

AMERICAN UNIVERSITY OF ARMENIA

IMPACT OF LANDLOCKEDNESS ON ARMENIA'S EXPORT  
PERFORMANCE FOR THE PERIOD 1996-2010

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A MASTER'S ESSAY SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL  
OF POLITICAL SCIENCE AND INTERNATIONAL AFFAIRS FOR PARTIAL  
FULFILLMENT OF THE DEGREE OF MASTER OF ARTS

BY  
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YEREVAN, ARMENIA AUGUST 2012

SIGNATURE PAGE

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## **Acknowledgement**

Tears run off my eyes as I am writing this part of the essay, though if serious there is a feeling of deep and sincere gratitude to be extended to the entire PSIA faculty and students for everything learnt and every academic battle won and lost so far. I would especially like to thank my supervisor Dr. Aleksandr Grigroyan for his support and, most important, patience exercised in my case of laziness and late submission. Finally, I would as well like to thank any reader who will later use time (waste probably) and read this essay. Thank you.

## **Abstract**

Armenian government has issued a new strategy to boost Armenia's export and reach export-led growth. In the context of this strategy Armenia's export performance feels a strong need to be precisely analyzed. Several early analyses on the subject have indicated Armenia's landlockedness to greatly hinder country's export and cause the poor export performance Armenia has reported during the last 17 years. This paper, analyzing the impact of landlockedness on the country's export performance for the period 1996-2010, provides support for the hypothesis that landlockedness does not exercise decisive impact as suggested by many.

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## **List of Abbreviations**

**AMD** Armenian Dram  
**BOP** Balance of Payments  
**BP-** British Petroleum  
**CIS** - Commonwealth of Independent States  
**CR-**Concentration ratio  
**EBRD-** European Bank for Reconstruction and Development  
**ELGH-** Export-led growth  
**EU** European Union  
**FDI** –Foreign Direct Investment  
**FL-** factor of Landlockedness  
**GDP-** Gross Domestic Product  
**GNP-**Gross National Product  
**HDI-** Human Development Index  
**LDC-** Least Developed Countries  
**LLS-** Landlocked State  
**LPI-** Logistics performance Index  
**MDC-**Medium Developed Countries  
**OECD-** Organization for Economic Co-operation and Development  
**RA** – Republic of Armenia  
**SITC-** Standard International Trade Classification  
**TIR** -Transports Internationaux Routiers  
**ToT-** Terms of Trade  
**TS-** Transit state  
**UN-** United Nations  
**UNCTAD-** United Nations Conference on Trade and Development  
**USAID-**United States Agency for International Development  
**VAT -Value-added tax**  
**WTO** -World Trade Organization

## **Introduction: Defining the Context**

Landlockedness is conventionally defined as a condition states under which have no direct access to open sea. As a matter of fact there are 48 landlocked countries in the world. If grouped into regional clusters world contains landlocked states in Central Asia (Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan), Europe and Eurasia (Austria, Czech Republic, Hungary, Kosovo, Liechtenstein, Macedonia, Serbia, Slovakia, Switzerland, Armenia, and Azerbaijan), in Africa (Azawad, Burkina Faso, Burundi, Central African Republic, Chad, Mali, Niger, Rwanda, Uganda, Ethiopia, South Sudan, Botswana, Malawi, Zambia, and Zimbabwe), and in South America (Bolivia and Paraguay). The countries listed above share different levels of landlockedness: single landlocked states (not bordering another landlocked state)-, for instance, Lesotho, Swaziland, Belarus, Moldova; or doubly landlocked (bordering with other landlocked states). Landlocked states are as well often clustered into developed, developing and least developed ones.

Armenia, following the definition employed above, falls under the category of partial double-landlocked countries. Three of Armenia's neighbors (Iran, Georgia, and Turkey) have direct Armenia is a twenty-year independent republic located in the South Caucasus neighboring with four states: Turkey (West), Azerbaijan (East), Iran (South), and Georgia (North). The country has a total of 1,254 km border line longest with Azerbaijan, and shortest with Iran. Following the collapse of the Soviet Union, Armenia immediately got involved in war with Azerbaijan over the Nagorno-Karabakh conflict. As a result of this, to exercise pressure on Armenia Turkey closed its border with the country in 1993; Azerbaijani-Armenian border was closed in 1994. The situation hasn't change since then. Armenia's way-out to open sea as before now lies through Georgia and Iran. Thus, Armenian context is unique in sense that the



country faces economic blockade from two of its neighbors - Turkey and Azerbaijan. This factor added to the landlockedness nature of its geographic location is claimed to make the country economically vulnerable. Furthermore, it is often claimed by various analysts that landlockedness acts as a factor greatly hindering Armenia's export.

