

A light gray outline map of Europe is in the background. Overlaid on the map are several red squares connected by thin gray lines. The squares are located in the following approximate positions: one in the British Isles, one in Central Europe (Germany/Poland area), one in Eastern Europe (Russia/Ukraine area), one in the Balkans, one in Scandinavia, one in the Iberian Peninsula, one in Southern France, one in Greece, and one in Turkey. The lines connect these squares in a network-like pattern, possibly representing trade routes or regional groupings.

# REINDUSTRIALISE EASTERN EUROPE?

## Perspectives of progressive economic policy in the countries of the Eastern Partnership, Russia and Germany

June 2017

- After the end of the Soviet era the tendency of De-industrialization was prevailing in the former member states of the Soviet Union as well as all other former socialist countries of Central and Eastern Europe, including East Germany. This harmful transitional process, and the emphasis of some of the countries on the export of raw materials have mostly provoked pauperization instead of prosperous development in Eastern Europe.
- Significant lessons can be drawn from the recent experiences of the countries. They were facing substantial market and political failures. An economy which solely relies on the free market does not work, as well as an economy based on the export of raw materials or service and agricultural sectors does not automatically bring economic growth and welfare to the majority of people. Now more than ever, the countries need a new social contract which will be based on the concepts of inclusivity and sustainability.
- The authors argue that the countries require a modern industrial policy, which will transform the current palliative development models into more inclusive developmentalist states. A strong manufacturing sector will help the countries to overcome the transition period and to fully be competitive on the EU-market.
- The development of such a strong manufacturing sector is not possible without long term planning, funding research and development, subsidizing and protecting infant industries, and most importantly, government taking risks in terms of shaping and governing markets



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## PREFACE

The dissolution of the Soviet Union was accompanied by the end of its already beforehand weakening economic model. The collapse of the communist state, however, did not only mean the emergence of new, independent states on the global map - whose democratic development has taken different paths to date - but also meant the end of the basic economic and social model linked to the communist system. Still today the social consequences of this breakdown are shaping the development of the countries.

The absence of a strong domestic industrial sector in Eastern Europe has provoked the disastrous system transformation after the collapse of authoritarian state socialism. As a consequence, entire sectors of the economy have disappeared, numerous regions died out and the lives of millions of people were hampered. None of the countries has yet recovered to the level of its former industrial performance.

On the contrary, misguided trendy economic policies, in the tradition of shock therapy, have led to massive gaps between rich and poor; have provoked partially endemic corruption in many sectors, and caused the exploitation or usage of economic resources without regards to sustainability or distributional justice.

The countries are still lacking a coherent economic strategy beyond the exports of natural resources (in the case of Russia and Azerbaijan) or more or less "muddling throughs" with different political directions (in the case of Armenia, Georgia, Moldova and Ukraine) in an already foreign-political confused and partly conflicting region.

In February 2017, the second Eastern European Academy for Social Democracy, organized by the Friedrich-Ebert-Stiftung

(FES), brought together 24 progressive young people from politics, civil society, trade unions, executive organs, media, business and science to discuss the perspectives of modern industrial policy for the region on the example of the transformation and currently widely discussed reform process in Ukraine.

The second Eastern European Academy for Social Democracy has focused on the economic development of Eastern Europe and modern industrial policy perspectives for the region, new ways of generating growth and its redistribution, as well as on the creation of a sustainable, future-oriented economic basis for post-soviet countries by focusing on new technologies and possible reindustrialization.

During the program, the participants have developed common policy recommendations for the individual countries based on the results of the discussions. They also did not only shed light on the economic development of their own countries, but also brought the role of Germany as a European key player into the debate with a comparative transition experience in Eastern Germany.

For the first time the results of the debates during the Eastern European Academy for Social Democracy are summarized in this publication, which is available in English and Russian. The articles are intended to stimulate further debates and promote steps on how the region can shape a coherent economic policy in perspective, simultaneously opening up new economic and social perspectives.

Kyiv, May 2017

Marcel Röthig and Olga Melykh

## RESISTING CHALLENGES THROUGH THE RE-INDUSTRIALIZATION OR TOWARDS THE PROSPERITY OF ARMENIA

Eleonora Begoyan, Narek Minasyan, Armen Mkhchyan, Lilit Karapetyan

In this article, we will present an analysis of the development of Armenia's economy as a result of possible re-industrialization, considering Prof. Erick S. Reinert's observations.<sup>1</sup> But before the analysis, we will present our economy as of today and the processes because of which "we have what we have."

Before the collapse of the Soviet Union (USSR), Armenia was considered one of the most industrialized states of the Soviet Union. For the country, that doesn't own large areas of land and natural resources, the development of the industrial economy based on the raw material provided by the USSR. Consequently after its independence Armenia promptly plunged into crisis, deprived of "inexhaustible natural resources" suppliers and export markets, losing its status as a developed industrialized country. All this contributed by the timely adopted wrong economic policy and bad governance.

During the transformation of economic life Armenia paid a high social price with a sharp increase in poverty, the collapse of the economic infrastructure, a trade deficit, rising unemployment, high inflation and other problems. In the Republic of Armenia, after the independence of the initial period, in addition to the above mentioned, other difficulties appeared later on: the consequences of the earthquake (07.12.1988), war with Azerbaijan, a partial blockade and an energy crisis.

The result of the above-mentioned was that today in the Republic of Armenia a kind of economic system exists, which forms a market economy, but still it contains many elements

of a planned economy. The existence of private property is enshrined in our legislation, but the basic financial flows are indirectly controlled by the state, more precisely, by the entities of state power: that means very often an interconnection of government and big business, which resembles the communist nature of the business relationship in many areas and constitutes an obstacle to the full restoration of the industry.

During its 25 years of independence, the Republic of Armenia and its economy have passed through a unique way of development and decline, trying to overcome the status of a country with an economy in transition. The Government of Armenia has adopted a new direction to the country's industrial policy, which provides using of new technologies and knowledge-based industries for the development of sectors with export potential, the use of modern management models, as well as it ensures sustainable development of the industry's branches that already are developed.

This adopted policy can become reality, when at the same time our country will be able to ensure economic, social and political equal development processes effectively at first using their own resources for own prosperity. In particular, although many projects have been carried out in our country to conduct industrial policy and industrial development, today we are a country with a more import-oriented economy. Imports exceeded exports almost half, totaling 3292.4 million and 1782.9 million dollars by 2016 statistics.<sup>2</sup>

1. <http://norla.no/nb/books/580.pdf>

2. <http://armstat.am/en/?nid=126&id=10003> ; <http://armstat.am/en/?nid=126&id=10004>

And today, based on 2016 data from national official statistics, industry is only 11.51% of Armenia's GDP, yielding agriculture, which amounts to 16.32% of GDP.<sup>3</sup>

It is interesting that Armenia is considered a major producer in the global molybdenum production (7%) and has significant deposits of gold and copper. Also, the mining industry has a significant role in the country's economy: as of 2011 the mining industry accounted for over half of the country's exports.

Thus, Armenia exports mostly raw materials and here's GDP depends on price fluctuations in the international markets of raw materials. If industrial activity continues this way, we will not only be able to have development in the economy, but also we will stay without any resources. Mining is the top priority and the area that needs re-industrial development.

We attach great importance to the financial system, because due to its advantages and shortcomings, we can make accurate predictions and recommendations for further development of the industrial economy of Armenia. So, the financial system is one of the promising sectors of future development for Armenia, it stands out as a very small, dynamic, transparent and coordinated system. The differential of interest rate is high (around 5%) with major expansion possibilities.

Looking at the financial system of Armenia, the most developed system is the banking system. Compared with the other former Soviet countries, Armenia's banking system is stable and competitive, was able to overcome the obstacle of mistrust, currently recording growth of the deposit portfolio and the provision of high quality financial services.

Despite the steady growth of the deposit portfolio, our depositors are still not secured

financially so that they can make a substantial percentage of the Bank's financial resources. And this fact prevents the drastic reduction policy to conduct business loan interest rate of credit to businesses, the result is that funded business effective rate reaches up to 30%. It turns out that we can not presently fund projects with large industrial base. Log-acquisition period of the investment in the industry is high, and it is a big risk in this fast developing world with a high probability that till getting back the investments, the business will lose its demand in the market.

Armenia is a country lacking natural energy resources and imports of primary energy resources, thus clinging Armenia to the energy price fluctuations in the international market and energy resources offering State's policies. At the same time, Armenia is one of the few countries where it is possible to obtain renewable energy in very effective and inexpensive way. Armenia is a mountainous and sunny country.

Country studies that were carried out by German and Austrian companies, issued an opinion that is very beneficial to start a business in the field of renewable energy.<sup>4</sup> In this sense, the most efficient area apart from the Sevan lake basin is considered, including the surrounding villages and towns. This sector can really become a main accelerator for Armenia's economy and industry unprecedented growth and development.

One of the promising sectors of the industry is the information technology sector. It is considered the main cluster of the economy, the sector that grew by an average of 22% annually from 2008 till 2013, and 25.2% starting from 2014. The sector employs over 20,000 computer programmers and software engineers. In considering this indicator we must remember that the country's population is about 3,000,000

3. <http://docs.armstat.am/nsdp/>

4. <http://www.east-invest.eu/en/investment-promotion/armenia-2/RA-alternative-energy>

people, of which 70% is between 15-64 years of age.

Major IT companies such as Oracle and Synopsys, Microsoft Mentor Graphics and the French Atos Company (Thierry Breton) are present here, developing some of their main software's in Armenia. As we see Armenia has a booming IT industry. Armenian companies achieved success in Armenia, as well as in the rest of the world. The turnover of the IT sector in 2016 approximately represented 500 million dollars, 6% of the Armenian GDP. More than 540 companies were registered the same year.<sup>5</sup>

Observing the GDP structure in 2016, agriculture accounts for 16.32% of GDP and 40% of the workforce. A very important indicator that shows very obviously the degree of polarization of the economy. According to 2015 data, Armenia exported more than 250,000 tons fruits and vegetables.<sup>6</sup> The nation has numerous vineyards and is therefore considered a major producer of wine and cognac (brandy). The sector has great potential to attract the Iranian market and increasing the Russia market. We would also like to add that since the spring of 2017 in Armenia the "Halal" food export office opened, which will export "Halal" food from Armenia to Iran and to the Arabic countries.

Moreover, the tourism sector is promising and developing in Armenia. The arrival of tourists increased by around 12% for the last 10 years reaching around 1.5 millions in 2015. Skiing resorts, religious tourism and wellness and health tourism are interesting attractions. Chains such as Marriott, Hyat and Hilton are operating, but the country

still lacks 5 and 4 star hotels. Also there is a need to develop a network of hostels and geshouses in the rural areas of Armenia.

The sectors of industry, such as pharmaceuticals, fashion, clothing, leather, apparels, garments, precision industry, research and development, robotics, jewelry have great potential for development. Because Armenia has a liberal system for foreign direct investments, exchange, capital flows dividend repatriation; Armenia is a major launch-pad to local production and for export to Iran, Russia, Georgia, and others. Also, Armenia has comparatively low crime rates and is considered in the top 10 secure countries;<sup>7</sup> Armenia has abundant literate manpower with very reasonable costs; Armenia's real estate, including land and constructed areas, is very reasonably priced; Armenia has very dynamic diaspora composed of businessmen interested in investment opportunities.

Thus, following our research, we can offer the following:

First of all Armenia needs political reforms to ensure a competitive business environment. Re-industrialization is nothing if we fail to ensure democracy in the country.

Secondly, Armenia should gradually stop the export of raw materials and become importer of raw materials for industrial development. This offer will be implemented, if we start to focus on our domestic markets, starting to produce what we import.

Armenia should invest and encourage foreign investments in the renewable energy sector. Developing this sector, we can gradually overcome our dependence on the foreign energy market, reduce energy costs and promote

5. PicsArt, Menu.am, Shadowmatic: Pics Art is among the top 50 most attractive companies for investors. At the time, it was estimated at \$250 million with 250 million downloads. Given the fact that today the number of downloads reached more than 350 million, the value should have increased as well. The app has been developed in Armenia since 2011.

6. <https://www.export.gov/article?id=Armenia-agribusiness>

7. <http://www.gallup.com/services/185798/gallup-global-law-order-2015-report.aspx>-Armenia scored the 9th spot among 141 countries covered in Gallup's Law and Order Index [https://en.wikipedia.org/wiki/Global\\_Terrorism\\_Index](https://en.wikipedia.org/wiki/Global_Terrorism_Index)-

industrial development and in the end also become an energy exporting country.

In this world of limited resources the most valuable resource is the human resource. Armenia should direct its investments in education and science development, because the country has very intelligent young people and the priority must be to keep them in the country, preventing the brain drain. Financing of this sector, with its scientific potential the country can create a main cluster economy. With the academic success, the country can ensure success in the IT sector, in the financial sector, in the robotics, in the light industry and agriculture. These developments will result in the country changing the country into a developed and high-paid professionals country.

So we need to transform agriculture to the agro-processing: it is one of the most important and efficient industries. It is an important cluster using local agriculture,

resources and nearby markets. We need to turn agriculture into an eco products manufacturing sector. Major food processing industries can be developed locally.

All these developments will have positive influence on the financial system. The population will be able to afford to increase the deposit portfolio, which will drastically reduce the interest rate on business loans, encouraging investments. This system can be developed as a regional hub, as Iran and Russia don't have liberal systems.

Armenia is a small country, with a small economy where risks are and can be controlled easily: Armenia can be considered a hub for business groups that want to target Iran, Russia, and minor Asian countries, Armenia can be considered an alternative to Luxembourg, Switzerland and other countries where investors can benefit from a moderate taxation and corporate expenses.



## AGRICULTURAL POLICY AND THE REASONS FOR ITS INEFFICIENCY IN AZERBAIJAN

Farid Hasanov

Geographically, Azerbaijan is situated in a favorable place from its perspectives of industrial development. Although its revenue mainly bases on the oil and gas sector, there are different climate types in order to improve agricultural products, cultivate different foods from subtropical fruits to cold climate vegetables. Unfortunately, the number of cultivable lands of Azerbaijan is not that high and some of them following the Nagorno-Karabakh conflict are under occupation of Armenia.

