Spillover economic effects of Liberland on economies of Serbia and Croatia

Estimates show a significant positive spillover effects that Liberland as a high economic freedom zone would have on economies of both Serbia and Croatia. Presence of Liberland as a high economic freedom area would lead to a one off increase in exports of 0.33% and 0.17% of GDP respectively, and increase in investments boosting long term growth rate for 1% and 1.3%. In a decade (2020 – 2030) this would lead to an increase in per capita GDP in Serbia of approximately 2400 USD, and 4 000 USD in Croatia; or in nominal GDP terms of 8.1 billion USD and 10.7 billion USD respectively.

More competition, investment and trade create new opportunities and wealth. Wealth creation is a dynamic process, in which many individuals pursuing their own motives engage in mutually beneficial trade. There is no limit on the amount of wealth that can and will be produced, and the unprecedented standard of living of the current generation will only be enhanced in the future. Although wealth is not equally distributed among individuals because it is not equally produced in the first place, it never remains restricted since it has no value *per se*, but only in exchange with other human beings. Because of that there are always positive economic spillover effects. This report tries to calculate what would economies of Serbia and Croatia experience as positive economic effects by establishing Liberland as an independent state.

But what are the mechanisms through which positive economic spillover effects influence the Serbian and Croatian economy? There are three channels:

1. Providing a business haven which encourages business development
2. Trade with Liberland
3. Enhancing local reforms.

Economic effects of high economic freedom zones

High economic freedom zones have a positive impact on the surrounding economies, by increasing sales and investment of companies that operate an affiliate in these zones. This in turn increases economic growth rate, and estimates suggest that Serbian and Croatian long term economic growth rate would be 0.9% and 1.2% higher annually if there would a high economic freedom zone within the region. The envisaged decrease of corporate tax receipts due to such an entity is estimated to be minuscule (0.5% of GDP in Serbia and 0.45% in Croatia) which would easily be offset by increased revenues stemming from higher growth.

There is a limited literature on the impact of high economic freedom zones on other economies, due to considerable data limitation. However, those studies that are peer reviewed show that so called tax havens have an important role in promoting investments. Actually, companies that operate a tax haven

affiliate tend to increase their sales and investment outside the tax haven, within their region of operation (Desai, Foley, Hines, 2004) between 0.5 and 0.7%. Furthermore, there is an estimation of the likelihood for domestic companies to open and operate a tax haven affiliate, which is directly correlated to the effective local corporate tax rate, with an elasticity of -0.6 (Hines 1997) . Since the current level of corporate tax in both Serbia and Croatia is already relatively low in European standards (15% in Serbia and 18% in Croatia), this would lead to only 9-11% likelihood for domestic companies to establish such affiliates.

Due to the lack of clear data on tax haven affiliates in these countries, this area is left to an educated guess only. But both countries already exhibit some signs that a certain number of local companies operate a tax haven affiliate, but this is mostly restricted to big and medium companies, since the legal requirements and associated costs are often beyond means of the vast majority of local SMEs. Apart from usual suspects for tax havens such as the Caribbean islands, this role has also been played by Cyprus, Luxembourg and the Netherlands. Therefore, an estimated guess would be that no more than 10% of companies in respective countries already use a tax haven affiliate. This would mean a likelihood of opening a tax haven between 8.1% (Serbia) and 10.8% (Croatia), leading to an increase in investment between 4 – 5.7% in Serbia and between 4.8 – 6.8% in Croatia. With a three year average of total investments being 18.5% of GDP in Serbia and 20% of GDP in Croatia, total investment gains are expected to be approximately 1% GDP annually (0.9% in Serbia and 1.2% in Croatia).

Negative effects on public finances should also be taken into consideration. The impact of tax havens on companies active in the regions where they are located consists of establishing tax haven affiliates in order to lower its corporate tax rate. The overall tax rate reduction is estimated (Desai, Foley, Hines, 2004) at 20.8% of the prevailing tax rate. Bearing in mind the current Serbian corporate tax rate of 15% and public revenues of 2.4% of GDP (and the Croatian one of 18% rate, with revenues of 2.2% of GDP) this would lower Serbian and Croatian public revenues for 0.5% and 0.45% of GDP respectively. However, this would be a maximum possible effect, if all existing companies registered a tax haven affiliate, which is highly unlikely. Therefore, it would be more prudent to expect more moderate public revenue losses, which would easily be outweighed by economic gains in higher economic growth and consequently higher public revenues.

