Industrial Policy Strategic Priorities and Peculiarities in the Republic of Armenia

Aghavni Grigor Hakobyan

Abstract—Global financial crisis became an economic development threat not only in highly-developed countries, but in newly-independent states, which are not ready to overcome the subsequences of the crisis and haven’t got appropriate tools for economy’s recovery. Integration and collaboration promote spread of the crisis among countries, which sometimes doubles economic losses and increases the threat of financial crisis import. Armenia is one of the post-soviet states which seriously suffered from the global financial crisis – GDP decline was about 14,4%.

Last transformations and key economic indices dynamics prove the necessity of reconsideration of economic policy priorities, exploration of potential fields of growth, improvement of socio-economic situation in the country. Economic decline in the Republic was partly conditioned by the global financial crisis, but there are some internal reasons as well: dependence from foreign partners’ development, economic policy priorities, underestimation of industrial policy and its potential in economic growth formation, lack of anti-crisis management effective tools and mechanisms, etc.

Keywords— industrial policy, economic growth, innovative economy, export-orientation strategy.

I. INTRODUCTION

As a newly independent state the Republic of Armenia faced a number of issues which were new to a country with a planned-economy background. During the last two decades Armenia has been implementing economic reforms aimed at market economy formation: national currency issuance, trade and prices’ liberalization, state-owned property privatization, tax, customs, banking and antitrust legislation adoption. The country initiated the reforms in unfavorable conditions: newborn independence, Nagorno-Karabakh conflict, destructive earthquake, neighboring countries’ blockade, indefinite vision of country’s future development, lack of professionals with market-oriented economy working experience. During 1990s Armenia has undergone a profound transformation by adopting new legislation, creating new regulatory bodies, refining country’s development vision, trying to create market-oriented environment. But what is surprising that the main locomotives of national economy and economic policy have been underestimated, as if industrial policy has nothing to do with ensuring economic growth, sovereignty of national economy, attracting foreign investments, decreasing unemployment rate, stimulating economic activity. Though industrial policy is crucially important for mentioned reasons, as well as for improvement of import/export ratio and creating conditions for export-based industrial policy, “The Strategy of Export-Led Industrial Policy” was approved by Armenian Government only in 2011 [1]. It’s obvious that the lack of industrial development strategy influenced economic development priorities and mislead economic policy for more than two decades. The necessity of industrial strategic development vision seems to be indisputable as it creates institutional framework and identifies the goals, measures, executives and outcomes of industrial policy, creating preconditions for industrial output growth.

II. INDUSTRIAL PRODUCTION OVERVIEW

Until independence Armenian economy was largely based on industry—chemicals, electronic products, machinery, processed food, synthetic rubber and textiles. But the situation has rapidly changed in early 1990s and the country lost its leading positions in industrial booming. Nowadays the leading industries in Armenia are mechanical engineering and metal working, chemical and petrochemical, nonferrous metallurgy, manufacture of building materials, foodstuffs and light industries. Armenian industrial sector was estimating around 14.9% of GDP in 2010 and 7.3% of total employment (2488 organizations). In 2011 industrial sector share in GDP was about 16,2%. In 2011 by the index of industrial production growth rate Armenia was the 5th in the world with a result of 14,1%, which is the best index among CIS countries. From post-soviet countries better result was only in Estonia (18%), Armenia’s neighboring countries – Georgia and Azerbaijan have indices of 11.8% and -5%, other post-soviet countries respectively Belarus – 10,5%, Kyrgyzstan – 10%, Latvia – 9%, Tajikistan – 7,5%, Lithuania – 7,5%, Turkmenistan – 7,3%, Moldova – 7,1%, Russian Federation – 4,7%, Kazakhstan – 3,4%. In 2012 industrial sector share in GDP was 17,2%, though in 2008 pre-crisis year the index was only 13,3%, which shows the positive dynamics and encouraging trends.

In 2010 industrial products registered an increase of 9.7% compared to 2009. At the same period 33.8% of issued products has been exported, out of which 21% to CIS countries and 79% to other countries (including EU member-states). In 2011 the country’s industrial output amounted to AMD 990 billion. In 2012 Armenia’s industrial output for the
first time since country gained independence exceeded 1 trillion drams.