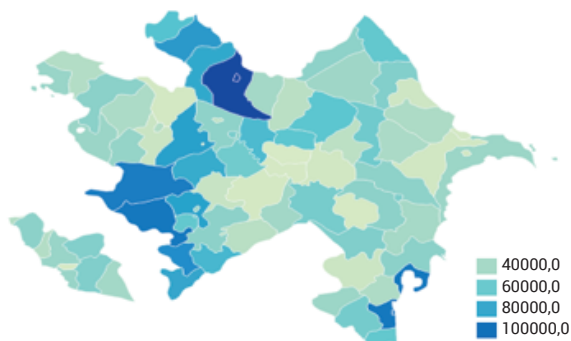
Azerbaijan is specialized in cultivation of wheat, rye, rice, millet, sugar beets, fruits, vegetables, cotton, tobacco, potatoes, tomatoes, cucumbers, cabbage, onions, grapes, pomegranates, melons, green tea, citrus trees and so on. Cattle-breeding, fishery and forestry take more important parts of agriculture. As for statistics, Azerbaijan takes the 7th place among all CIS countries (including Russia) in cattle-breeding, the 5th place in cultivating fruits and 6th place for vegetables.

The share of agriculture in the country's GDP sharply decreased from 16.1% to 5.5% during 2000 till 2010 when the oil production was dominating the economy of Azerbaijan. After the beginning of the global financial crisis and the fall of the oil prices in the world during 2010 till 2015, Azerbaijan's income diminished as well. As a result, in this period of time the share of agriculture increased from 5.5% up to 6.2% in the GDP.

While the decreasing oil price caused a budget deficit, the government tried to focus on the agrarian sector, but annual net profits of separate regions from agricultural products aren't satisfied. As it is seen in Table 1, plant-growing sectors of agriculture were not profitable, but it compensated its loss on account of cattle-breeding. This tendency makes a misbalance and it is a threat for food safety of the country.

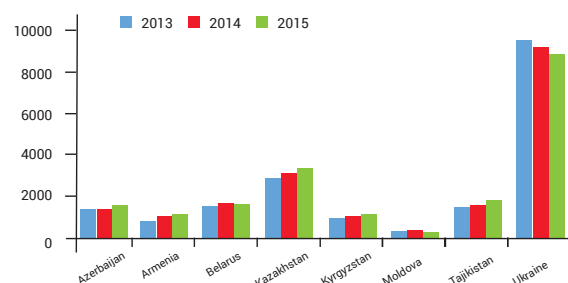
On the other hand, the agrarian sector is a riskier part of the economy of Azerbaijan. Changeable weather, natural disasters,

### Cultivable lands of Azerbaijan (hectare)



Source: Ministry of Agriculture of the Republic of Azerbaijan

### Chart 1: Production of vegetables among CIS countries (thsd tons)



Source: The State Statistical Committee of the Republic of Azerbaijan

insects and no insurance for agriculture make it a less attractive sphere. Khagany Lalayev, farmer from Gazakh (Western part of Azerbaijan) region who deals with cultivating grapes, touches another point that negatively influences to local markets. He says that even if they get more products there is a lack of markets to sell them for a proper price.

Guba resident, Yousef Ahmedov, who has 64 ares (1 are = 100 square meters) of apple gardens, states that last year he wasn't able to sell his products and half of them rotted in the boxes, so that he had to throw them away.

"This year I didn't do the same mistake, and found a way to bring the apples to the Russian market. There I sell apples three times, even six times more expensive than in Baku. If we compare Azerbaijani and Russian markets, there is no barriers in Russia for agricultural products. But, believe me, last year I was fed up, the head of the central market of Baku demanded from me 10 AZN in order to give me a daily place to stand and sell my products. It is injustice, you know," tells Mr. Ahmedov.

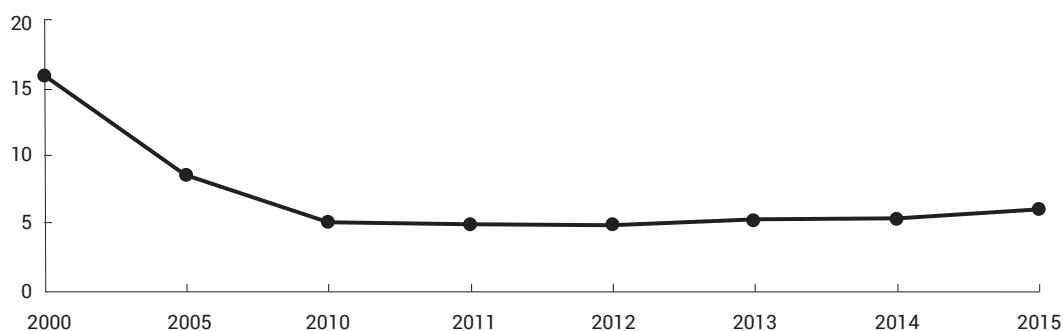
The economic expert Natig Jafarly considers that these negative tendencies happened because of monopoly. Due to his speech, some companies who have storage-refrigerators buy cheaper products from rural people who are not able to keep them

fresh until winter months and sell them more expensive in winter times in Baku markets. Farmers have no choice except agreeing on the cheapest price offered by monopolists. Furthermore, Jafarly underlines that other monopolists bring some food, especially vegetables from other countries, not because imported products are in high-quality (on the contrary local ones are more natural and cheaper), but it occurs that just because this field is under control of those monopolists.

The specialist on the agrarian sector, Samedagha Hamzayev says that the government organizes agricultural fairs in different regions of Baku, but it is not enough to develop this field. According to his opinion, the government should improve alternative transportation ways such as the railway. Mr. Hamzayev mentions that during the times of the USSR the share of the railway in delivering food was on the top and additionally, there wasn't extra payment if the product exceeded the required weight. In parallel, the government should increase the number of wholesale markets in Baku, Ganja, Lankaran, Nakhchivan, Barda and Guba which are strategic centers for agriculture.

Samedagha Hamzayev also thinks that by this way we can prevent the artificial increase of prices, too.

**Chart 2: The share of agrarian sector in the country's GDP (by percent)**



Source: Center for Economic and Social Development

Table 1

**Regions' net profit from agricultural activity (thsd AZN)**

<b>Economic and administrative regions and towns</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Baku city	62	13	21	18	63
Absheron economic region-total	297	294	145	84	75
Ganja-Gazakh economic region-total	833	573	416	392	431
Shaki-Zagatala economic region-total	610	526	743	400	155
Lankaran economic region-total	64	123	92	114	173
Guba-Khachmaz economic region-total	571	476	343	372	324
Aran economic region-total	3727	3382	3907	2662	2389
Yukhari Garabagh economic region-total	2680	2331	2060	2139	2596
Kalbacar-Lachin economic region-total	186	135	160	164	79
Daglig-Shirvan economic region-total	398	487	503	185	527
Autonomous Republic of Nakhchivan - total	315	303	286	313	292

Source: The Ministry of Agriculture of the Republic of Azerbaijan

Moreover, he considers, the last decision of the Tariff Council of Azerbaijan on increasing the price of utility services (electricity, natural gas, water) is expected to raise production costs for business, which may undermine the competitiveness of domestic production.

The member of Parliament Javid Gurbanov emphasizes that the government should change the tax policy regarding the import and production of food.

"Today we apply the same 18% value added tax (VAT) to all imported products, but it's wrong, because this policy reduces the competitiveness between local and foreign products. Besides, payments for the customs office is high in our country and it is a "good" excuse for monopolists to manipulate prices on the market. We should decrease the VAT for food and create transparent competition in the market."

During the last session of the Parliament, the member of Parliament Ilham Aliyev (i.e this is not President Ilham Aliyev, but their names and surnames are the same) stressed that

Khachmaz Canning Factory buys a kilogram of tomatoes from farmers for 0.09 AZN ( $\approx 0.05$  USD), but in Baku it is equal 3.5 AZN per kilogram ( $\approx 2$  USD). He offered the Cabinet of Ministries should regulate the purchase prices.

After eight-month discussions, the head of the government confirmed "The Strategic Roadmap for Production and Processing of Agricultural Products" to prevent all these negative impacts over economy on December 6, 2016. It contains a strategic view until 2020 in order to develop the agrarian sector, and a long-term view until 2025 to get more sustainability in this field. According to this program, the GDP will increase up to 1.235 billion AZN in agriculture and 20 thousands new workplaces will appear till the end of 2020. Implementation of this program will demand from both private and state sectors approximately 1.170 billion AZN investment. All these initiatives regarding production and processing will be carried out by the Ministry of Agriculture of the Republic of Azerbaijan.

Table 2

Top 5 regions mostly focused on the apple business – total area (orchards), ha					
	2011	2012	2013	2014	2015
Guba region	12915	12905	12901	13139	13248
Khachmaz region	3989	4400	4330	4808	4665
Gusar region	3901	3951	3540	3546	4016
Gedabey region	1468	1468	1468	1468	1468
Gabala region	1215	1320	1322	1307	1317
Total area in the country for apple plantation	29195	30028	29761	30572	31168

Source: The State Statistical Committee of the Republic of Azerbaijan

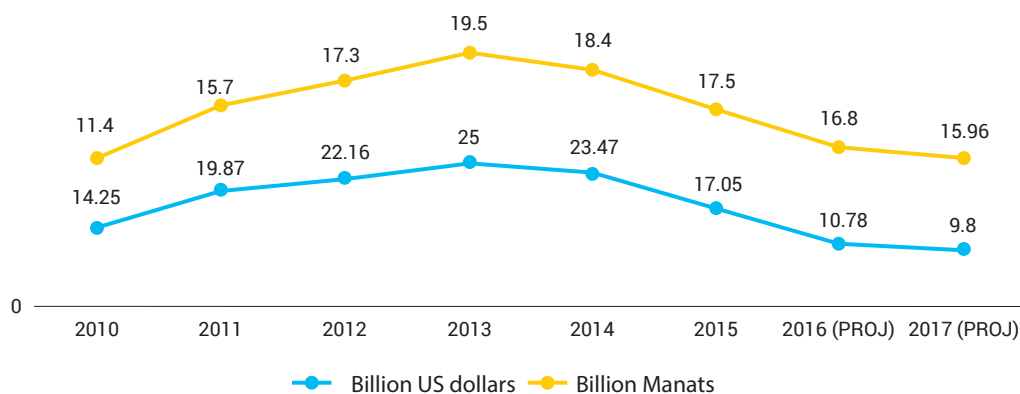
Experts from the “Center for Economic and Social Development” (CESD) consider that the key objective of the Strategic Roadmap is to decrease the dependence on resources and

to overcome the potential risks, through the sustainable and competitive development of the non-oil sector in Azerbaijan. Currently, the actual and potential participants of the

Table 3

Expectations from Strategic Road Map			
Priorities	Real influence to GDP (by million AZN, 2020)	Employment (number of permanent employees)	Investment (by million AZN)
Strengthening of production on the point of competitive agriculture and processing industry in local and foreign markets	450	-	440
Development of cooperation between state and private sector in order to implement joint projects	130	7250	325
Formation of supportive infrastructure to the development of agribusiness	355	7725	350
Improvement of financing mechanisms in agriculture	210	-	-
Supporting and encouraging of export in agriculture and processing industry.	90	5060	40
Development of ecologically clean and natural products	-	-	15

Source: [www.president.az](http://www.president.az), official website of the President of Azerbaijan

**Chart: 3 Dynamics of state budget revenues (by years)**

Source: Center for Economic and Social Development

economy are trying to determine the motives of the promised future economic policy by conducting an evaluation of the document.

According to the CESD specialists, the approved document encompassing separate fields of the economy of the country specify some obligations posed to the government in 2017. "Notwithstanding, it will not be attainable to accelerate the economic dynamics significantly. It is due to the fact that, a conservative approach will be preserved regarding the factors stipulating the economic growth based on the domestic demand throughout the year. Such that, 2017 state budget will be smaller by 8.6% in comparison with the current fiscal year projections. This, in turn, will adversely affect the GDP dynamics achieved owing to the long-term budget spending," states the "Macroeconomic Forecasts for Azerbaijan in 2017" CESD paper.

The expert Rashad Hasanov says that if there is no significant increase in oil prices and the government is committed to the implementation of the Strategic Roadmaps, the initiative in the non-oil sector may rise, especially agriculture, tourism and light industry can develop. In general, it is expected that the economic depression observed in 2016 will continue in 2017.

Mr. Hasanov also emphasizes that another threat for 2017 may be the weakening of the trust of interest groups including the country's publicity towards the newly approved Strategic Road Maps and commitment of the government in this regard. If the public opinion is under impression that the government or any of its bodies is not interested in the implementation of Strategic Road Maps and economic reforms in general, it may aggravate the economic pessimism and deteriorate the economic activity. As a result, the incentives will weaken, local and foreign investments will decline.

In parallel, there are still positive views to the confirmed document in annual predictions of CESD. Thus, the center thinks that the development of strategic roadmaps on national economy and main economic sectors, adoption of several steps towards the liberalization of business environment including the elimination of licenses for various fields of activity or the facilitation of procedures (organization of the procedures by ASAN service), improvement of tax policy and adoption of the decision on the implementation of differential tax rates, as well as the establishment of "ASAN Support for Family Business center" (ABAD) will facilitate the creation of new job positions during 2017.

## INDUSTRY IN BELARUS: HOW THE STATE SUBSIDIES LED TO A TECHNOLOGICAL UNDERDEVELOPMENT

Volha Aleszko

There is an opinion that it is better to have inefficient industry than to not have one at all. This article, by presenting the example of Belarus, shows what conditions a state should fulfil in order to exist with an inefficient industry. How has Belarus subsidized and partially modernized its state-owned and unprofitable enterprises for the last nearly twenty years? And why does this approach not work anymore? This article seeks to answer these questions.

In the 20<sup>th</sup> century, for about seven decades Belarus was a part of the Soviet economic system. After the collapse of the Soviet Union the ex-union republics had to decide what to do with their industrial sectors. Generally, these states decided between two economic models for dealing with their industries in the post-communist era. In the first model the state allowed the open market to regulate the path of the industries. In this model industries that were not compatible and not profitable would die.

The strong ones on the contrary would remain and would start to develop according to the needs and challenges of an open market. Central European countries chose this model. Poland, Hungary, the Czech Republic and Slovakia decided that there was neither the possibility nor the need to support already failing industries. In Poland this type of reforms was called "shock therapy". The disadvantage of this model was a dramatic increase in the unemployment rate in the short term. However, in the long run the model provided that new efficient industries appeared to replace the inefficient ones, creating employment in the process.

In the second model, states strove to save

the soviet-type industries. However, this would require significant and constant subsidizing. The majority of industries remained state-owned. That method had a big advantage: there was no rapid increase in unemployment or a decrease in production. Belarus chose this model of supporting all state-owned industries that had been left after the collapse of USSR. It was the key point of the policies of President Lukashenko. The industries were set to die because of inefficient structures that were by all means.