Prospective trade with Liberland

Existing trade gravity models estimate Serbian and Croatian potential exports to Liberland at 125.6 million and 83 million USD respectively, which would add additionally 0.33% and 0.17% to their level of GDP. Although this would be an one off happening, further exports and growth would be expected as Liberland's economy would grow and develop. Liberland's GDP is considered to have a potential of reaching 4.5 billion USD in the short run, which is indirectly estimated through potential capital stock of 13.3 billion USD.

Trade potential between countries can be calculated by a trade gravity model, an econometric tool. This model follows the model of gravity proposed by Sir Isaac Newton, where trade is expected to be higher

with higher GDP of countries included in it, and lower with the distance between them. For comparisons, two different trade gravity models were used: for Serbia (Stanojevic, Batic, 2009) and for Croatia (Druzic, Anic, Sekur, 2011). For this calculation, a potential GDP of Liberland had to be estimated.

The level of Liberland's potential GDP was estimated indirectly, through the expected investments. Liberland officials have an electronic database with almost 150 000 queries from people applying for citizenship, with question such as: would they invest in the country, how much and in what industries. These results show that majority of the applicants do not intend to invest vast sums of money, since majority of proposed investments are in the range of 1 000 to 10 000 USD, but there are also higher sums of 100 000 and even more than a million in several cases. The total amount of investments to Liberland from this survey is estimated at 13.3 billion USD. These resources can be considered as potential fixed capital stock, since all investments concern greenfield projects, because Liberland does not have infrastructure or physical capital. The total amount of net capital stock for OECD countries was estimated to be on average 300% of GDP (Kamps 2005) so in line with that Liberland's annual potential GDP is estimated to reach 4.5 billion USD annually. In comparison to other European micro states, this would put Liberland's GDP above those of San Marino (1.9 billion USD) or Andorra (3.2 billion USD), but below those of Monaco (6.1 billion) and Liechtenstein (6.7 billion USD).

With this information, it is possible to estimate Serbian and Croatian exports to Liberland, using developed trade gravity models. Serbian export is estimated to stand at 125.6 million USD annually, while those of Croatia would stand at 83 million USD. This would mean an one off increase in their respective GDP for 0.33% (Serbia) and 0.17% (Croatia).

Enhancing local reforms

Much remains unknown in the interaction between entities from countries with different levels of economic freedom and their mutual influence. Establishing of Liberland would give an example to other countries in the region to imitate its success, by increasing their respective level of economic freedom. Indirect estimates show that this would increase the level of economic freedom of both Serbia and Croatia for about 0.2 which would further increase long term economic growth of 0.1% of GDP. Bearing in mind historical examples, this is most likely an underestimation of the actual impact Liberland would have on the level of economic freedom in the countries in the region.

There are no comprehensive studies on determinants of economic freedom. Research is mostly confined to the areas in which economic freedom is used as independent variable. However, there is some evidence which plausible the proposition that there is a substantial ''neighbor effect'' i.e. that the level of economic freedom in a country is partially determined by the level of economic freedom of its neighbors. Neighbors trade more, and with trade all sorts of contacts also flourish, as does the exchange of ideas. The analysis of determinants of reforms in countries in transition (Treisman, 2014) reveals a connection between reached level of democracy and economic development after two decades of reforms. It reveals how important neighboring effects were for reforms for countries in transition: the more democratic its neighbors were, the more democratic a country became. The same goes for

establishing a free market economy: the more its neighbors were economically free measured by the Economic Freedom of the World Index, the more economic reforms measured by Transition Indicators were undertaken.

If this assumption holds, 1-point increase of economic freedom score of neighboring countries would lead to an increase in of economic reforms and establishing of a market economy in the country under scrutiny for 0.097. How can we link these two? Since Transition Indicators (1 – 4 scale) measure how similar a transition country has become to a developed market economy, we could use this as a proxy for economic freedom. If we calibrate 4, the best score in TI, to be the current level of OECD countries average in economic freedom of 7.56, this would lead to a conclusion that 1-point increase in economic freedom (on 1 – 10 scale) in neighboring countries would increase the overall level of economic freedom in the country concerned for 0.2.