On the background of this notion, RA government adopted a strategic plan to link Armenia's future growth to export, in other words to report export-led growth in future. (RA Government, 2011) This notion itself is highly controversial in two aspects: a) Armenia's poor export performance so far, and b) endemic questionability of export-led growth concept itself.

In terms of export performance Armenia faces several problems. Country's exports reached about 1 billion U.S. dollars in 2010 this being one of the lowest results among CIS countries. (Armenian Statistical Service 2011) Along with this, Armenia counts for about 0.01% of world export. (WTO, 2012) Armenia's export basket is highly concentrated (more than 70%); it contains nine main products eight of which are capital- and labor-intensive. Only three of these eight products are integrated into world value chains and make up more than 1% of world total export by their categories. However, out of these pearls are the only products which have dominated the export basket for a few years, and face gradual share decrease for the recent years. Armenia's export has only 4-5 export destinations with so-called "guaranteed" market shares. Finally, country's export dynamics is largely divergent with no possibility to predict next-year volumes. In the context of these performance indicators, Armenia's logistics also functions poorly no matter the recent modest improvements. (LPI

index 2012) Most importantly country's export performance remains largely unexplored; as a matter of fact most problems have come to be attributed to "landlockedness".<sup>1</sup>

Nevertheless, it needs to be mentioned that according to some studies Armenia is claimed to have had one export-led growth case back in 2000s. This concept itself<sup>2</sup>, as already stated is highly questionable. In most cases export-led growth<sup>3</sup> is estimated based on a simple calculation of export growth rates exceeding GDP growth rates. As absurd as this can be, calculations of this type are never indicative of causality.

Summing up, if Armenia is to embark the so-called export-led growth, study of export performance and its problems should be the first step to undertake. In the context of this, current study makes two contributions: a) it analyzes the scale of the so-called "landlockedness impact" as a factor hindering Armenia's export, and b) brings a time-series descriptive assessment of Armenia's export performance. It is worth mentioning here, that the general certitude before undertaking the study has been consideration of landlockedness as a not decisively hindering factor.

To provide a comprehensive analysis current study first reviews existing literature on landlockedness impact in general, and impact on Armenia's economy in particular. Chapter 1 of the study brings forth analysis of transportation and transit costs Armenian exporters face based on Armenia-Georgia transit legal regulations and logistics performance studies. Chapter 2 studies impact of landlockedness on Armenia's export measured specifically on export structure, concentration ratio and export dynamics in a time-series frame. It should also be noted that the study provides a short literature review on export-led growth hypothesis

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<sup>1</sup> It needs to be noticed that Armenia's domestic factors hindering export have received attention as well, still landlockedness has remained the conventional "scapegoat".

<sup>2</sup> Concept of landlockedness

<sup>3</sup> See Appendix 1 for a short analysis on export-led growth hypothesis.

(Appendix 1) in the context of RA government's new policy to boost export and reach export-led growth.

## Methodology

To analyze the hypothesis that landlockedness does not hinder export performance decisively, this study utilizes the following methodology:

- a) Defining Landlockedness: Landlockedness as already stated is a rather new concept. Beyond being new, it is also hardly quantifiable; this difficulty being first of all associated with its definition. With no “classical” definition of landlockedness in economic terms, current study defines it as “costs that lie between Armenia’s border check points and up to check points of destination markets”. Understandably this definition contains elements of vagueness. To put more precise this study defines landlockedness impact as a mixture of logistics and transportation costs reducing export performance indicated by export volume, export basket structure and concentration change. Logistics costs include both direct and indirect costs incurred by all transit procedures, as well so-called opportunity costs lost because of specific logistics mechanisms.
- b) Exploiting research questions: To explore the hypothesis above mentioned, two research questions are analyzed:
  - RQ 1: What have been and are the landlockedness costs on Armenia’s export through Georgia?
  - RQ 2: What has been and is the landlockedness impact on Armenia’s export performance when exporting through Georgia?
- c) Underlining the frame for analysis: To analyze the research questions above this study conducts a statistical time-series analysis for the period 1996-2010. 1996 has been chosen as a start year for two factors: a) Armenia, because of the war with

Azerbaijan, did not export till 1994, and b) new constitution was adopted in 1995.

Thus 1996 may actually be called the first year of full-scale exports.