In Belarus after the collapse of the Soviet Union some of the industries became bankrupt, however the biggest of them survived. These included giant mechanical engineering industries such as MAZ<sup>1</sup>, BELAZ<sup>2</sup>, MTZ<sup>3</sup> and dozens of adjacent smaller enterprises. In contrast, in Poland many similar sized inefficient industries either became bankrupt in the 90ies or the government split them in smaller parts. There is a tractor factory<sup>4</sup> in Poland that was struggling to survive on the open market for decades and only for the last five years it started to be profitable. Those decades without subsidizing forced the factory to modernize its industry and become compatible on the open market.

Starting in the year 2000 Belarus has been investing enormous amounts of public finance to prevent the bankruptcy of these industries. It was able to do this due to three reasons. Firstly, Belarus had a large income from the redistribution of crude oil which it bought cheaply from Russia.

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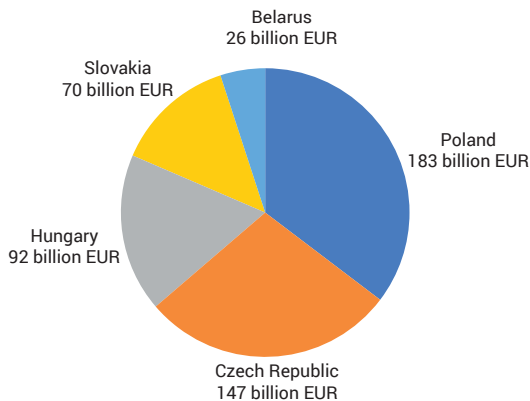
1. Minsk Automobile Plant

2. Belarusian Automobile Plant

3. Minsk Tractor Factory

4. URSUS Factory in Warsaw, Poland

**Fig. 1 Total export of V4 states and Belarus in 2016**



Source: Eurostat

Belarus processed the oil and then exported it. Secondly, there was low taxation for the state-owned industries. Thirdly, the Belarusian government created artificial demand for the goods produced by state-owned manufacturers.

This was ensured by Russia, that who created demand for Belarusian products in its market. This became a channel of indirect support for the inefficient industries. Around 70% of the Belarusian machinery and building products were sold to Russia. In order to balance this, Russia limited the import of other products from Belarus, at the same time keeping the demand on the products that Belarus would not be able to sell somewhere else. The emerged situation was possible due to tight relations between Russia and Belarus and its geopolitical union. It created a strong economic dependency on Russia.

By saving the failing industries Lukashenko planned to gain big advantages. The key advantage was that the biggest industries were still producing. Periodically, the state also modernized them. The difference that has occurred in Belarus and its neighbouring Russia and Ukraine, was that

there was no risk to invest a lot of money in industrial modernization. In Russia and Ukraine, the high level of corruption did not give assurances to shareholders that the modernized and profitable factories would stay much longer in their possession. In Belarus those industries belonged to the state, therefore there was no danger that they would be taken after their modernization.

Consequently, the expenses of the state were growing: it had to subsidize the industry from failing and also pay to modernize it - establish the new equipment etc. Nevertheless, the state has failed in technological development of the industries. There is a fundamental technological gap between the Belarusian production and the products other countries offer. Where can we see examples of such technology backwardness?

In 2010, the Belarusian producer of microchips "Integral" was proud to announce that they started to produce an integrated circuit with design standards of 0,35  $\mu\text{m}^5$ . Unfortunately, Intel and IBM had already reached this design standard in 1997. A positive, however, is to note that this example outlines that there is a skilled workforce for technological development in Belarus. This workforce, given the right market conditions, skilful management and industrial policies, could support the rapid technological modernization of national industries, especially in the IT sector.

As the big part of Russian market is purposefully dedicated for selling these products, there is no technological competition on products from Belarus that would come from Western products. Russia buys the major part of "Integral" production to use it in the military purposes. The Russian government does not permit itself to use Western microchips due to security reasons, even if these are considered to be

5. [http://www.electronics.ru/files/article\\_pdf/3/article\\_3214\\_493.pdf](http://www.electronics.ru/files/article_pdf/3/article_3214_493.pdf)



more advanced technologically. As there is a big demand for military microchips, “Integral” does not have a need to invest in research for the microchips to be used in civil matters.

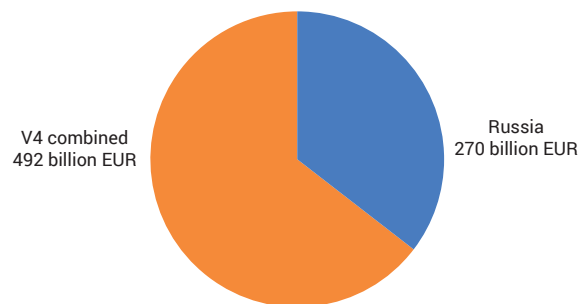
On the other hand, the Belarusian government lacks the capacity of state management to design economic policies that would create the incentives for profitability. Technological modernization in big industries requires cooperation of the state with transnational corporations which have finances, access to technologies, and know-how. To achieve this, the country must create incentives for the private sector to engage in such activities. But in Belarus all industries belong to the state. For example, until recently there was only one private sugar factory in Belarus. This was the only one that was profitable and it was nationalized last year. The products of Belarusian industries are not compatible with Western markets. Therefore, complete dependency on the Russian market has brought Belarus to the situation when it cannot redirect its exports to other markets.

In 2014, due to its economic crisis, exports from Belarus to Russia decreased by 30 to 60%. This has always been Belarus’ main export market and it is now losing it. In the end, all that Belarus created were huge industries that would fail without subsidizing. And this comes at a big cost – such inefficient financial support could be directed to develop other areas of the economy. Most probably, if Belarus had adopted a similar approach to the Central European countries, after 20 years there would be an area in Belarusian economy that would be profitable and compatible. However, it did not happen.

Belarus took the path of a Soviet model of economy. This worked in the USSR but it did not work in post-soviet Belarus. The USSR had its own big market and there was no market competition from external countries. In undertaking this approach, Belarus tried to be autarchic but it still became part of the world market.

It is worth looking at the electronics industry, for example in the production of televisions. The Belarusian television producer “Horizont” produced 440 000 televisions in 2011 but decreased its production to 22 000 in 2015, and in 2016 stopped production completely. This happened because it was not competitive anymore. All governmental institutions were already supplied with “Horizont” televisions and the demand disappeared. Instead, the Japanese company “Panasonic” started producing televisions in Belarus in 2016.<sup>6</sup>

**Fig. Total export of V4 states and Russia in 2016**



Source: Eurostat

Nowadays, there are much cheaper and higher-quality products from China. Neighbouring markets to Belarus are also developing and growing: for example, the countries of the Visegrad group. There is a good example of what would happen if Belarus would let its inefficient enterprises fail.

The Polish lesson of economic reforms, its experience in performing “shock therapy” shows how Belarus could look like in 20 years. The economic situation of Poland was much worse 20 years ago than it was in Belarus. However, nowadays the Polish economy is strong and diversified, and its competitive industries are finding markets for export.

6. <https://charter97.org/ru/news/2016/9/10/221863/>



In Belarus, in order to stabilize the situation, the government must either find money to continue the subsidy or perform serious economic reforms. It will require the deep modernization of the factories, the employment of the high level specialists and the improvement of the management. Its existing highly skilled workforce and surprisingly developed IT sector will help this technological transformation.

Summing up, it is important to highlight that the Belarusian state is now in a very difficult situation. On the one hand, there are no

financial resources to continue subsidising its unprofitable industry sector. The majority of factories do not create profit due to the Russian economic crisis reducing demand in that country.

On the other hand, products of Belarusian factories are technologically outdated and not ready for introduction into other external markets. Consequently, the unemployment rate grows dramatically because the factories have no money to pay for salaries. What is worse for Belarus is that it has lost twenty years of development.

## TOWARDS A NEW PARADIGM OF DEVELOPMENT: THE CASE OF GEORGIA

Tato Khundadze, Mariam Gachechiladze, Lasha Bliadze, Kristine Margvelashvili

It is symbolic that last year the Ministry of Economy and Sustainable Development of Georgia privatized and sold the building where it was based. This decision well reflects the country's neoliberal route of economic development ever since its post-Soviet independence.

From the very onset of the post-Soviet market transition, Georgian economic strategy became preoccupied with massive and uncontrolled privatization of public assets, de-industrialization of economy and tearing apart bureaucratic mechanisms responsible for providing welfare services. All governments have failed in creating a better and freer society. The hopes of millions of people for a better post-Soviet regime were met with extreme poverty and inequality.

The Soviet regime provided full employment, education and universal healthcare. An average citizen could afford to buy a car and a house with his income. Housing problems were marginal. This came at the expense of having an authoritarian, closed system where political rights and freedom were limited for citizens, and travel outside of the USSR was restricted.

Starting from the 1980s, the Soviet government underwent Perestroika, a restructuring, which meant loosening political and economic controls and starting to open up the country. However, this reformist movement turned out to have neoliberal character. Similarly, the newly born national movements in independent republics (Georgia being one of them) also acquired a neoliberal character, in the sense that their economic strategy appeared like not having an economic strategy at all. All Georgian governments from the post-Soviet

transition to this day are shaped by this ideology.

This article offers a criticism of the neoliberal market model and proposes alternatives. The main argument here is Georgia should adopt a new paradigm of economic development which will put the interests of the people first, as opposed to the wealthy few who benefit at the expense of the population. The way forward should be to establish a clear economic strategy, one which promotes the creation of local industries and stable employment for the population.

The Oxymoron of Freedom:  
(Neo)Liberal-Nationalism

Some 80 years ago, John Maynard Keynes expressed the following very eloquently in his magnum opus *The General Theory of Employment, Interest and Money*: "But, soon or late, it is ideas, not vested interests, which are dangerous for good or evil".

The words of the famous economist reflect the patterns of economic transformation of post-Soviet Georgia. The idea (more like, the ideology) of "personal freedom" took front stage when shaping independent Georgia's economy. Basically, the country started to be ruled with the odd mixture of neoliberal economic freedom and ethnic nationalism.

In particular, the notion of "freedom" was comprised of two key aspects: the first being the negation of the "other", and this other means anything associated with the Soviet past or the current Russian Federation. Second was a more individual understanding of 'freedom', such as negative freedoms (freedom of speech, freedom of assembly etc.) and economic freedoms like

a non-interventionist state in the affairs of the economy and individuals.

The logic was that the separation from the Russian sphere of influence and the promotion of neoliberal notions of freedom would automatically bring prosperity for the country. Post-Soviet Georgian governments eagerly implemented recommendations from the International Monetary Fund and the World Bank, as well as other development institutions. While strongly promoting the idea of freedom and independence, the Georgian political elites disregarded to enact economic development strategies, which would favor local industries, stimulate the economy and hence benefit the Georgian people. It is ironic that national narratives and political nationalism that came about in Georgia in the 1980s, were not backed by any understanding of economic nationalism.

It is likely that Adam Curtis, the British film director, did not have a chance to get acquainted with the Georgian neoliberal experiment. If he had, Georgia's recent empty understanding of personal freedoms, devoid of any economic rights, would have complimented the British case which Curtis presents in his documentary "The Trap: What Happened to our Dream of Freedom".

#### The Socio-Economic Results of the Liberal-Nationalist Oxymoron

Since Independence to present, the majority of Georgian political parties actively talk about "government failure". This was the case with Saakashvili's United National Movement Party, and is still the case with Georgian Dream, the present ruling party. Austerity and "tightening of the belts" policies has become a favorite motto of Georgian politicians. In this marathon to outdo each other's austerity policies, they fail to acknowledge that with perpetually ineffective, weak government and bureaucracy, Georgia has experienced an immense market failure.

As it's often said, there is always a room for improvement, which refers to the limitless liberalization of economy. During the Soviet Union, the communist ideology served to persuade people to "build communism" with hard work, which would bring a bright, never-before-experienced future for the society. The rigid Soviet ideology is now replaced with a neoliberal one. However, the difference here is that the Soviet regime granted basic services to everyone, while the neoliberal development model has left most people more destitute than they have ever been.

Some simple statistics portray the above-stated. According to the 1989 census 5 443 000 people lived in Georgia. The 2014 census says that the number is 3 713 700. It turns out that since 1989, the population of Georgia has decreased by 1 730 000 people (GEOSTAT, 2017). The Georgian population during the last 25 years has decreased by 31%.

There are several things to consider, for example the breaking away of Abkhazia and South Ossetia, the populations of which are not reflected in the last census. However, the economic aspect is fundamental to these figures, as poverty and unemployment has led a decrease in life expectancy and birth rates. Moreover, due to a total devastation of the industrial sector, a big part of the population has left the country. 9-12% of the Georgian GDP is comprised of remittances, which is very telling of this situation (National Bank of Georgia, 2015).

It is clear that the majority of people living in Georgia depend on relatives working abroad. Due to the neoliberal economic model, "human export" and brain drain have become a normal occurrence.

Unemployment in Georgia is 12% according to Georgian Statistical Office. But if we take into account incomplete and latent unemployment this number reaches to

50%. The fact that 48.4% of population is employed in the agricultural sector (GFSIS, 2016), while agriculture is only around 9% of GDP, indicates intrinsic backwardness of the economy. This means that practically half of the population is left out from the economic processes occurring in the country.

While foreign direct investment (FDI) has been deemed an economic savior, it clearly has not been enough to cure the structural problems of the deindustrialized economy. Despite the increase of FDI from 2005 until today, Georgia is nonetheless facing a constant hike in trade deficit. Only in 2012 there was a slight decrease in trade deficit, and this was due to the fact that the Russian market was reopened for exporting agricultural products and mineral waters from Georgia. According to 2015 data, the trade deficit is 4.4 billion USD (National Bank of Georgia, 2015), which is an immensely big sum for Georgia, taking into consideration the size of the country's economy. This means that Georgia is buying 4.4 billion USD more than it sells. Such economic model is a formula of perpetual poverty for small countries like Georgia.

Often showcased as the pinnacle of radical reforms, Georgia cannot even boast a reduction of poverty rates. According to data presented by GeoStat, during 2008-2011 the number of people below the poverty line increased from 6.4% until 9.2%, and in 2013 it was 9.7%, which is equivalent to 437 238 people.

The World Bank data on poverty in Georgia is much more tragic. The World Bank calculates that 25% of the Georgian population is poor and lives under the 3.10 USD margin. According to this indicator, Georgia is the poorest country in the region (The World Bank, 2017). As a UNICEF report notes, 225 000 children in Georgia live under the poverty line and spend less than 4.5 GEL a day, while 50 000 children live in extreme poverty and use less than 2 GEL

a day ([www.unicef.ge](http://www.unicef.ge), 2015). However, the neoliberal "ideological wall" (Klein, 2014), as the prominent Canadian writer and activist Naomi Klein refers to it, is firm and unbreakable.

