018	4,153	6,022	953	3,370	1,512	11,833	1,975	17,988	29,821
2019	4,361	6,323	1,001	3,538	1,588	12,424	2,074	18,888	31,312
2020	4,579	6,639	1,051	3,715	1,667	13,046	2,178	19,832	32,878
2021	4,808	6,971	1,104	3,901	1,751	13,698	2,287	20,824	34,522
2022	5,048	7,320	1,159	4,096	1,838	14,383	2,401	21,865	36,248
2023	5,301	7,686	1,217	4,301	1,930	15,102	2,521	22,958	38,061
2024	5,566	8,070	1,278	4,516	2,027	15,857	2,647	24,106	39,964
2025	5,844	8,474	1,342	4,742	2,128	16,650	2,780	25,311	41,962
2026	6,136	8,897	1,409	4,979	2,234	17,483	2,919	26,577	44,060
2027	6,443	9,342	1,479	5,228	2,346	18,357	3,065	27,906	46,263
2028	6,765	9,809	1,553	5,489	2,464	19,275	3,218	29,301	48,576
2029	7,103	10,300	1,631	5,764	2,587	20,238	3,379	30,766	51,005
2030	7,459	10,815	1,713	6,052	2,716	21,250	3,548	32,304	53,555
10-year average	4,512	6,543	1,036	3,661	1,642	12,856	2,146	19,544	32,401

Source: Author's computations based on WDI database; 2015 the last observed data, 2016-2030 are projected values

On the other hand, the "medium growth" scenario, in which the countries of the region maintain the current pace of growth with an annual rate of 3% (close to their post-crisis recovery

mean growth rates), would require an investment effort of USD 14.5 bn (average annual gross investment; 10-year average until 2024) and of USD 23.9 bn comprising Croatia, as indicated by the projections of Table 2.

Table 2. Projection of Investment Needs for the Moderate Growth Scenario (3% per year)

(in USD bn)

Years	ALB	SRB	MNE	BiH	MKD	HRV	KSV	WB6	WB6+HRV
2015 (observed)	2,608	4,607	655	2,393	1,186	8,080	1,281	12,732	20,813
2016	2,686	4,746	674	2,465	1,221	8,322	1,320	13,114	21,437
2017	2,767	4,888	695	2,539	1,258	8,572	1,359	13,508	22,080
2018	2,850	5,035	716	2,615	1,296	8,829	1,400	13,913	22,743
2019	2,935	5,186	737	2,694	1,334	9,094	1,442	14,331	23,425
2020	3,023	5,341	759	2,774	1,375	9,367	1,485	14,761	24,128
2021	3,114	5,502	782	2,858	1,416	9,648	1,530	15,203	24,852
2022	3,207	5,667	805	2,943	1,458	9,937	1,576	15,659	25,597
2023	3,304	5,837	830	3,032	1,502	10,235	1,623	16,129	26,365
2024	3,403	6,012	854	3,123	1,547	10,542	1,672	16,613	27,156
2025	3,505	6,192	880	3,216	1,594	10,859	1,722	17,112	27,971
2026	3,610	6,378	907	3,313	1,641	11,184	1,774	17,625	28,810
2027	3,718	6,569	934	3,412	1,691	11,520	1,827	18,154	29,674
2028	3,830	6,766	962	3,515	1,741	11,866	1,882	18,698	30,564
2029	3,945	6,969	991	3,620	1,794	12,222	1,938	19,259	31,481
2030	4,063	7,178	1,020	3,729	1,847	12,588	1,996	19,837	32,426
10-year average	2,988	5,282	750	2,743	1,359	9,262	1,468	14,596	23,860

Source: Author's computations based on WDI database; 2015 the last observed data, 2016-2030 are projected values

DISCUSSION: Actual Investment and Future Growth Prospects: Is it Enough?

Following the results of the previous section, an issue of particular interest is whether the actual level of investment is sufficient to support the region's future growth prospects.

In addition, to determine the investment gap, the current level of investment (with the observed value of 2015 as a reference point, thus representing actual investment) is compared to the projected estimations under each of the pre-specified growth scenarios. A negligible gap between the two would imply that there is no pressing need for increasing investment effort in the future.