According to National Statistical Service of the Republic of Armenia, manufacturing in Armenia in 2012 has grown by 5.9%. Total industrial output in Jan-Dec 2012 is estimated in AMD 1,120 475 million, 65% of which belongs to manufacturing, 18.8% to electricity, gas, steam and air conditioning supply, 15% to mining and 1.2% to water supply, sewerage, waste management and remediation [2].

TABLE I
INDUSTRIAL OUTPUT CLASSIFICATION BY ECONOMIC ACTIVITY /%/

<table>
<thead>
<tr>
<th>Economic activity, %</th>
<th>Jan-Dec2010</th>
<th>Jan-Dec2011</th>
<th>Jan-Dec2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Mining</td>
<td>17.7</td>
<td>13.9</td>
<td>15</td>
</tr>
<tr>
<td>2 Manufacturing</td>
<td>66.1</td>
<td>65.3</td>
<td>65</td>
</tr>
<tr>
<td>3 Electricity, gas, steam and air conditioning supply</td>
<td>14.1</td>
<td>19.3</td>
<td>18.8</td>
</tr>
<tr>
<td>4 Water supply, sewerage, waste management and remediation</td>
<td>2.1</td>
<td>1.5</td>
<td>1.2</td>
</tr>
</tbody>
</table>

From the resulted table it is easy to make a conclusion that the country has some decline in Mining and Manufacturing, but growth in Electricity, gas, steam and air conditioning supply by 4.3%.

TABLE II
MANUFACTURING CLASSIFICATION IN 2010-2012

<table>
<thead>
<tr>
<th>Manufacturing classification, %</th>
<th>Jan-Dec2010</th>
<th>Jan-Dec2011</th>
<th>Jan-Dec2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Manufacture of food products</td>
<td>34.6</td>
<td>36.7</td>
<td>35.9</td>
</tr>
<tr>
<td>2 Manufacture of beverages</td>
<td>12.8</td>
<td>15.8</td>
<td>13.9</td>
</tr>
<tr>
<td>3 Manufacture of tobacco products</td>
<td>3.6</td>
<td>4.2</td>
<td>7.7</td>
</tr>
<tr>
<td>4 Manufacture of textiles</td>
<td>0.6</td>
<td>0.9</td>
<td>0.7</td>
</tr>
<tr>
<td>5 Printing and reproduction of recorded media</td>
<td>1.7</td>
<td>3.0</td>
<td>2.3</td>
</tr>
<tr>
<td>6 Manufacture of chemicals and chemical products</td>
<td>1.6</td>
<td>0.9</td>
<td>0.8</td>
</tr>
<tr>
<td>7 Manufacture of other non-metallic mineral products</td>
<td>9.2</td>
<td>4.9</td>
<td>5.7</td>
</tr>
<tr>
<td>8 Manufacture of basic metals</td>
<td>24.8</td>
<td>20.1</td>
<td>18.4</td>
</tr>
<tr>
<td>9 Manufacture of fabricated metal products</td>
<td>1.2</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>10 Manufacture of electrical equipment</td>
<td>0.8</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>11 Manufacture of jewelry production</td>
<td>1.8</td>
<td>1.7</td>
<td>2.5</td>
</tr>
<tr>
<td>12 Other manufacturing</td>
<td>7.3</td>
<td>9.3</td>
<td>9.8</td>
</tr>
</tbody>
</table>