The elite remains oblivious to the tragic social circumstances. Several years ago, one of the activists of United National Movement noted with irony and surprise that if a person is really poor, she would not have the money for self-immolation. This was directed at a woman set herself on fire in front of a ministry building for reasons related to poverty and marginalization. As these polarized, elite attitudes are common, the media did not make much out of this sarcastic comment.

It often happens that with such scandals and tragedies the society gets a wakeup call and a temporary rebirth of morality. Even though comments were made that such things (as a woman's self-immolation due to poverty) would not be allowed to happen again, there was nothing inherently new or striking about this occurrence.

Post-Soviet Georgia has had high cases of suicides of people who had dignity and served a purpose in their societies, but due to radical market reforms had turned homeless, unemployed and purposeless. Just in the last five years, Georgian banks have sold the private properties of more than 10 000 people, leaving them on the streets (Bekauri, 2016). Hence, any moral reawakening of the elites following scandalous occurrences is then nullified with the following dogmatic argument that "if you are poor, it is your fault".

From Neo-Liberal Palliative Development  
Towards a Developmentalist Economy

Two significant lessons can be drawn from the recent experience of Georgia. An economy which solely relies on the free market does not work. Georgia is facing a clear market failure,

as well as government failure. According to neoliberal arguments, the latter was supposed to bring prosperity to the country, but it has also brought about a market failure.

The second lesson is that an economy solely based on service and agricultural sectors does not work in Georgia. While economic stability is important for a country, this stability should not mean stagnation, and perpetually prolonging the ineffective status quo. The myth of market liberalization and austerity bringing about development, has been boldly discredited with decades of experience in the Global South. This is even acknowledged by organizations such as the IMF and the World Bank, which were the flagships of the neoliberal economic model (Jonathan, Prakash, & David, 2016).

What Georgia requires is a modern industrial policy, which will transform its current palliative development model into an inclusive developmentalist state. Many pose logical questions, such as: what does an industrial policy mean? What can Georgia produce? Can new industrial policy raise prices for consumers? To what degree can the Georgian ineffective bureaucracy implement such difficult structural policies, and can industrial policies turn into a trap of corruption? Answering these questions provides a basis on how to implement a modern industrial policy.

Question: what can Georgia produce?

According to Ricardian thesis, Georgia should produce things where it has a competitive advantage, and hence are the cheapest to produce. This logic brings us back full circle into the present development mode. The renown Norwegian heterodox economist Erik Reinert notes that the Ricardian logic for developing countries means “specializing of on being poor” (Reinert, 2008).

Georgia’s fifth largest export is wine (GEOSTAT, 2017). Merely specializing in wine production will bring the country either to a worsening quality or raising prices, since land

is a limited resource, and for the agricultural sector it is characterized by decreasing return on capital.

At some level, Georgia won’t be able to produce more than a certain quantity of wine or local wine producers will be forced to start wine growing on a less productive soil, which will lead to an increased fixed price, further leading to a diminished quality and price of wine exports. One can stipulate beyond the Georgian case. Had China or other East Asian economies followed the Ricardian logic, they would have stayed rice producers instead of the leading economies they are today (Chang, *Bad Samaritans: The Myth of Free Trade and The Secret History of Capitalism*, 2008).

Some economists urge to pose this question differently, and focus on not what Georgia should produce, but how the country can diversify its manufacturing sector.

As Dani Rodrik of Harvard University has advised effective industrial policy should be concentrated on eliminating “information failure”, which will support the process of “self-discovery”. More specifically, economic agents must find activities, which will increase their income. However, since the cost of any new activity is high and returns are low, economic actors do not take risks. If it turns out that certain economic activity is profitable, there is a high chance that other economic actors will engage in the said activity, which will prevent the firm who brought the innovation on the market to cover its initial costs (Rodrik, 2004).

For this market failure, government can use subsidies in order for businesses to have the opportunity to take risks. Given the context of Georgian, Georgia has to follow two main steps. First of all, subsidies have to cover only new activities in the Georgian economy, not to the already existing ones in order to promote diversification of economy. Secondly, only activities under

which service or product has high export potential should be subsidized. In this regard, the World Trade Organization has some limitations for subsidizing exports, but there are experiences of countries avoiding this stipulation through indirectly supporting exports.

Question: will the new industrial policy raise prices for the Georgian consumers?

Naturally, a consumer is interested to buy a product as cheaply as possible. Additionally, a customer prefers to buy imported high quality products, rather than spending money on locally produced, low quality and more expensive. Discussion on this topic is not new, and goes beyond Georgia.

Same discussion was taking place in America approximately 200 years ago. Landowners living in the South were particularly against trade tariffs on import, because it was difficult for them to understand why they have to buy products from "Yankees", when they could import cheap and high quality products from abroad.

South Korean economist Ha-Joon Chang notes that this argument between the US Northern industrialists and Southern slave-owners was won by the former. As Chang argues, Americans realized creating a strong state was not possible without a strong economy. Therefore, America had strict protectionist policy until the end of the Second World War, having the highest trade tariffs amongst industrial countries (Chang, *Economics: The User's Guide*, 2014).

In this current globalized system, it will be difficult for a small country like Georgia to replicate the American or other industrialization experiences. Hence, the industrial policy must be selective and smart, meaning protecting certain infant industries and not entire sectors of the economy. Additionally, due to the small market of Georgia, it has to protect the economic activities which have high export

potential. If the country takes these into account, Georgia will not have radical inflation. Moreover, developing industrial politics will create jobs and link service and food industries, which will certainly compensate damage inflicted from the increased consumer prices.

Question: is Georgia's ineffective bureaucracy capable of implementing an industrial policy, and can it become a trap for corruption?

Since the 1980s, following the influence of the neoliberal economic doctrine, the role of the government in economic development has been marginalized. Many fallacies have been created, which claim state institutions are filled with idle bureaucrats whose aims are to disrupt economic development. This fallacy has been thoroughly discredited with decades of experience.

Scholars note that without government, the free market does not exist, since state institutions always create the rules of the market. For example, the judicial system, which is the instrument of enforcing contracts, is important for the effective functioning of the market.

Similarly, protecting private property needs appropriate law enforcement institutions. To defend the principles of free market, it is necessary to define what is an acceptable market power, and anti-trust legislations and related agencies are fundamental to this process and the securing of free competition (Reich, 2015).

Some economist like Mariana Mazzucato go further and say that government is the actor in creating and governing markets. Mazzucato presents the examples of the Internet, smartphones, biotechnologies, where governments were fundamental to creating and shaping these markets (Mazzucato, 2013).

For an effective bureaucracy, it is necessary to have concrete, measurable goals and aims.



Further, financially supporting the bureaucratic apparatus is crucial for it to function.

Another important condition is to have personnel policies which entails a meritocratic system. Dani Rodrik notes that there can be an effective and successful bureaucratic base in every state, which has a fundamental role to play in carrying out state politics (Rodrik, 2004).

In Georgia, the Ministry of Finance and the Ministry of Justice perform their jobs very well and are the reasons behind Georgia's functioning taxation system. If a government prioritizes on an industrial policy, an effective and accountable bureaucratic apparatus can be put in place.

## Conclusion

Georgia is often named as the country of successful reforms, which is an example to follow for other post-Soviet countries like Ukraine. In order to be fair and objective, it must be admitted that the social and economic transformation that Georgia went through during the last 25 years, and especially after the 2003 Rose Revolution,

has not concluded with a democratic change, accompanied with a wide social and economic progress. This successful depiction of Georgia's post-Soviet path fails to depict the living conditions of average citizens. Most rural spaces of leisure and comfort are visited by tourists and the rich, while most people are huddled in the impoverished suburbs. Addressing these socio-economic injustices is the path to move forward and build a better, inclusive future.

Despite the fact that the Georgian state has only 30 or so years of governing itself independently, it also has historical experience of being an industrialized nation (during the USSR), and these historical experiences must be put towards building a strong, modern industrial sector.

The development of a strong manufacturing sector is not possible without long term planning, funding research and development, subsidizing and protecting infant industries, and most importantly, government taking risks in terms of shaping and governing markets.

Now more than ever, Georgia needs a new social contract which will be based on the concepts of inclusivity and sustainability.

## GERMAN INDUSTRIAL POLICY ON THE VERGE OF THE MACHINE AGE

Arsen Fazlovic, Matthias Ecke, Alexander Wajnberg

### Productivity paves the way: Fifteen-hour weeks within grasping reach?

No other than John Maynard Keynes in his 1930 essay “Economic Possibilities of Our Grandchildren” contemplated that within two or three generations, the “economic problem may be solved”. Given the spectacular rise of productivity since the first industrial revolution, he mused, manual labour would become redundant although “three-hour shifts or a fifteen-hour week may put off the problem for a great while”. More than 80 years after Keynes’ bold prediction, Germany’s manufacturing industry finds itself on the verge of the Machine Age. Who gains, who loses from increasing productivity? Is Germany heading towards a fifteen-hour week, or are we going to witness a resurfacing redistributive battle between labor and capital-owners?

### Sunny with some clouds: An export-oriented, industrialized economy lacking investment

#### a) Industry meets institutions

Germany is the fourth biggest economy in the world. The industrial sector has a large share in this success and contributes significantly to the country’s wealth. Germany’s GDP in 2016 amounts to over 3.1 billion Euro and more than a quarter of it is comprised of manufacturing (excluding construction). This is not just due to well-known economic superstars such as Siemens, ThyssenKrupp or Daimler. The German industry’s popularity most notably manifests itself in the international competitiveness of the so called *Mittelstand*, i.e. small and medium-sized enterprises. Businesses like Kuka (robotics), Beumer (conveyors) or Luerssen (shipyard) are among

the world leaders within their respective business fields. They hugely owe their success to effective research and development based on both a dual educational system and an excellent technological academia.

**Table 1: Economic key figures for the Federal Republic of Germany, Federal Office of Statistics 2017**

Economic key figures	2014	2015	2016
Growth	1.6 %	1.7 %	1.9 %
GDP in billion Euro	2,923.9	3,032.8	3,132.7
IPC in Euro	36,105	37,127	37,866

But the industrial sector’s strength is not just the result of a functioning educational system. The institutional environment also needs to be highlighted in this respect. The German society is highly organized within associations and unions, which have always played a major part in the distribution of wealth after World War II. On the employers’ side, political (Federation of German Industry - BDI), social (Confederation of German Employers’ Associations - BDA) and commercial (Association of German Chambers of Industry and Commerce - DIHK) associations advocate their interests. Their counterparts, the labor unions, have recently accomplished to stop the previous trend of constantly losing membership. German labor unions remain well-organized in the core industrial sectors but struggle to extend union coverage to parts of the service sector. However, they draw on another considerable leverage: Members of the Industrial Union of Metalworkers (IG Metall) and of the Industrial Union for Mining, Chemistry and Energy



(IG BCE) amount to more than 3 million workers, i.e. voters. The German system of collective bargaining autonomy foresees that these two sides negotiate labor disputes whilst the state stays impartial and merely provides the regulatory framework. The institutionalization of this conflict resolution method has for many decades proved to be more than beneficial for the German industry.

The political support for Germany's industrial sector reaches far. In the current legislative period of the German Bundestag there is not a single political party, which firmly questions the formal institutions backing German industry. The Social Democratic Party (SPD) is in support of investment-related and employment-oriented industrial policies whereas the Christian Democrats (CDU/CSU) highlight the merits of free trade and solid finances. The Left Party rather emphasizes the likes of service industries but does not miss out on stepping in for a socially reformed, industrial policy. Of course, the Greens are in favor of ecologically modernizing the German industrial sector (by means of eco taxes, CO<sup>2</sup> certificates and the like). Nevertheless, they acknowledge its importance for public revenue and, therefore, for the German welfare state. Reliability builds trust. In their location decisions, domestic and international businesses rely on a stable political landscape regarding Germany's industrial policy.

#### b) Europe's exporting engine

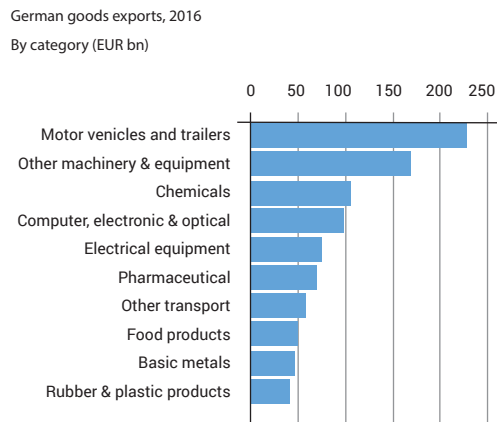
The European Union plays an important part in the success of the German industry, too. What once began as the Montanunion, limiting (especially the German) national steel and coal production, has become the biggest single market on the globe. The EU does not only provide peace, free travelling and mobility of labor. For the German industry it is indeed a crucial factor for productivity and prosperity. Almost two thirds of Germany's record breaking 252 Euro billion trade surplus in 2016 (~8% of GDP) is due to exports to countries of the European Union. The share of German exports to the EU is rising since 2012 and is foremost attributable to manufactured goods such as motor vehicles, trailers, machinery, equipment, chemicals, computers, electronics and optical products.

Speaking of the advantages of the European single market one cannot leave out the menaces that come with it. Germany features a trading surplus, which is alarming the rest of the world. Despite political claims for boosting domestic demand, the country's high saving rate renders a substantial reduction of its export surplus unlikely. The dependency on exporting goods of the industrial sector could put the German economy in danger, especially if one considers global tendencies towards national protectionism. On the one hand, Germany benefits from a currency deriving its value also from structurally different

**Table 2: Exports of the Federal Republic of Germany, Federal Office of Statistics 2017**

<b>German exports (value in Euro Mio)</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Europe	761,898	803,405	821,223	+2.5 %	+5.4 %	+2.2 %
Africa	22,521	23,917	24,519	+3.2 %	+6.2 %	+2.5 %
America	135,293	156,982	147,707	+3.7 %	+16.0 %	-5.9 %
Asia	190,973	196,297	200,459	+6.7 %	+2.8 %	+2.1 %
Australia/Oceania	9,566	10,221	10,381	-3.8 %	+6.9 %	+1.6 %

Fig. 1: Financial Times 8.3.17, Federal Office of Statistics 2017, Haver



economies in the European periphery. On the other hand, Germany is accused of having distorted the market by keeping wages too low in comparison with European competitors. The current account imbalance not only shows a high dependency of the industrial sector on exporting products (leading to exposure to global trade volatilities). As indicated by the European Central Bank and the International Monetary Fund, global trade imbalances also raise the risk of debt-fueled financial crises.