Since Liberland would receive a full score of 10, its establishment would increase the average economic freedom score of neighboring countries of Serbia and Croatia for 0.36 and 0.43 (from 7.14 to 7.50 for Serbia and from 6.96 to 7.39 for Croatia). Because increase in economic freedom leads to an increase in long term economic growth of 1.24% (Gwartney and Lawson 2004), this could lead to a small increase in long term economic growth rate of 0.1% annually in both observed countries.

However, much about the connection between economic freedom and growth enhancing reforms remains to be scrutinized. History shows us examples where deep reforms for increasing economic growth were instituted in a country that was geographically close to another country with a high level of economic freedom. Taiwan was able to learn from Hong Kong and Japan; China from Hong Kong and Taiwan; Malaysia from Singapore; New Zealand from Australia; Ireland from the United Kingdom during the Thatcherite reforms etc. There is only one example of a country that took on radical reforms for increases in economic freedom and that was not geographically close to any country that already enjoyed a high level of economic freedom – Georgia. Therefore, the importance of high economic freedom zones for fostering exchange of ideas and inducing reforms in its own backyard is most likely grossly underestimated. However, for a more reliable estimation of its impact more research is needed.

Projections to 2030

Liberland as a high economic freedom zone would provide boost of 1% and 1.3% of GDP growth annually to Serbia and Croatia respectively, with another one off boost of 0.33% and 0.17% stemming from increased exports. In the long run these would lead to significant effects: in just a decade (2020 – 2030) Serbian GDP would be higher for 8.1 billion USD or 2 400 USD per capita in international USD. Croatia would gain even more, with an increase in GDP of 10.7 billion USD or 4 000 USD per capita.

Economic impact of Liberland on Serbian and Croatian economies would be substantial. It would raise the long term level of economic growth for Serbia from the currently estimated (IMF, 2018) 4% after 2020 to 5%, (0.9 percentage points coming from growth in investments, 0.1 from an increase in economic growth and one off 0.33 percentage points from growth in exports). Similar to this, long term

growth of Croatia would be increased from the projected 2.2% in 2020 to 3.5%, (1.2 percentage points coming for growth in investment, 0.1 in increase in economic freedom and one off 0.17 percentage points for growth in export).

This may not seem like a rather important instrument for boosting growth, but this increase in the economic growth will have a strong effect in the long run. These are GDP projections for Serbia and Croatia for 2020-2030, with and without Liberland effect.

Projections of GDP in Serbia and Croatia, index 2020 = 100.

Year	Index 2020 = 100 without Liberland Serbia	Index Index 2020 = 100 with Liberland Serbia	Index 2020 = 100 without Liberland Croatia	Index Index 2020 = 100 with Liberland Croatia
2021	104.0	105.3	102.2	103.7
2022	108.2	110.6	104.4	107.3
2023	112.5	116.1	106.7	111.0
2024	117.0	121.9	109.1	114.9
2025	121.7	128.0	111.5	119.0
2026	126.5	134.4	114.0	123.1
2027	131.6	141.2	116.5	127.4
2028	136.9	148.1	119.0	131.9
2029	142.3	155.6	121.6	136.5
2030	148.0	163.4	124.3	141.3

Projections of GDP per capita in Serbia and Croatia, in international dollars.

Year	Serbia without Liberland	Serbia with Liberland	Croatia without Liberland	Croatia with Liberland
2021	16 200	16 400	24 300	24 640
2022	16 850	17 230	24 830	25 500
2023	17 530	18 090	25 380	26 400
2024	18 230	19 000	25 930	27 320
2025	18 960	19 950	26 500	28 280
2026	19 710	20 940	27 090	29 270
2027	20 500	21 850	27 680	30 290
2028	21 320	22 990	28 290	31 350
2029	22 180	24 250	28 910	32 450
2030	23 060	25 460	29 550	33 590

These projections show that GDP of Serbia and Croatia would be after a decade for 15 and 17 percentage points higher if Liberland would be established. These economic gains after in 2030 are estimated stand at 2 400 international USD per capita in Serbia, and 4 000 USD in Croatia. In nominal USD, Serbian GDP in 2030 would be higher for additional 8.1 billion, while that of Croatia would be higher for 10.7 billion, compared to the status quo scenario.