As we can conclude comparing data for 2010, 2011 and 2012 Armenia has growth in manufacture of food products (1.3%), beverages (1.1%), tobacco products (4.1%), jewelry production (0.5%), printing and reproduction of recorded media (0.6%), at the same time there was essential decline in manufacture of basic metals (6.4%) and other non-metallic mineral products (3.5%). One of main branches of Armenia’s economy is mining, which has great export potential and growth opportunities: Armenia was ranked seventh in the world in mine output in 2010 [3]. Armenia is one of the leading states with the proven reserves of molybdenum: it owns 5.1% of overall and 7.6% of proven world reserves of the molybdenum. There are also reserves of copper, zinc, iron, lead, gold, silver, rhenium, cadmium, tellurium, etc. The average annual copper production in Armenia is about 23,000 tons of metal. Copper concentrate was the leading position in the exports structure of Armenia in 2010 (20.7% of total exports in 2010). In 2011 export of copper and copper concentrate was about 118 thousand tons in comparison to 116 thousand tons exported in 2010. The country also produced aluminum foil from aluminum imported from Russia, ferromolybdenum, molybdenum metal, and rhenium salt (potassium perrhenate) from local ores; it also had developed a diamond-cutting industry based on imported diamond. In 2010, the country’s exports, which were valued at USD 1.04 billion, were much lower than the country’s imports of USD 3.75 billion. Mineral commodities played an important part in the country’s exports. The main export commodities were copper, diamond, energy, foodstuffs, nonferrous metals, and other mineral products. Overall, nonprecious metals and products made out of them accounted for USD 332 million, or 30% of the country’s export revenue; mineral products accounted for USD 307 million, or 27.7%; and precious stones and metals contributed USD 134 million, or 12.1% [4]. Its worthy mentioning that mining contributed to attraction of foreign investments and economic growth especially in pre-crisis period, which was linked with the growth of commodity prices in the international market and was a crucial contribution to export growth. But mining industry was one of the sectors of Armenian economy hit by the global financial crisis: post-crisis decline in metal prices caused contraction of mining industry by 10% [5]. The crisis cut the demand for Armenia’s exports – the biggest share of which is raw-materials almost in half.
From the resulted table we can make a conclusion that in 2012 there was a decline in mining of metal ores and the share of other mining and quarrying has increased, though it's obvious, that the vast majority of mined metal ores has been exported and hasn't been manufactured in Armenia, which will promote economic activity, create new jobs, decrease unemployment rate and stipulate the export of finished goods, but not raw materials, which is one of the main obstacles mining sector development in the Republic. Foreign investors are more interested in exporting metal ores, copper concentrate than finished goods, which doesn't seem to meet country's interests, preventing future development of manufacturing field. Foreign investors continue to control a crucial share of Armenia’s mineral industry: Armenal a subsidiary of Russian company Rusal, Cronimet Mining AG of Germany is the main shareholder of the Zangezur copper-molybdenum complex and the Yerevan Pure Iron Works, GeoProMining Ltd. of Russia, which was a privately owned mineral resource company established in 2001, had assets in Armenia that included the Agarak copper-molybdenum mining and processing complex, the Ararat gold recovery plant, and the Sotk gold mine. GeoProMining produced gold in the form of dore and antimony, copper, and molybdenum concentrates. The electricity distribution system was privatized in 2002 and purchased by Russia’s United Energy System (RAO-UES) in 2005 [3].

Armenia is divided into five economic regions which differ in natural and economic-geographical conditions and industrial specialization. According to National Statistical Service of the Republic of Armenia there is disproportionate spacial development: the capital city of Armenia (Yerevan) continues to be the leader in industrial output production, in 2010 its share in industrial output was about 43%, in 2011 – 42,4% and in 2012 – 40,2% [6]. Three regions of Armenia (Yerevan, Syunik and Kotayk) together ensure 71,6%, 70,9% and 70,8% of industrial output respectively in 2010, 2011 and 2012.

III. INDUSTRIAL POLICY STRATEGIC PRIORITIES

The Strategy of Export-Led Industrial Policy of Armenia identifies 11 sectors that have significant export potential:

- Textiles
- Wine-making
- Brandy-making
- Mineral water bottling and juice bottling
- Canneries

The choice of above-mentioned sectors was conditioned by Armenia’s competitive advantages and sectors’ export potential. Four sector strategies have already been developed: Wine sector strategy, Brandy manufacturing sector strategy, Precession engineering sector strategy, Pharmaceuticals and bio-technologies sector strategy.

Pharmaceutical industry is one the few sectors in Armenia’s exports that grew during the years of global financial crisis. Pharmaceuticals and biotechnologies sector includes the production of pharmaceutical drugs and their components, food additives, healing herbs and pharmaceutical drugs produced from the latter, as well as the research and expert organizations specialized in the sphere. It’s one of the most dynamically growing sectors in Armenia (12.5% average annual growth over 2003-2010), export in 2010 was USD 5 mln, export dynamics 2003-2007 was 28.9% and 17.7% in 2007-2010 [5]. The field is described with high export orientation – 57,3%. Key export markets are Georgia with the share of 38%, Russia – 18%, Uzbekistan – 13%, Belarus – 6%, Ukraine – 5%. According to Pharmaceuticals and biotechnologies Sector Strategy if in 2010 production was about USD 8 mln, the forecast for 2015 and 2020 respectively are USD 30-35 mln and USD 95-135 mln, the same is with exports: if in 2010 it was about USD 5 mln, in 2015 and 2020 the figures will grow to USD 20-25 mln and USD 75-115 mln respectively. Production and exports growth will have impact on employment in the field, if in 2010 it was about 550, in 2015 and 2020 it will be 800-950 and 1600-1800.