**Table 3: Trade balance of the Federal Republic of Germany, Federal Office of Statistics 2017**

	2014	2015	2016
Exports in Euro Mio	1,123,746	1,193,555	1,207,019
Imports in Euro Mio	910,145	949,245	954,642
Trade balance in Euro Mio	+213.601	+244.310	+252.377

c) Macroeconomic bottlenecks: investment and demography

Another problem is Germany's private and public investment ratio. For a long time, it

struggled below the OECD average. Due to the investment bottleneck since the 1990s, physical and digital infrastructures remained insufficient and hindered increases in the industrial sector's productivity. Partly, low investment activity resulted from consolidation pressure in combination with tax cuts during the first decade of the 2000s: public spending decreased and public infrastructure was left unmodernized. Subsequently, macroeconomic demand was weakened, too, entailing negative consequences for private investments. Entire regions and municipalities were, and still are, suffering from structural change. Most recently, the German Federal Ministry of Finance has acknowledged that effective location policy needs to focus the framework conditions for private investment. But up till now, German private investments were rather pouring abroad.

Births in 1964 reached an estimated 1,326,000 of newborns. Ever since the trend goes downwards, implicating consequences for labor, public revenue and equality. Less and less workforce is filling the gaps, thereby putting social security at risk if welfare contributions remain at current levels. The German welfare state is largely based on contributions from labor rather than from taxes, thus putting a strain on overall labor costs. A vicious circle is put in place since the workforce decreases and the number of retirees increases. The workforce would have to contribute more in order to avoid a pauperization of the elder generation, implying higher labor costs and more incentives for employers to substitute labor with capital.

Forecasting the storms to come: risks and opportunities of the next industrial revolution

Despite a lack in investments, Germany's economy seems overall well suited for the future. As a high-productive economy with relatively capital-intensive production patterns it has traditionally been on the

forefront of automatization. However, as the rise of the machine age accelerates, the promise of higher productivity as envisioned by Keynes 80 years ago remains as elusive as ever. With labor productivity and GDP per capita in Germany and other countries having largely stalled since 2005, economists such as Larry Summers suspect a prolonged period of “secular stagnation” awaiting the world’s developed economies.

a) Germany’s fourth industrial revolution: Industrie 4.0

Paradoxically, technological progress is routinely identified as a major culprit for lacking growth and productivity in recent years. The “fourth industrial revolution”, meaning the disruptive automatization and digitalization of manufacturing and supporting services, is poised to transform many industries while creating significantly less job opportunities than previous industrial revolutions did.

The World Bank considers an estimated 60% of jobs in the OECD and in China to be susceptible to automatization, with employees of secondary or lower education as well as the bottom 40% of the wealth distribution being

the most vulnerable. Furthermore, temporary, part-time and other atypical employment in Germany already increased significantly since 2000. Unprotected and uninsured clickworkers and crowdworkers could be at risk of being exploited.<sup>1</sup> The fourth industrial revolution may not only render many workers redundant, but also demand unprecedented flexibility and availability from the rest, thus making those remaining jobs more precarious. Owners of land and productive capital (machines), on the other hand, would continue to stay on the winning side. While the share of labor in national income has shrunk steadily since 1975, the importance of capital in Germany has spiked in recent years ahead of other major economies. Increasing inequality between labor and capital could permanently curb economic growth by misallocating resources, diminishing mass purchasing power and capturing governments in favor of a capital-owning minority.

b) The rise of the machines: the decline of manual labor?

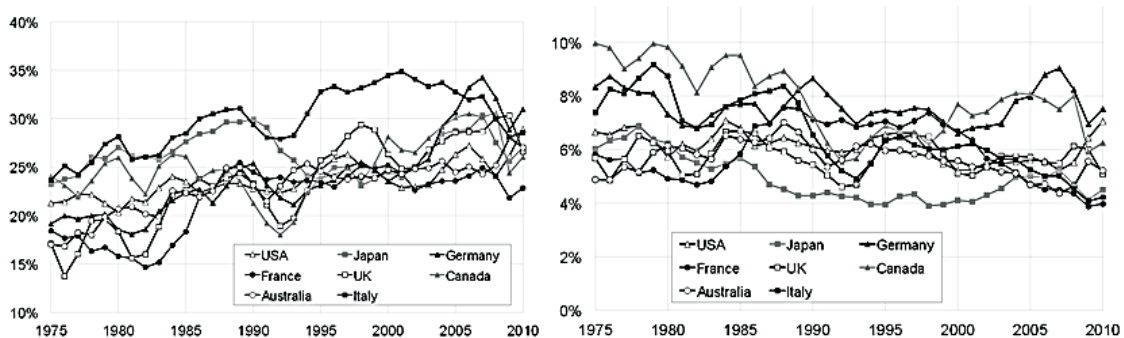
Does such a scenario suggest a severe “robot tax” or even a Luddite uprising against the machines of the fourth industrial revolution?

**Table 4: The fourth industrial revolution, or Industrie 4.0, and its predecessors, Schwab 2016; Federal Ministry for Economic Affairs and Energy 2015**

What	When	How
1 <sup>st</sup> industrial revolution	1784	Based on mechanical energy (steam, water), thus revolutionizing transportation, mining and production
2 <sup>nd</sup> industrial revolution	1870	Based on electrical energy and division of labor, allowing for mass production and economies of scale
3 <sup>rd</sup> industrial revolution	1969	Based on electronics and information technology, leading to automated production and just-in-time logistics
4 <sup>th</sup> industrial revolution or «Industrie 4.0»	Forthcoming	Based on cyber-physical systems, big data, cloud technologies and additive manufacturing (3D printing), enabling individualized manufacturing at zero marginal costs

1. These terms refer to self-employed online workers who are compensated for finishing crowdsourced tasks, i.e. specified tasks outsourced to an online platform by a private company or public institution.

**Figure 2: Capital shares in factor-price national income (left) and average return on private wealth (right) 1975-2010, with Germany on top in 2010, Piketty / Zucman 2013**



**Table 5: Number of multi-purpose industrial robots per 10.000 employed in manufacturing, International Federation of Robotics 2015**

South Korea	478
Japan	314
Germany	292
USA	164
China	36

The historical data supports a more sober perspective. Germany's population roughly quadrupled between 1800 and 2000 while GDP per capita rose by a factor of more than 18 in the same period. As the annual working hours per person employed decreased from 2,841 in 1870 to 1,804 in 1973, labor productivity (GDP per working hour) subsequently rose from 1.55 USD to 14.76 USD per hour worked. Past industrial revolutions - and the accompanying policies - degraded neither the quantity nor the quality of employment but enhanced both. Recently, 2016 witnessed an all-time low in unemployment in post-reunification Germany at 2.6 million as well as a robust increase in real-wages. At the same time, Germany's economy also relies on industrial robots, which collectively constitute a backbone of its leading automobile and machine industry. Although Germany represents already one of the largest markets for industrial robots in

the world, demand for industrial robots still increased annually by a stellar 7% since 2010.

Such indicators rather nurture the vision offered by Keynes in 1930 than the pessimistic scenario depicted above. Apparently, given Germany's aforementioned demographic development and international competitiveness in manufacturing, automatization and full employment do not necessarily contradict each other.

The future of German industrial policy: investing in people and precaution

For Germany the battle between the risks and opportunities of "Industrie 4.0" is essentially a race between skills and technology. Training and education will become even more vital. Challenges will arise both for industrial policy and for industrial relations regarding worker safety and privacy, skills and qualifications, flexible working hours and technological dividends (e.g. participatory stock ownership). Those, however, might be outweighed by gains in both labor productivity and jobs. According to government estimates, up to 425 Euro billion in aggregate growth and 240,000 jobs could be added to the German economy by 2030, i.e. exceeding any offsets by structural losses, if the industrial value chain were to be digitalized.

## THE NEED FOR A NEW MARSHALL PLAN FOR THE REPUBLIC OF MOLDOVA AND THE EASTERN PARTNERSHIP

Mihai-Razvan Corman, Igor Girlea

### Introduction

In 2014 the European Union concluded Association Agreements (AAs) with Georgia, the Republic of Moldova and Ukraine. The Deep and Comprehensive Free Trade Area (DCFTA) constitutes the economic core of the agreements and includes a wide range of reforms aimed at enhancing trade relations and facilitating convergence to the EU standards in various areas. It is generally agreed that if the envisioned reforms are successfully implemented, the long-run economic effects on the signatory nations will be positive. The countries will transform into more competitive economies, the investment climate will improve and the economy will eventually grow increasing quality of life. The experience of the Central and Eastern European countries in the 1990s has shown that a significant development is possible.

At the same time the prospects in the short and medium run, far less publicly discussed than the long run benefits, are rather underwhelming involving high adjustment costs for less competitive sectors and regions, fiscal costs of the legal approximation to the EU *acquis communautaire* and challenges of finding a market niche in the already highly competitive European markets. The well-intentioned beneficiary effects of the DCFTA might come too late, provided that the signatory countries will continue to be EU-oriented. Euroscepticism in Moldova has partially materialized since the presidential elections in November 2016 forwarded the pro-Russian candidate Igor Dodon who is critical to the AA.

The following article wants to outline the current economic situation in Moldova (II.)

and the effects of the DCFTA for the country (III.), propose policy recommendations for a domestic industrial policy that needs to be implemented boldly and swiftly in order to facilitate the transition period until the beneficiary results of the DCFTA come into effect (IV.) and stress the need to raise the consciousness of the decision makers not only in Brussels, but also in Chisinau, Tbilisi and Kiev about the necessary changes in the economic approach towards the Eastern Partnership region and the sober account of the short and middle run costs involved in implementing the DCFTA (V). The proposals to be made are not new, neither is the debate about a different economic strategy towards Eastern Europe. The famous Marshall Plan implemented in Western Europe after World War II was key in rebuilding the war-devastated regions, removing trade barriers, modernizing industries and making Europe prosperous once more. It is all the more important to recognize the need for application of a similar plan in Eastern Europe in our times.

### The economic situation and recent trade developments in the Republic of Moldova

According to the World Bank's classification Moldova belongs to the lower-middle-income level group in Europe. The country had an estimated per capita GDP of about EUR 3.000 in 2015, slightly more than 10% of the EU average.<sup>1</sup> In the course of the past two decades the average annual growth amounted to 2.9% and employment fell by

1. wiiw Annual Database, Eurostat, World Bank, UN Comtrade, national statistics.



about one third.<sup>2</sup> The “frozen conflict” with Transnistria has put even more economic strain on the country since the separatist region has been an industrial core of Moldova during the times of the Soviet Union. Having been a country vastly characterized by agriculture, shares of agriculture in GDP lately rapidly declined, yet still remain higher than in new EU Member States. Simultaneously, its share of manufacturing in total exports has grown since 1995 constituting around 30% of total exports in 2015. However, comparing with its neighboring countries this number is relatively low. This is also reflected in the industrial composition of exports, concentrated mostly in commodities (metals, fuels) and agricultural and food products.<sup>3</sup>

Moldova is critically dependent on foreign trade for its economic growth and development. The average ratio of foreign trade to GDP in 2015 was 92% according to the World Bank’s World Development Indicators (WDI).<sup>4</sup> Moldova’s most important trading partners over the last decade have been Russia, Ukraine and Romania.<sup>5</sup> However, due to the forced transition away from the Russian market imposed by Russia’s embargo, Moldova has experienced a particularly notable transformation with wine, formerly its largest exports product, yielding way to cables and wires recently. The share of beverages contracted from about 30% of exports in the early 2000s to less than 10% in the recent years. At the same time, the share of electrical machinery industry to which cable production belongs increased from less than 1% to over 10% of exports over the course of the recent decade.<sup>6</sup> Another consequence of Russia’s embargo has been the increasing role of the EU as a trading partner. Moldova’s exports

to the EU represent about 62% of total exports in 2015 (of which 40% to Romania and 17% to Italy).<sup>7</sup> The country’s top export position to the EU is electrical machinery and specifically ignition wiring sets exported predominantly (75%) to Romania to be fitted into Dacia passenger cars. Iron and steel exports from Moldova to the EU have more than doubled during the last years.<sup>8</sup> Nevertheless, historically Moldova has been running large trade deficits which mounted to 0.9 billion Euro in 2015.<sup>9</sup>

## The effects of the DCFTA

The DCFTA is an instrument of the European Neighbourhood Policy (ENP) with the key objective to facilitate closer economic integration through legal approximation to the EU acquis with the countries in the neighbourhood of the EU in order to promote stability and security in the region. The DCFTA therefore goes beyond merely liberalizing trade between the participating countries demanding reforms and thus making their economies more competitive and efficient.

### a) Benefits and opportunities

The DCFTA is expected to bring a whole range of benefits to Moldova. In the short- to medium-run, the elimination or reduction of tariff and non-tariff barriers to bilateral trade will ease access to the EU market and boost exports.<sup>10</sup> In the medium run liberalization of imports will lead to higher efficiency of domestic industries and lower prices of final goods. The imposition of stricter EU requirements combined with financial

2. wiiw Annual Database, CIS Statcommittee Database, National Bureau of Statistics of Moldova.

3. wiiw Annual Database, UN Comtrade.

4. National Bureau of Statistics of the Republic of Moldova.

5. Adarov/Havlik, Benefits and Costs of DCFTA, Joint Working Paper, December 2016, p. 7.

6. Adarov/Havlik, Benefits and Costs of DCFTA, Joint Working Paper, December 2016, p. 8-9.

7. UN Comtrade.

8. Adarov/Havlik, Benefits and Costs of DCFTA, Joint Working Paper, December 2016, p. 10.

9. Adarov/Havlik, Benefits and Costs of DCFTA, Joint Working Paper, December 2016, p. 11.

10. European Business Association (EBA), Recommendations of the Business Community on the Elimination of Constraints, Chisinau, 2015, p. 22 ([http://eba.md/app/webroot/uploaded/Recomandarile\\_En\\_print.pdf](http://eba.md/app/webroot/uploaded/Recomandarile_En_print.pdf), last access on 16 March 2017).

and technical support will lead to higher quality of products and will result in a more supportive and stable business environment. In the longer run this will lead to accelerated economic growth, higher real income, more tax revenues and will foster sustainable development and increase quality of life.<sup>11</sup> As a result, the AA represents a very relevant and powerful tool that the EU offers as a “golden carrot” to incite institutional changes.