Table 3. The gap between Projected and Actual Investment (bn USD)

	WB6	WB6+Croatia	Gap WB6	Gap WB7
2015	12.7	20.9		
g=5%	19.5	32.4	6.8	11.5
g=3%	14.6	23.9	1.9	3

Source: Author's Calculations

However, as shown by Table 3 the gap between projected and actual investment is far from negligible. In the "high growth" scenario with an average annual rate of 5%, the gap is USD 6.8 bn for WB and USD 11.5 bn when Croatia is included whereas for the "medium growth" scenario with 3% growth per year, USD 1.9 bn and USD 3 bn for WB6 and WB7 respectively.

In this context, even the preserving of the current economic performance (in terms of economic growth) poses the need for increasing actual investment (approximately 1.1 times more) in order to achieve the "medium growth" scenario of 3% per year. The "high growth" scenario on the other hand, requires the current level of investment to be multiplied by nearly 1.5 in order to achieve the 5% annual rate of growth.

CONCLUDING REMARKS

The 2008 global financial and economic crisis, reveled existing vulnerabilities in the pre-crisis model of growth. The robust growth prior to the crisis was above potential, mainly driven by excessive domestic demand, with private consumption as its main contributor. Productive investment on the other hand, was not an essential contributor of growth in the region. The failures of the pre-crisis model of growth, pose the need for a new growth model that marks a shift from consumption to investment.

By relying on simple investment-growth model as proposed by Harrod (1939) and Domar (1946), I explore two different growth scenarios that can be of interest in terms of policymaking: 1) "the high growth" scenario which relies on the assumption that the countries of the region recover their pre-crisis mean growth rates of 5% per year and the "moderate growth" scenario, which assumes that they maintain the current pace of growth: 3% (close to their post-crisis recovery mean growth rates). The first scenario (high growth) would require an investment effort of USD 19.5 bn (10 year average, until 2024) and of USD 32.4 bn when Croatia is included whereas the second (moderate growth) an average annual gross investment of USD 14.5 bn and of USD 23.9 bn comprising Croatia.

The actual level of investment is not sufficient to support the region's future growth prospects. The preserving of the current economic performance (in terms of economic growth) poses the need of increasing actual investment (nearly 1.1 times more) in order to achieve the "medium growth" scenario of 3% per year. The "high growth" scenario on the other hand, requires even more investment effort (1.5 times more) than the current level of investment.

To conclude, substantial investment effort is needed in order to correct the failures of the pre-crisis growth strategy and rebuild the region's economies with investment as the main engine of growth, rather than consumption. Looking forward, in future research the analysis can be extended to include the possible sources of financing that can be exploited in order to fill the existing investment gaps. In particular, the role played by development institutions in providing access to long-term finance and the inflow of foreign direct investments are of peculiar interest considering the fiscal position of Western Balkan countries.

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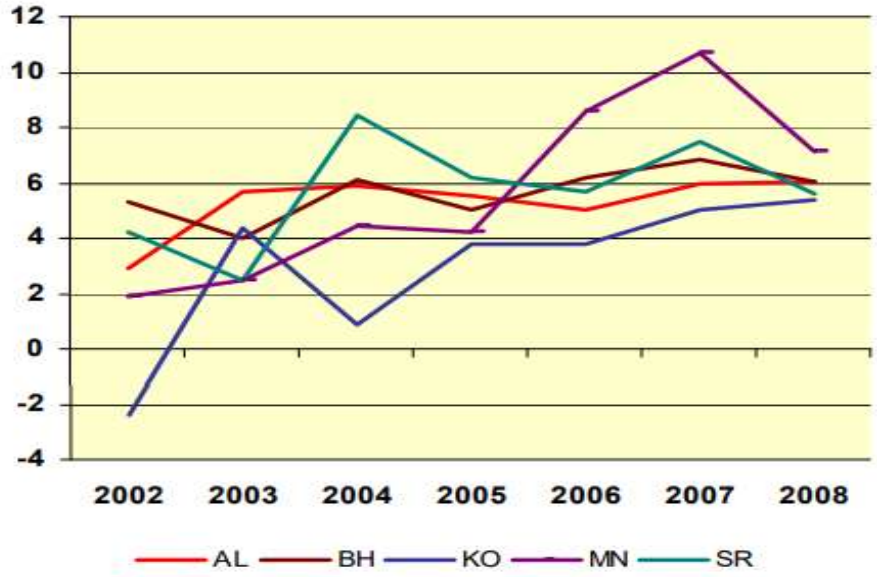
APPENDICES