The development of precision engineering is highly correlated with the performance of engineering services sector. Production and services are strongly interconnected in engineering sector: manufacturers expand into the services’ sector alongside to production, while service providers sometimes go further in the value chain and produce engineering goods. The sector of engineering services (research and development, system engineering, services, etc.) is developing at a dynamic pace in Armenia. The entry of international organizations such as National Instruments, ST Engineering, Synopsys, Cambrić, Siemens in Armenian market is the prove of promising development tendencies and trends. Precession Engineering 2012-2020 Sector Strategy includes optical, electronic, mechanical and machinery production, characterized by high-level of precession and/or knowledge content. In 2010 gross sales was USD 35 mln,
annual export volume was about USD 17 mln, export growth in 2003-2008 was 10%. The sector is characterized by mostly CIS market-oriented instrument making and tool making, a number of R&D and small scale production units, financed by international organizations, military production, servicing mostly Armenian and Russian markets, machine-tool production, servicing mostly domestic market, limited internationally competitive products (e.g. optical and laser technologies). According to Precession Engineering Sector Strategy, production and export in the field will grow in unprecedented way, if in 2010 production was estimated USD 35 mln, in 2015 it will double and comprise USD 65-80 mln and will triple in 2020 and be USD 150-220 mln. The same with export, if in 2010 it was only USD 17 mln, in 2020 it will respectively be USD 115-185 mln. In 2010 the number of employees was 4000 and the figure will grow in 2015 to 4500-5600 and 6000-7000 in 2020.

Large investments, especially in procurement of new, advanced technology and improvement of production processes have been made in the wine sector for the past 5-6 years. There have also been made foreign investments to establish vineyards and wine production in Armenia, most of which have export purpose. As of 2011 about 20% of wine produced in Armenia is exported which has value of USD 5.2 mln. Since 2004 wine export has been growing by an average of 35% annually. Two main export markets are Russia and the USA: in 2010 76% was exported to Russia, 7% to the USA, 6% to European Union and 11% to other countries. If in 2010 the production was about USD 11.8 mln, in 2015 according to the forecast will be USD 27.1 mln and USD 55.3 mln in 2020, export will also grow and reach the figures of USD 10.7 mln in 2015 and USD 29.5 mln in 2020.

Armenia counts for 2.8% of global brandy exports (by 2007-2010 cumulative volume) and is the 6th biggest exporter of brandy in the world. This is the only sector, where Armenia has a considerable presence in the world market. Brandy Manufacturing 2012-2020 Sector Strategy sets the priorities development for coming years. In 2010 sales was USD 107.3 mln, export was USD 95.2 mln, share of Armenia in world export was 2.8%. Share of brandy export in total Armenian exports is 9.4%, the targeted export markets, however, are limited and not diversified, main export market is Russia – 80%, share of Armenia in brandy import is 23.5%. Armenia has some advantages in the field: solid experience in brandy manufacturing, accumulated knowledge and skills in the industry, internationally competitive production and laboratory equipment in a small number of advanced companies, but at the same time there are some obstacles, as: low-level of quality human capital availability that is a central issue, given the high importance of human resources in the industry, discrepancy with minimal standards in production processes in a large number of small companies.

The main responsibility for successful implementation of The Strategy of Export-Led Industrial Policy is put on the Ministry of Economy, besides, under the Prime Minister’s decree N 178 - A of February 29, 2012 Industrial Council was established to ensure the coordination of Republic of Armenia’s export-oriented industrial policy and strategy implementation, review and approve progress. But it won’t be justified to put the whole responsibility only on the above-mentioned bodies, because industrial policy is a part of macroeconomic policy, which is comprised of monetary, tax, antitrust, foreign trade, social, agricultural and other policies, which precondition and predetermine the successful performance of the Strategy. As main goals of industrial policy are import substitution and growth of export potential, external variables and foreign markets current trends also influence on its outcomes. Export orientation is especially important for landlocked countries like Armenia, which have small domestic market with very small consumption, limited natural resources and closed borders. Country’s export strategy should be aimed not only at increasing export and import substitution, but also reconsidering the structure of import and export for exploring national producer’s competitive advantages. Armenia’s external trade remains very low and little diversified (main exports are base metals and precious stones) in spite of Armenia being a WTO member since 2003 and benefiting from the EU’s Generalised Scheme of Preferences. EU-Armenia trade has been growing over the last five years, but similarly to Armenia’s trade with the world in general, it is still very low and non-diversified.