However, in the short- to medium-run the non-tariff barriers (high food safety requirements and technical standards) that will remain in place until Moldova fully aligns with the EU regulations will be an important factor constraining exports from Moldova given its economy dominated by the agri-food sector and commodities. The globally more competitive EU exporters on the other hand already being able to abide by the rules of the EU will continue to export to the DCFTA markets unhindered.<sup>12</sup>

#### b) Costs and risks

The DCFTA also causes manifold and significant costs for Moldova, many of these being already noticeable for the state and the private sector. Unfortunately costs of implementation of the necessary reforms are either not estimated or not communicated publicly. In general, there is hardly any discussion of the costs of transition, although that is critical to assess the net effects of the DCFTA as well as the cost effectiveness of specific reforms.<sup>13</sup>

The implementation of the DCFTA will require various and complete changes of many practices. Fiscal costs are needed to make the legal approximation to the EU *acquis communautaire* possible. Adjustment

costs related to industrial restructuring are expected to lead to contraction of less efficient industries with potentially painful concurrent labor market repercussions.<sup>14</sup> Investment costs by the public and private sector to conform to EU technical standards for industrial products and to bridge the “gap” in infrastructure and productivity as well as regulations in the agri-food sector are likely to be significant and particularly challenging at the early stages of DCFTA implementation.<sup>15</sup>

Moreover, the generally weak local agricultural industries will face severe problems accessing the EU commodities and agri-food sector which is highly protected. Technology-intensive sectors at the same time require modernization and will struggle to find a market niche in the already highly competitive European markets. Social costs associated with sectoral transformations induced by DCFTA and dislocated workers in less efficient sectors, particularly painful in poor regions, will also be significant over the medium run. In addition, economic linkages with the Russian market, which are still strong in Moldova and remain potentially important, make reorientation even more difficult.<sup>16</sup>

It is however clear that lack of funding opportunities will be among the key constraints. According to the survey results reported in DAI Europe (2014) and the World Bank's Enterprise Surveys, in all three DCFTA countries most small and medium enterprises indicated financing constraints as one of the critical problems. During the first decade of EU membership, Poland received almost 80 billion Euro net from EU transfers (more

11. Analysis commissioned by the EC to research institutions in the form of “Trade Sustainability Impact Assessments” (TSIA) reports by Ecorys and CASE (2007 and 2012, respectively).

12. EU – Republic of Moldova Deep and Comprehensive Free-Trade Area, Reading guide, p. 4 ([http://trade.ec.europa.eu/doclib/docs/2014/february/tradoc\\_152194.pdf](http://trade.ec.europa.eu/doclib/docs/2014/february/tradoc_152194.pdf), last access on 16 March 2017).

13. Adarov/Havlik, Benefits and Costs of DCFTA, Joint Working Paper, December 2016, p. 23.

14. Chirila, A focus on Moldova, published in: Eastern Partnership Revisited. Associated Countries in Focus, Warsaw, 2015, p. 65 (<http://library.fes.de/pdf-files/bueros/warschau/12002.pdf>, last access on 16 March 2017).

15. Adarov/Havlik, Benefits and Costs of DCFTA, Joint Working Paper, December 2016, p. 1.

16. loc. cit.

than 3% of its GDP); Slovakia more than 9 billion EUR (less than 2% of GDP). Romania received more than 17 billion Euro during the first eight years of its EU membership (2007-2014). On a per capita basis and cumulated over the whole EU membership period, this represented 2,080 Euro per head in Poland, 1,670 Euro in Slovakia and 860 Euro in Romania.<sup>17</sup> Extrapolating these per capita transfers to the population of Moldova, the estimates would add up to about 3-8 billion Euro – a vast difference compared to the de facto EU financial support.<sup>18</sup>

### Policy recommendations for a domestic industrial policy

In order to prevent the short- and medium-run costs of the DCFTA from hindering the long-term beneficiary results coming into effect economic policy changes are necessary. This article especially wants to focus on the need to strengthen the domestic industry. A strong manufacturing sector will help Moldova to overcome the transition period and to fully be competitive on the EU-market after the transition period is over and free trade between the EU and Moldova is possible. The importance of a strong manufacturing sector for the wealth of a nation is not new. Erik Reinert, a prominent Norwegian economist, doubted that free trade is the magic bullet for economic growth and national wealth by analyzing the economic turmoil in Latin America in the 1970s. He stated that the result of relatively rich nations that have developed manufacturing sectors trading with relatively poor nations that have economies specialized in agriculture and commodities is wealthy nations specialize in being wealthy while poor nations

specialize in being poor.<sup>19</sup> This article sets forward recommendations on how a lasting economic domestic industrial policy of the Republic of Moldova that aims at creating strong domestic manufacturing industries could look like.

#### a) Short term policy – more Free Economic Zones

In the short term the opening of more Free Economic Zones (FEZ) within Moldova's territory would strengthen the domestic industrial sector. Nowadays, Moldova has seven Free Economic Zones: FEZ "Ungheni-Business", FEZ "Expo-Business-Chișinău", FEZ "Bălți", FEZ "Tvardița", FEZ PP "Valkaneș", FEZ PP "Taraclia", FEZ PP "Otaci-Business".<sup>20</sup> In 2015 the total volume of the commodities production and provided services was 4.3 billion MDL which constitutes 95% of the industrial production of the country.<sup>21</sup> This proposal would lead to growing investments in the country and increase development of infrastructure on the local level, where production is located. More FEZs would in addition improve local employment, prevent further depopulation, give way to higher local wages and rise venues to the local budget. But most importantly, foreign investors bring with them new technologies and know-how. Through the exchange of good practices between the investing company and the local workforces, the latter could adopt to industrial production processes and get used to high technology standards which will serve as a strong foundation for future innovations and business ideas. After the termination of the investment contracts the established infrastructure could be used by local industries.

17. See [http://ec.europa.eu/budget/figures/2007-2013/index\\_en.cfm](http://ec.europa.eu/budget/figures/2007-2013/index_en.cfm) (last access on 16 March 2017).

18. European External Action Services (EEAS); Adarov/Havlik, Benefits and Costs of DCFTA, Joint Working Paper, December 2016, p. 38.

19. Erik Reinert, Increasing poverty in a globalized world: Marshall plans and Morgenthau plans as mechanisms of polarization of world incomes; The terrible simplifiers: common origins of financial crisis and persistent poverty in economic theory and the new "1848 Moment".

20. <http://mec.gov.md/ro/content/zonele-economice-libere> (last access on 16 March 2017).

21. Report concerning the activity of Free Economic Zones in the Republic of Moldova in 2015.



## b) Medium term policy

In the medium term institutional changes, the creation of an industrial fund, the development of biofuel and recycling technologies and, last but not least, road construction should be on the agenda.

## Development Bank of Moldova

First of all, the creation of a Development Bank of Moldova where state owns the majority of shares is necessary. The task of such an institution would be to provide available funds and lend money with a low interest rate to start-up projects and enterprises with new, fresh ideas willing to start a new business. The Development Bank would facilitate financial support of low-risk industrial projects aiming at coming up with highly developed and eco-friendly technologies. Profits from interests would cover the maintenance expenses of the bank and could eventually be reassigned for crediting, if necessary. Such a financing model would allow the bank to be self-sustainable within ten years after its creation. Money gained from taxes paid by the successful enterprises could be reinvested to support other promising projects. The Development Bank of Moldova would therefore provide the needed financial support for starting and promising industrial projects and keep innovation and development within the borders of the country instead of allowing brain drain to already highly developed countries.

## Special Agency for Exports

Secondly, the creation of a Special Agency for Exports is crucial. This state agency would have the purpose to promote the local industrial products and facilitate their export. It could be maintained on the basis of commission businesses which means that it would take a small, reasonable commission in case there is a deal signed on exports and exceeds a specified amount

of money. Thinkable is also a maintenance based on financial support from the state budget. Both institutions, a Development Bank and a Special Agency for Exports exist in all industrially developed countries and contribute extraordinarily to the improvement of the manufacturing sector. These institutions must most certainly not miss in Moldova for they would stimulate the already growing production of cables, wires, electrical machinery and other attached industries.

## Industrial Fund

What is also needed is a national industrial program and a partnership between state and manufacturers. The so created Industrial Fund would focus on small companies and start-ups (already opened projects) having the objective to elaborate highly developed and eco-friendly technologies. Industrialists would in this way be motivated to implement modern and sustainable technologies in their production chains. The fund would be formed by allocations of 2-5% of taxes paid by industrial producers to the state with additional payments from the state budget. This financial model would create transparency and incite producers to pay taxes, because a part of the money would eventually refinance their projects. This fund would have to be supervised by a special committee formed by representatives of NGOs, manufacturers and state representatives. Though it could affect competition policies, the committee of the Industrial Fund would have to discriminate the beneficiaries in order to diversify the industrial production.

## Biofuel and recycling technologies, road construction

The fact that Moldova is an agriculturally developed economy must be used as an economic springboard. The millions of tons of agricultural waste could be used as an incitement to develop sustainable, future oriented, energy creative industries by establishing new biofuel and recycling technologies.

Last but not least, the Moldovan government has to invest more in road construction. Roads as the blood vessels of the economy are highly needed in an industrially developed country. Unfortunately, at this moment only 58% of roads are in good condition in Moldova.<sup>22</sup>

c) Long term policy – solution of the Transnistrian conflict, research and development

In the long run an end to the Transnistrian conflict must be achieved. As the industrial core during the times of the Soviet Union the separatist region had 30% of Moldova's industry in the middle of the 1990s. Nowadays, good infrastructure can be found on the left bank of the Dnistr River that could be attractive for external investors. The metallurgic factory located in Transnistria was the third largest in Europe by production of metal products in the middle of the 2000s. Nowadays it could be of great interest to international investors and could be used to further boost the production of iron and steel products.

Another long term policy should be the improvement of research facilities and the educational system. Education is the headstone of new ideas which lead to inventions and innovation. Every new business founded on a new idea can lead to thriving new industries. Therefore, a reform of the educational system must be passed based on the tripartite relationship: state representatives, manufacturers and teachers. Nowadays, Moldova has 32 universities; from 2005 to 2015 – 4007<sup>23</sup> people obtained PHD titles, 50% of

them in economic studies. Nevertheless, students are pending between the realities of the market and the framework of the soviet educational system. This provokes uncountable damage to the present and next generation conserving the existing gap between the knowledge which a student received during his studies and the requirements of the market reality. Combined with respective research and development programs a reform of the educational system would allow to take full advantage of the commodity "brain".

d) Financial Aid

Some of the recommendations will partly be able to fund themselves. Others must fully be financed by the state budget. The Transnistrian conflict on the other hand will need political negotiations with international actors and the parties involved. But the implementation of all of the above forwarded policies will need financial support that cannot be provided by the Moldovan government alone. As a result, financial aid is not only important concerning the adjustment to European standards, as mentioned at the beginning of this article. Financial help will also be crucial in implementing the aforementioned policies and making Moldova an industrially developed economy. It is therefore argued that there is a need for a new Marshall Plan financed by the EU to help Moldova and the other Eastern Partnership countries to help themselves.

The post-war Marshall Plan was designed to make Europe prosperous again, while at the same time injecting much-needed investment into European countries in order to prevent the steady march of communism from beyond territories controlled by the Soviet army. Over a period of four years, the United States invested 148 billion present-day USD in Western and Central Europe restoring real wages and output and creating the world's most modern road

22. [http://www.realitatea.md/raport-despre-calitatea-drumurilor-din-moldova-in-total-418-km-de-drum-sunt-in-repara-ie-iar-58prc-din-totalul-traseelor-se-afla-intr-o-stare-mediocra\\_41611.html](http://www.realitatea.md/raport-despre-calitatea-drumurilor-din-moldova-in-total-418-km-de-drum-sunt-in-repara-ie-iar-58prc-din-totalul-traseelor-se-afla-intr-o-stare-mediocra_41611.html) (last access on 16 March 2017).

23. [http://statbank.statistica.md/pxweb/pxweb/ro/30%20Statistica%20sociala/30%20Statistica%20sociala\\_\\_07%20INV\\_\\_INV070/INV070300.px/?rxid=b2ff27d7-0b96-43c9-934b-42e1a2a9a774](http://statbank.statistica.md/pxweb/pxweb/ro/30%20Statistica%20sociala/30%20Statistica%20sociala__07%20INV__INV070/INV070300.px/?rxid=b2ff27d7-0b96-43c9-934b-42e1a2a9a774) (last access on 16 March 2017).

and marine transport systems. Thanks to these financial efforts Europe was rebuilt and peace and stability restored. A New Marshall Plan today could similarly promote the development of democracy, state of law and a vibrant economy in a strategically important region of the world.

Through signing the DCFTA, the EU has put in place a program that will bring a whole range of benefits. But in order to overcome the bumpy transition period, to alleviate social costs in the vulnerable sectors and regions and to support the modernization of the threatened small and medium enterprises a further engagement of the EU is necessary.

## Conclusion

As this article has shown, Moldova's economy is still very fragile but at the same time demonstrates promising approaches. The DCFTA will, in the long-run, fortify the country's economy making it more efficient and competitive, if the needed reforms are implemented. But in the short- to middle-run various costs and risks are expected, many of those already noticeable.

In order to overcome the difficult transition period and to sustainably transform Moldova into an industrially developed country able to compete with the EU member states after the DCFTA takes full effect, policy changes are crucial. In the short term Moldova needs more Free Economic Zones to attract foreign investments, modern technologies and know-how.

In the medium term institutional changes, like the establishment of a Development Bank of Moldova and Special Agency for Exports, the creation of an Industrial Fund and the improvement of biofuel and recycling technologies and road conditions are necessary.

Finally, in the long run the solution of the Transnistrian conflict and the implementation of research and development programs will be key. Although partly being able to fund themselves the forwarded plans will need financial support by the EU. Therefore there is a need for a new Marshall Plan of the 21<sup>st</sup> century adapted to the needs of the Eastern Partnership region.

As important as a new Marshall Plan might be for Moldova and the fellow Eastern Partnership countries, it would also be very much in the interest of the EU and of utmost strategic importance for Europe as a whole. Although the EU is currently facing a crisis on a number of fronts and has to deal with a set of urgent priorities, which its neighbours are not part of at the moment<sup>24</sup>, a stable and prosperous Eastern frontier remains very much in the continent's interest.

After the annexation of Crimea and the military operations in eastern Ukraine the EU has been reminded that Russia is not willing to give up its influence in the region and that Europe is not immune to aggression and instability. Therefore, the EU needs to act in order to decrease the chances for confrontation and regional upheaval and to prevent a potential power vacuum from emerging.<sup>25</sup>

The EU itself recognized this in 2004 when the European Neighbourhood Policy was launched and the goal set to create a "ring of friends". Today, Art. 8 of the Treaty of the EU aims "to establish an area of prosperity and good neighbourliness, founded on the values

24. Recently confirmed by Gernot Erler, Coordinator for the inter-societal cooperation with Russia, Central Asia and the countries of the Eastern Partnership, within the frame of the "Eminent Lecture Series" with Edi Rama, Prime Minister of the Republic of Albania, organized by the Friedrich-Ebert-Stiftung (FES) in Berlin on 9 March 2017.