Figure 1 Growth of WB countries 2002-2008



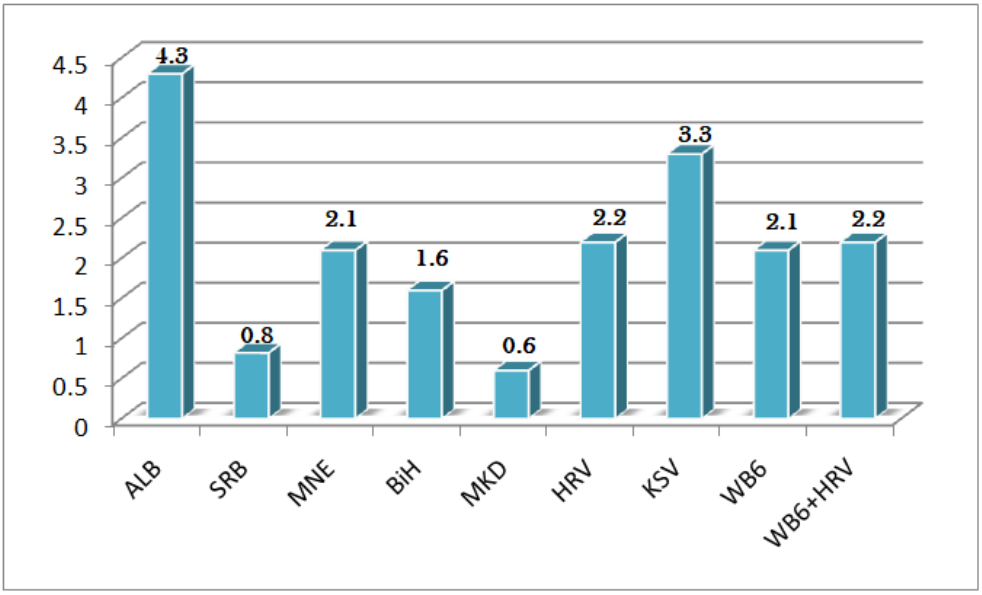
Source: EFCIN (2010)

Figure 2 Private Consumption (% of GDP)

	2003	2004	2005	2006	2007	2008	Average
BG	71,3	70,8	70,7	72,8	72,2	71,4	71,5
CZ	53,7	52,9	51,0	50,2	49,7	50,2	51,3
EE	57,1	58,3	58,5	60,0	61,0	60,3	59,2
EL	72,0	71,3	72,9	73,4	72,6	72,8	72,5
LV	63,3	63,9	64,2	69,4	72,4	71,8	67,5
LT	62,7	65,3	68,0	69,7	71,1	71,7	68,1
RO	73,7	78,7	83,2	86,9	91,5	93,8	84,6
SI	56,7	55,8	54,8	53,3	53,3	52,5	54,4
SK	56,3	56,1	56,0	54,7	52,9	52,8	54,8
NMS	**63,0**	**63,7**	**64,4**	**65,6**	**66,3**	**66,4**	**64,9**
HR	64,6	64,5	64,5	63,2	63,6	62,7	63,9
fYRoM	73,7	76,4	77,6	79,1	82,0	83,5	78,7
TR	72,1	73,2	72,8	71,3	71,8	71,2	72,1
CC	**70,1**	**71,4**	**71,6**	**71,2**	**72,5**	**72,5**	**71,6**
AL	84,7	82,8	89,2	88,9	89,0	89,0	87,3
BH	90,0	90,0	90,9	84,6	80,7	80,1	86,1
MN	74,2	73,1	69,9	77,3	88,4	91,2	79,0
SR	73,8	79,3	79,0	77,9	80,9	82,6	78,9
Average PCC	**80,7**	**81,3**	**82,2**	**82,2**	**84,8**	**85,7**	**82,8**

Source: EFCIN (2010

Figure 3 ICOR coefficient estimates for WB countries, WB6, WB6+Croatia



Source: Author's calculations based on WDI database