IV. CONCLUSION

Armenia’s industrial policy development is crucially important for import substitution and economic security. Import-dependence is a serious obstacle for country’s development, it evidences the impossibility to set independent economic policy priorities, low productivity of national producers, low competitive advantages of local production in international market. From the other hand it shows the opportunities of national production growth, because there is an aggregate demand which is mainly satisfied due to import, though can be satisfied by national producers. Armenia has chosen export-oriented industrial policy, but there are also import-substitution and innovative models of industrial policy, tools of which should be used during industrial policy implementation. Innovative industrial policy seems to be more competitive in future perspective, as it contributes to the maintenance of scientific and technological potential of the country and consequently its competitiveness in the global market. The disadvantages of innovative model can be considered as the need of spending huge funds for the development of innovation infrastructure and upgrade production facilities industry, the need for a large number of highly qualified staff and the problem of effective training. Successful innovative economic development model is acceptable for Armenia, taking into consideration small territory of the Republic, mobility to regulate and control markets, information technologies recent development trends. At the same time, import substitution industrial policy has its own advantages as ensures stable employment, satisfaction of
domestic demand, better usage of resources, budget revenues growth, etc. That’s why there should be a synthesis of the above-mentioned models based on innovation development, which will give Armenian economy the necessary impetus to the industrial growth.

Industrial policy should focus on the strategic objectives and priorities of exceptionally innovative orientation, based primarily on intellectual resources, provide state support for training and education in general.

Industrial policy is the foundation of economic policy which should be linked, first of all, to conduct innovative, investment and restructuring of industrial production. Thus, industrial policy should solve several problems: the problem of modernization of the economy by addressing its most pressing problems and stimulate economic growth, as well as the problem of determining the long-term economic development strategy that ensures a more rapid development.

It’s worth mentioning that though economic growth is important, but economic growth and economic development differ from each other: economic growth is a precondition for economic development, but if growth is a quantitative index, economic development is a qualitative index, which seems to be much more important for prospective sustainable growth. This is evidenced by the situation in Armenia: before global financial crisis from 2000 to 2008 Armenia has been ensuring two-digit economic growth, which was mainly by two sectors: construction and mining. That’s why Armenian economy could be described as highly resource-dependent on construction and mining sectors. Later developments showed that country had an increase of GDP and national income, but didn’t ensure economic development, because chosen sectors don’t have high-tech compound, didn’t invest in technological and innovative solutions, were not knowledge-based. One of the reasons of Armenia’s economic decline was the lack of diversification, meanwhile diverse economy is a key factor for a sustainable economy as diversification could increase real activity performance and decrease economic losses. If the country wants to turn into an advanced industrial country it should create a public sector that will have the most advanced technological solutions, encourage the development of human resources, carry out major public investment in infrastructure, organize receipts of raw materials for enterprises and domestic manufacturing facilities for further processing and manufacturing of competitive products in final demand; provide state support for domestic producers. Though Armenia turns out to be the most innovative country in 2012 in South Caucasus region by the Global Innovation Index, ranking the 59th in the list of 142 countries and topping the other countries in the region, with Russia, Turkey, Georgia, Azerbaijan and Iran being the 62nd, 68th, 73rd, 105th and 113th countries on the list, respectively it doesn’t seem the maximum of country’s potential and capacities. Though it’s impossible to evaluate how The Strategy of Export-Led Industrial Policy adoption already stimulated industrial output growth, because it was adopted only in 2011 and we need longer period of time for policy outcomes evaluation, it’s obvious that Armenia initiated steps towards creating some institutional framework for industrial policy development, set the priorities, which in prospective will stimulate industrial development of the country fostering the development of other branches of national economy in multiple ways.

REFERENCES