25. Edi Rama, Prime Minister of the Republic of Albania, recently pointed out that a growing influence of Russia can be observed in the Balkans due to an emerging power vacuum formed by the lack of coherence and interest of the EU towards the region which could lead to the region looking for "new friends", within the frame of the "Eminent Lecture Series", organized by the Friedrich-Ebert-Stiftung (FES) in Berlin on 9 March 2017.

of the Union and characterized by close and peaceful relations based on cooperation". The EU should stick to its commitment.

The time has come to raise the consciousness of the decision makers in Brussels and also in Chisinau, Tbilisi, Kiev and among their respective societies about the necessary changes in the economic approach towards the Eastern Partnership region and the sober account of the short and middle run costs involved in implementing the DCFTA.

The survey conducted by DAI Europe (2014) reports that among the 902 small and medium enterprises in the three DCFTA countries there is lack of awareness of the DCFTA agreements (79% in Ukraine, 72% in Georgia and only 32% in Moldova "heard of the agreement").<sup>26</sup> These statistics reflect the missing ability of government officials to communicate the AAs and the DCFTAs to their respective societies and business communities.

Numbers among other society groups might look much worse. But what these numbers also sadly reflect is that the actors affected most by the DCFTA which must be the driving forces for change know the least. The missing public debate about costs and risks of implementation of the DCFTA even widens the information gap.

Therefore, it is not a problem of bad intentions but of bad information. Mere ignorance should no longer peril the European integration and ongoing developments in the countries of the Eastern Partnership. The post-war Marshall Plan made the reconstruction of Western Europe possible and the following founding of the European Union assured record lasting peace, stability and prosperity in Europe. A new Marshall Plan can set the tone for a new prosperous beginning in Eastern Europe as well. The Marshall Plan of the past has shown what the Marshall Plan of the future can achieved.

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26. DAI Europe (2014), 'EU Support to the Private Sector in the context of Association Agreements including DCFTAs (Georgia, Moldova and Ukraine)', Project No. 2014/ 345014, <http://www.east-invest.eu/uploads/Modules/Documents/final-report-dcfta.pdf> (last access on 16 March 2017).

## RUSSIAN NEW INDUSTRIAL POLICY: EXAMPLE OF KARELIA

Liubov Petrova

The Republic of Karelia is a frontier subject of the Russian Federation and part of the Northwestern Federal District. It shares the longest border with the EU in Russia. Geopolitically, the position of Karelia naturally has influenced the shaping of its political and socio-economic development and has encouraged the development of cross-border cooperation with Finland since 1992.

Karelia's transit function, the development of tourism and transborder IT startups, as well as the support of export-oriented businesses, play the priority role in the cross-border cooperation. Importantly, the development of economic ties is not limited to the framework of federal and regional authorities. One of the efficient channels for developing economic cooperation is horizontal ties between businesses, sister cities, communities and various business associations. Karelia, a cross-border Russia-EU cooperation program, plays an important role, too.

Since 2000, the Republic of Karelia has been part of Euroregion Karelia. Its function is to coordinate cooperation between Kainuu, Northern Ostrobothnia, North Karelia and the Republic of Karelia, as well as to attract external funding for the region development, and to maintain political dialogue between Russia and Finland, promote national interests of Russia in Finland, including in the institutions of the European Union. The strategic role of Euroregion Karelia is particularly important given the current difficult situation on the international arena.

It is important to note that this cross-border cooperation is one of the few remaining sectors where Russia and the EU interact in today's situation of international turbulence.

It is particularly important for the Republic of Karelia and the border regions of Finland to preserve the support of cross-border cooperation, the launch of a new cycle of the Russia-EU program Karelia 2014-2020 which is implemented as part of the European Neighborhood Instrument, and further implementation of projects and programs within the Barents Euro Arctic Region framework. The total amount of funding for the territory covered by the program (Republic of Karelia and Finland) was 46.4 million Euro over 2010-2014. The shares of 25% each came from the budgets of Russia and Finland, the EU contributed 50%. Within the program, 63 projects were implemented (including big infrastructure projects) aimed at economic development, environment protection, sustainable energy, culture, tourism, social welfare and forestry.

The economy of the Republic of Karelia is export oriented. It sells nearly a third of its manufactured output abroad. Therefore, Karelia is especially sensitive to the ruble fluctuations and changing demand on the external markets. According to the Northwestern Customs Department and Karelia Statistics Bureau, the pace of negative dynamics in the volume of Karelia's foreign trade was slowing down over January-September 2016 (this did not include data on mutual trade with the Eurasian Economic Union, as well as exports and imports of services).

Still, its international trade amounted to 645.3 million USD which was 6.6% down from 2015. Exports exceeded imports fourfold. The key counterparties included Finland (29.4% in Karelia's foreign trade turnover), Turkey (8.8%), UK (8.3%), Germany

(7.8%), the Netherlands (5.3%) and China (3.9%).

Over nine months of 2016, exports-oriented shipments grew both in value and volume terms, seeing the increase in the supplies of iron ore (28.3%), kraft paper (20%), processed timber (13.5%), market pulp (6%), and unprocessed timber (5%).

Over nine months of 2016, the import of goods to the Republic of Karelia grew by 18.1% compared to the same period of 2015, amounting to 132.3 million USD. This upward change came primarily from the increasing exports of machinery by 35%, paper, cardboard and derivative products by 18.3% in value terms. The imports of black metals and products grew ninefold. The shipments of boats and watercraft increased fivefold.

Further opportunities in economic cooperation should be viewed from two main perspectives – of globalization and regionalization. As mentioned before, the Republic of Karelia shares the longest border with the EU as it is on the verge of two different structures of regional economic integration: The Eurasian Economic Union and the European Union. This makes Karelia a convenient territory for the implementation of the benefits of the international labor distribution system on the regional level.

One of the most promising vectors for developing economic projects on the border between two regional integration unions (EAEU and EU) is the support of processing in the customs zone within the border territory of Karelia.

The procedure of processing in the customs zone in line with the Customs Code of the Eurasian Economic Union is a customs procedure whereby foreign goods go through processing operations in the customs zone of the customs union within

the established timeframe, fully exempted from import duties, taxes and non-tariff regulations, and are transported further beyond the territory of the customs union. The goods placed under the processing procedure in the customs zone retain their status of foreign goods, while the goods resulting from the processing operation gain the status of foreign goods. Such processing allows for the use of goods from the customs union. Practically, this means that one party imports the components it needs to produce goods from another country. One party receives benefits of reduced production costs while the other party benefits with new jobs and incentives in economic development.

Currently, this customs procedure applies to Raptek OJSC (Rappola minnows) and AEK PKG-Group OJSC (electric wires, cables and harnesses for Skania and Volvo trucks), the two projects operating in Karelia. However, these projects are low-tech production which does not fully stimulate progressive economic development of the republic.

In the long run, this practice risks conserving the gap in the development of different territories along the border. This risk exists because the focus of Karelia's economy on the production that does not look for innovative technologies or highly-qualified labor force can potentially have negative impact. A well-developed transport infrastructure and logistic opportunities of Finland act as an additional bonus in favor of processing in the customs zone of Karelia – they reduce production costs and shipment timeframe.

It is thus necessary to support extensive development of this initiative, engaging more and more partners on both sides, as well as to aim at expanding this practice into technology-intensive spheres in order to make the region more attractive for investment.



## STATE INDUSTRIAL POLICY OF UKRAINE

Yurii Velychko

The Government of Ukraine declares the direction of the state industrial policy for the preservation, support and development of domestic commodity producers. Priority, of course, is given to those enterprises and industries that by their activities provide the main vital interests of the state and society. These items include the defensive industry, the economic sector that provides at least relative financial stability, and sectors that are oriented towards supporting the increase of social standards.

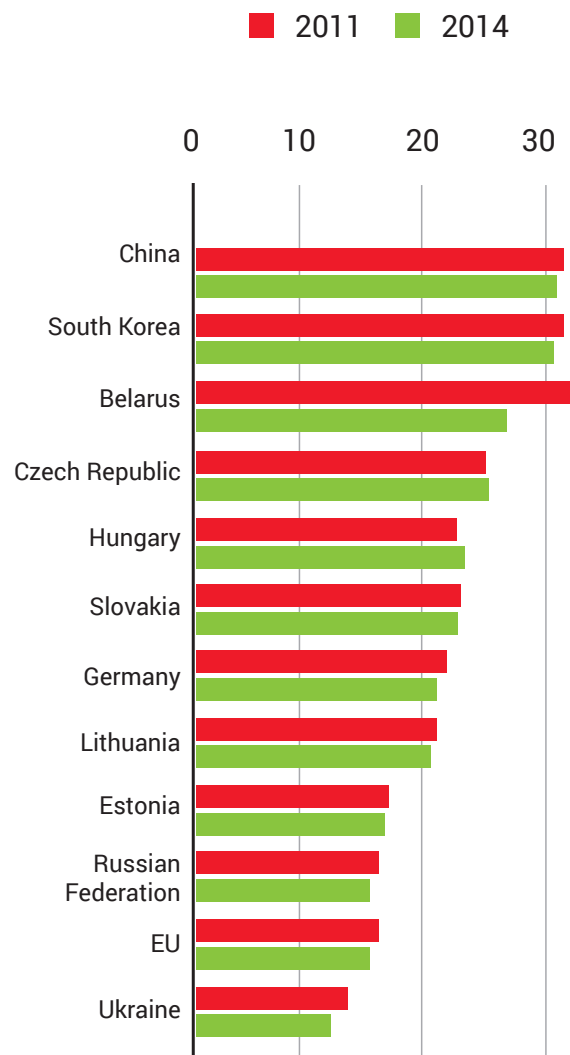
At the same time, the government declares its responsibility for the crisis in industry and reports about work on complex and structural changes. These innovations should allow full use of scientific and technical potential and create a favorable climate for foreign investment, which in turn will contribute to the gradual reindustrialization of the country. The consequence of this process should be an intensive development of technology, which allows more rational use of public resources and, of course, the production of industrial goods that can compete on an equal footing with the best foreign counterparts.

However, in Ukraine the issues of industrial development have never had a sufficient level of public discussion. Even the phrase "industrial policy", among the population, was perceived very cautiously, because it was always associated with top politicians, oligarchs and pro-government lobbyists. Hence, the population always had a distrust of people and enterprises engaged in industry.

This is probably due to a strong influence on the minds of people during the times of the Soviet Union. During this period, the state had absolute control over the industry, but

even its intensive development did not affect the improvement of the living standard of ordinary citizens. Therefore, people have in mind the memory of the characteristics for the total control of that time over all spheres of the economy and the absolute power of one layer of society over others.

**Fig. 1 The share of processing industry in GDP in the world**



Source: gazeta.dt.ua

However, the years go by, and the majority of the population gradually realize that for Ukraine, as for the state, which sets a goal to become an economic leader in its region, a powerful industry is needed. Unfortunately, for the largest country in Europe, to get a stable and prosperous economy that does not have a strong locomotive behind the back in the form of industry, is simply impossible.

This is confirmed by the experience of the nearest industrialized countries. Without a well thought out industrial policy, now prosperous Poland would never have got the status of the “Eastern tiger”. Belarus would not have such economic stability without 27% of GDP from the processing industry, which is much more than in Ukraine. In Slovakia, such indicators generally crossed the threshold of 30%, which allows them to maintain stable trade relations with the richest countries of Europe<sup>2</sup>

If we look in more details at the issue of GDP, then one of the most significant foundations of its growth has always been a clever industrial policy of the state.

The formula for calculating GDP by expenditure is as follows:

$GDP = I \text{ (investment)} + (C) \text{ consumption} + (NE) \text{ net exports} + (GE) \text{ government expenditure.}$

If the industrial policy of the country is able to support all these components, then we receive a regular attraction of investments, both domestic and foreign.

Nevertheless, in order to get such a result, any country needs to prepare an appropriate industrial infrastructure that will allow investors to create production without excessive costs. Such investments by the state are necessary, because they make

it possible to become an attractive place for investment. This creates new jobs and stimulates higher wages because of the purchasing power of citizens. The totality of these processes increases the level of consumption of goods and allows developing the economy.

In addition, an important consequence of this industrial policy is the reduction in the percentage of people who receive certain benefits and subsidies. Under such conditions, they will have the opportunity to ensure their worthy living and cease to be a burden to the economy of their country. Moreover, without this factor, sustainable economic development remains only a utopian dream.

The current situation in Ukraine does not look too catastrophic, but there are not so many reasons for joy. All the decades, on which the formation and basic development of Ukrainian industrial policy had to take place, we were only part of the Union of Soviet Socialist Republics.

Consequently, today in 2017, we can de facto state an almost complete absence of closed technological processes that would not need help from abroad. Therefore, now it is very difficult to hope for positive changes, in conditions of almost complete absence of the formed structure of industrial productions having a complete technological cycle.

Namely, they could significantly improve and rationalize the use of the state's natural resources. The absence of such a single complex led to a huge disparity between different industries. In addition, this, in turn, makes us dependent on foreign raw materials, technologies and equipment, which we are forced to buy at high prices on the world market.

However, even in the current situation, we have reasons for optimism. For example, in metallurgy, which still remains the main industrial sector of Ukraine and gives more

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2. <http://interfax.com.ua/news/interview/253639.html>



than 30% of foreign exchange earnings, last year brought not a significant, but still growth. According to the World Steel Association, we managed to enter to the top 10 countries in terms of steel production in 2016.<sup>3</sup> In general, Ukrainian producers managed to overcome the 22 million tons, which is 5% more than in 2015.

In addition, due to the deterioration of relations with the Russian Federation, which has always supplied more than 2/3 of the produced products, domestic producers are forced to seek new markets. This facilitates greater integration into world trade markets and the introduction of new, higher quality standards.

For example, JSC “Zaporizhtransformator”, after a long break, again has won a tender for the supply of five reactors for power plants in Malaysia. Moreover, this is not the only time when domestic commodity producers start to discover new markets for themselves and return to the once lost. Only during the last year Ukrainian industrial enterprises won major tenders in China, India, South Africa, Japan, Korea and in a few European countries.

However, our industry is still under threat and one of the most terrible factors for it remains the massive outflow of the intellectual elite. The big mistake of the current political course is not just the lack of attempts to attract new qualified workers, but not even the creation of conditions to deter those who are already here.

The biggest treasure of our country is not land, forest or other natural resources, but educated and skillful workers who either have already left or are standing in line for emigration. Abroad, they often receive interest-free loans (or loans within 1-3%), tax

benefits, and their children are arranged in kindergartens and schools without bribes. For most of them, it is enough to make a choice in favor of foreign companies.

In addition, given the continuation of this trend, it remains impossible to preserve and develop the scientific and technological potential and modernize industry, with its focus on the social needs of the population.

In reality, the topic of the shock therapy is increasingly being raised through rapid reforms of liberalization of economy and less attention is paid to the need for industrial development. This is perhaps the biggest threat to remain us as a country with a colonial economy. What is meant by this term?

The fact that Ukraine now exports products with extremely low benefit. For example, in the presence of significant forest resources, foreign partners usually sell timbers, not finished furniture. In metallurgy, it is metal, and not the products of its processing, the margin from the sale of which would be several times higher.

There are no real prospects for the development of the economy, which is based mainly on the export of grain, metal, timbers and the reverse import of ready-made goods. To qualitatively change our industrial policy, it is very important to produce products that will be competitive in the world market and will be able to occupy new markets with reasonable benefit. For this purpose, it is very important to have state protection of all industrial complexes, especially those that are of strategic importance.

The consequence of the absence of these factors and the insufficient rational use of resources (both raw and human) is the fact that we are consistently entering the top of the states in terms of the number of emigrants and the outflow of capital.

3. <http://uaprom.info/news/156872-ukraina-2016-godu-ostalas-top-10-rejtinga-mirovyh-proizvoditelej-stali.html>

Especially with regard to the outflow of capital, even for the years of peace, in the period 2004-2013, about 116 billion USD were exported from our country abroad.<sup>4</sup> This amount is especially impressive when the highest-ranking officials proudly report that the IMF and other donors have provided us with loans of as much as 1, 2 or 3 billion USD, while also ignoring the huge outflow of funds, which is several times higher than the receipts.

It is difficult to choose the tasks that would be top priority, and which could be postponed for later. Now it is very important to overcome the status of “laggards” and implement innovative solutions that will solve not only short-term current tasks, but also be able to cope with those that are strategic long-term.

One of the levers that can help in solving such issues is to attract funds to the investment process that are on the hands of the people. To do this it is very important to restore confidence in the banking sector, which has suffered greatly in recent years, due to the revaluation of the national currency, the withdrawal from the market of well-known banks with a worldwide name and the privatization of commercial banks.

One of the biggest problems for the whole industry of Ukraine is not just the threat of de-industrialization, but also its gradual increase. For any state, this is a harbinger of poverty, job losses and a reduction in investment. Therefore, only under condition of qualitative state regulation of industry, subsidies for investors and creation of

appropriate infrastructure, at the expense of the state, we can hope for a way out of the crisis in which Ukrainian industry has been in recent years, and consequently the banking sphere and the economy as a whole.

In such a way, we can state that Ukraine, at a certain period of its history, did not go the best way of development and instead of becoming a producer, entrepreneur, and exporter of a finished product, we focused on selling raw materials and waiting for loans from the IMF.

This did not allow the economy to develop quickly enough and cause to the loss of jobs and a large wave of emigration. In the end, we came to very disappointing GDP figures, according to this indicator, our country lags five times from Europe and seven times from the USA. World analysts predict a stable GDP growth of only 3.5% per year for the next 20 years.<sup>5</sup> This indicator is quite low and most likely will not help to stop the emigration crisis.

Therefore, for stable economic growth, we should focus on those factors that will allow us to revive industry. In the short term, this is to ensure tax preferences for producers, especially those that are export-oriented. In the long term, this is the creation of an appropriate infrastructure by the state for the development of industry. In general, this will allow us to hope for an increase in the number of jobs and an increase in exports, not raw materials, but ready-made goods, which will have significantly higher benefit.

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4. <https://www.pravda.com.ua/news/2015/12/10/7092013/>

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5. <https://www.epravda.com.ua/news/2015/08/17/555462/>

## Bibliography:

**Adarov Havlik**, Benefits and Costs of DCFTA, Joint Working Paper, December 2016.

**Analysis commissioned by the EC to research institutions in the form of "Trade Sustainability Impact Assessments"** (TSIA) reports by Ecorys and CASE (2007 and 2012, respectively).

**Bekauri, N.** (2016, 10 25). [www.resonancedaily.com](http://www.resonancedaily.com). Retrieved 04 06, 2017, from Resonancedaily : [http://www.resonancedaily.com/index.php?id\\_rub=5&id\\_artc=31150](http://www.resonancedaily.com/index.php?id_rub=5&id_artc=31150).

**Brynjolfsson, E. / McAfee, A.** (2011): Race Against The Machine: How the Digital Revolution is Accelerating Innovation, Driving Productivity, and Irreversibly Transforming Employment and the Economy. Lexington, Massachusetts: Digital Frontier Press.

**Chang, H.-J.** (2008). Bad Samaritans: The Myth of Free Trade and The Secret History of Capitalism. New York: Bloomsbury.

**Chang, H.-J.** (2014). Economics: The User's Guide. New York: Bloomsbury Press.

**Chang, H.-J., & Grabel, I.** (2004). Reclaiming Development: An Alternative Economic Policy Manual. Zed Books.

**Chirila**, A focus on Moldova, published in: Eastern Partnership Revisited. Associated Countries in Focus, Warsaw, 2015, p. 65 (<http://library.fes.de/pdf-files/bueros/warschau/12002.pdf>, last access on 16 March 2017).

**DAI Europe** (2014), 'EU Support to the Private Sector in the context of Association Agreements including.

**DCFTAs** (Georgia, Moldova and Ukraine)', Project No. 2014/ 345014, <http://www.east-invest.eu/uploads/Modules/Documents/final-report-dcfta.pdf> (last access on 16 March 2017).

**EU – Republic of Moldova Deep and Comprehensive Free-Trade Area**, Reading guide, p. 4 ([http://trade.ec.europa.eu/doclib/docs/2014/february/tradoc\\_152194.pdf](http://trade.ec.europa.eu/doclib/docs/2014/february/tradoc_152194.pdf), last access on 16 March 2017).

**European Business Association (EBA)**, Recommendations of the Business Community on the Elimination of Constraints, Chisinau, 2015, p. 22 ([http://eba.md/app/webroot/uploaded/Recomandarile\\_En\\_print.pdf](http://eba.md/app/webroot/uploaded/Recomandarile_En_print.pdf), last access on 16 March 2017).

**European Commission / Eurostat**. See: <http://ec.europa.eu/eurostat/> (16.03.2017).

**European External Action Services** (EEAS); Adarov/Havlik, Benefits and Costs of DCFTA, Joint Working Paper, December 2016, p. 38.

**Expertenkommission Stärkung von Investitionen in Deutschland** (2015): Bericht der Expertenkommission im Auftrag des Bundesministers für Wirtschaft und Energie. See: [https://www.diw.de/documents/dokumentenarchiv/17/diw\\_01.c.500738.de/20150417\\_auszug\\_bericht\\_expertenkommission.pdf](https://www.diw.de/documents/dokumentenarchiv/17/diw_01.c.500738.de/20150417_auszug_bericht_expertenkommission.pdf) (16.03.2017).

**Federal Ministry for Economic Affairs and Energy** (2015): Industrie 4.0 und digitale Wirtschaft - Impulse für Wachstum, Beschäftigung und Innovation. See: [http://www.bmwi.de/Redaktion/DE/Publikationen/Industrie/industrie-4-0-und-digitale-wirtschaft.pdf?\\_\\_blob=publicationFile&v=3](http://www.bmwi.de/Redaktion/DE/Publikationen/Industrie/industrie-4-0-und-digitale-wirtschaft.pdf?__blob=publicationFile&v=3) (09.03.2017).

**Federal Ministry of Labor and Social Affairs** (2016): 5. Armuts- und Reichtumsbericht der Bundesregierung. See: <http://www.armuts-und-reichtumsbericht.de/DE/Startseite/start.html> (16.03.2017).

**Federal Ministry of Labor and Social Affairs** (2017): Weißbuch Arbeiten 4.0 (Diskussionsentwurf). See: [http://www.bmas.de/SharedDocs/Downloads/DE/PDF-Publikationen/a883-weissbuch.pdf?\\_\\_blob=publicationFile&v=7](http://www.bmas.de/SharedDocs/Downloads/DE/PDF-Publikationen/a883-weissbuch.pdf?__blob=publicationFile&v=7) (09.03.2017).

**Federal Office of Statistics** 2017: Außenhandel. Zusammenfassende Übersichten für den Außenhandel. See: Frey, C. B. et al. (2016): Technology at Work v2.0 - The Future Is Not What It Used to Be. Citi GPS: Global Perspectives and Solutions. January 2016. See: [http://www.oxfordmartin.ox.ac.uk/downloads/reports/Citi\\_GPS\\_Technology\\_Work\\_2.pdf](http://www.oxfordmartin.ox.ac.uk/downloads/reports/Citi_GPS_Technology_Work_2.pdf) (10.03.2017).

**GEOSTAT.** (2017). External Trade of Georgia in January-February 2017. Tbilisi: National Statistics office of Georgia.

**GEOSTAT.** (2017, April 04). Retrieved April 04, 2017, from [www.geostat.ge](http://www.geostat.ge): [http://www.geostat.ge/index.php?action=page&p\\_id=152&lang=eng](http://www.geostat.ge/index.php?action=page&p_id=152&lang=eng).

**GFSIS.** (2016). Structure of Unemployment and Structural Unemployment in Georgia. Tbilisi : Georgian Foundation for Strategic and International Studies (Rondeli Foundation).

**Gordon, R. J.** (2016): The Rise and Fall of American Growth. The U.S. Standard of Living since the Civil War. Princeton: Princeton university press.

**IMF Data.** See: <http://www.imf.org/en/Data> (16.03.2017).

**International Federation of Robotics** (2015): World Robotics 2015 Industrial Robots. See. [www.ifr.org](http://www.ifr.org) (09.03.2017).

**Jonathan, O., Prakash, L., & David, F.** (2016, June). Neoliberalism: Oversold? Washington, USA.

**Jones, C.** (2017): Concern spreads over Germany's trade surplus, in: Financial Times from 08 March 2017, p. 6.

**Keynes, J.M.** (1930): Economic possibilities for our grandchildren. See: <http://www.econ.yale.edu/smith/econ116a/keynes1.pdf> (09.03.2017).

**Klein, N.** (2014). This Changes Everything: Capitalism vs. the Climate. United States: Simon & Schuster.

**Maddison, A.** (2001): The world economy - A millennial perspective. Development centre of the OECD. See: <http://theunbrokenwindow.com/Development/MADDISON%20The%20World%20Economy--A%20Millennial.pdf> (09.03.2017).

**Mazzucato, M.** (2013). The Entrepreneurial State: debunking public vs. private sector myths. Anthem .

**National Bank of Georgia.** (2015). Balance of Payments of Georgia. Tbilisi: National Bank of Georgia.

**Nohlen, D. / Grotz, F.** (2015): Kleines Lexikon der Politik. Bonn: Bundeszentrale für.

**Piketty, T. / Zucman, G.** (2013): Capital is back - Wealth-income ratios in rich countries 1700-2010. Paris School of Economics. See: <http://piketty.pse.ens.fr/files/PikettyZucman2013WP.pdf> (09.03.2017).

**Reich, R.** (2015). Saving Capitalism: For the Many, Not the Few. Knopf Doubleday Publishing Group.

**Reinert Erik S.** Increasing poverty in a globalized world: Marshall plans and Morgenthau plans as mechanisms of polarization of world incomes; The terrible simplifiers: common origins of financial crisis and persistent poverty in economic theory and the new "1848 Moment".

**Reinert, E.** (2008). How Rich Countries Got Rich . . . and Why Poor Countries Stay Poo. PublicAffairs.

**Rodrik, D.** (2004). INDUSTRIAL POLICY FOR THE TWENTY-FIRST CENTURY. Cambridge: John F. Kennedy School of Government.

**Schmidt, M. G.** (2016): Das politische System Deutschlands - Institutionen, Willensbildung und Politikfelder. 3rd Edition. Munich: C.H. Beck.

**Schwab, K.** (2016): The Fourth Industrial Revolution. Geneva: World Economic Forum.

**Stiglitz, J.** (2012): The Price of Inequality - How Today's Divided Society Endangers Our Future. New York: W. W. Norton & Company.

**Summers, L.** (2014): U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound. Business Economics, Vol. 49, No. 2, pp. 65-73. See: <http://larrysummers.com/wp-content/uploads/2014/06/NABE-speech-Lawrence-H.-Summers1.pdf> (09.03.2017).

**The World Bank.** (2017, April 04). [www.data.worldbank.org/country/georgia](http://www.data.worldbank.org/country/georgia). Retrieved April 04, 2017, from The World Bank in Georgia : <http://data.worldbank.org/country/georgia>.

**World Bank** (2016): World Development Report 2016 - Digital Dividends. World Bank Group. See: <http://documents.worldbank.org/curated/en/896971468194972881/pdf/102725-PUB-Replacement-PUBLIC.pdf> (09.03.2017).

**Адаров/Гавлик**, совместный рабочий отчет Benefits and Costs of DCFTA, декабрь 2016 года.

**Анализ сделан исследовательскими учреждениями по заказу ЕК в форме отчетов "Trade Sustainability Impact Assessments" (TSIA)**, исполнители: Ecorys и CASE (2007 и 2012, соответственно).

**Глубокая и всеобъемлющая зона свободной торговли ЕС – Республика Молдова**, разъяснение, ст. 4 ([http://trade.ec.europa.eu/doclib/docs/2014/february/tradoc\\_152194.pdf](http://trade.ec.europa.eu/doclib/docs/2014/february/tradoc_152194.pdf), последний доступ 16 марта 2017 года).

**Европейская бизнес ассоциация (EBA)**, Recommendations of the Business Community on the Elimination of Constraints, Кишинев, 2015 год, ст. 22 ([http://eba.md/app/webroot/uploaded/Recomandarile\\_En\\_print.pdf](http://eba.md/app/webroot/uploaded/Recomandarile_En_print.pdf), последний доступ 16 марта 2017 года).

**Европейская служба внешних дел (EEAS)**; Адаров/Гавлик, совместный рабочий отчет Benefits and Costs of DCFTA, декабрь 2016 года, ст. 38.

**Национальное статистическое бюро Республики Молдова.**

**Чирла**, A focus on Moldova, опубликовано в Eastern Partnership Revisited. Associated Countries in Focus, Варшава, 2015 год, ст. 65 (<http://library.fes.de/pdf-files/bueros/warschau/12002.pdf>, последний доступ 16 марта 2017 года).

**Эрик Райнерт**, Рост бедности в глобализованном мире: планы Маршалла и планы Моргентау как механизмы поляризации мировых доходов; Ужасные упростили: общие истоки финансового кризиса и постоянной бедности в экономической теории и новом «Моменте 1848».



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