## **Landlockedness Impact: Literature Review**

The concept of landlockedness is comparatively new in academic discourse. This notion is reasoned by the fact that initially most landlocked states (dominantly African) were included in least developed country lists provided by the UN. Starting from establishment of new states in Africa since 1960s up to the collapse of the Soviet Union and coming forth of new landlocked states on the world map, concept of landlockedness re-emerged on the academic span.<sup>4</sup>

Academic literature<sup>5</sup> concerning this notion may be classified into two categories: a) general-issue studies (focused on identification of common problems and solutions for landlocked states), and b) case-studies (focused on specific landlocked countries dominantly in Africa). Comparative analyses conducted since 1980s revealed economic development differences between coastal and landlocked states. Gallup, Sachs and Mellinger were one of the pioneers to re-bring in the issue of landlockedness as a factor hindering economic development. Noticing that nearly all landlocked countries were poor, they identified three basic reasons: a) difficulty of cross-border labor migration versus internal migration, b) across border infrastructure development, and c) military and economic incentives of coastal states to add costs for the landlocked (Gallup et al., 1998). Mackellar et al. provided a theoretic framework for analyzing economic problems of landlocked countries trying to argument against the blame of economic determinism often applied to the case.<sup>6</sup> They argued, in the frame of neoclassical theory, for the incorrectness of the viewpoint that landlocked countries face

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<sup>4</sup> It needs to be noted that the link between geography and economic development had existed in the academic discourse long before.

<sup>5</sup> Glassner M. I. provides a very extensive bibliography on landlocked states in his 1992 book "Bibliography on landlocked states".

<sup>6</sup> Blame of "economic determinism" would imply viewing geography as a strong factor hindering economic development.

worse economic problems than others<sup>7</sup>. However, the regression analysis, conducted by the authors, revealed negative effects for the landlockedness factor: “for the period 1960-1992 landlocked countries annually grew on average 1.5 percent slower than countries that were not landlocked” (Mackellar et al., 2000 page 15). A most comprehensive list on the landlockedness factor was presented by Faye et al in their article ‘The Challenges Facing Landlocked Developing Countries’. The article noted that landlocked countries did worse in each of HDI component, had nine percent higher transport and insurance costs, and exported one-half less than their maritime neighbors (Faye et al., 2004). Among the many economic problems that landlocked countries face FDI involvement also needs a strong emphasis. UNCTAD secretariat in their issue paper (“Foreign Direct Investment in Landlocked Developing Countries: Trends, Policies and the Way Forward”) noticed that natural-resource-rich landlocked states were the dominant targets for FDI inflows. UNCTAD listed up to nine factors hindering FDI in landlocked countries with 4 of them being directly connected to the geographical disadvantage (UNCTAD, 2009).

Unlike the general-issue studies outlined above, case-studies basically concentrate on problems and solutions concerning individual countries.<sup>8</sup> Academic solutions concerning mitigation of the landlockedness factor have concentrated, however, on a narrow range of problems. This range can be divided into three categories that have evolved over time in the following sequence: 1st) legal solutions, 2nd) infrastructure development and 3rd) trade facilitation and logistics. It needs to be mentioned that practical developments with minor deviations followed the above-mentioned course as well. Concluding, noteworthy is the fact that second and third categories generally came to apply to those landlocked states which did

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<sup>7</sup> Neoclassical theory, in case of landlocked states, would view loss of trade volume in GDP as reasoned by the impact of landlockedness on increase of import price and decrease of export price net of transport costs. (Mackellar et al., 2000 page 9).

<sup>8</sup> Needs to be mentioned that most of case-studies apply to Asian or African landlocked countries taking into account the fact of these being less developed than, for instance, landlocked states in Europe. The fact of normalized neighborly relations of African and Asian LLSs with their neighbors also plays a role in the extensive bulk of attention they receive.

not have hostile relations with their neighbors and, thus, mitigating landlockedness factor would be a matter of technicality. One issue that remains evident is that landlockedness does have a certain level negative impact on economic development. To conclude, review of academic literature on the landlockedness factor reveals the following:

- Academic discourse on the factor of landlockedness (FL) points to the idea that landlockedness, though being a serious challenge, is mostly an issue possible to be mitigated by certain technical measures. This holds valid, alas, for states having peaceful relations with neighbors.
- Academic literature on FL tends to pay little attention to states having hostile relations with neighbors. Thus mitigation mechanisms cannot properly function unless relations are normalized.
- Mitigation mechanisms, if functioning properly, can reduce the FL effect on export and import and thus enable export-led growth if this is the case.
- Based on the above-mentioned notes and the literature reviewed, it remains clear that export-led growth and factor of landlockedness are not mutually exclusive under the condition of normal neighborly relations between LLSs and TSs. It is also clear that export of services can function as an alternative mitigation mechanism for the FL effect in the context of countries not having peaceful neighborly relations with neighboring TS-s.

#### *Landlockedness Impact on Armenian Export: Existing Studies*

Landlockedness impact has never drawn a specific study in the Armenian context; rather it has appeared mostly in studies concentrated on Armenia's economy in general and export in



particular. Furthermore, most of these studies shared a descriptive character aiming to indicate existing problems rather than providing case by case analyses.

World Bank's "Armenia Trade Diagnostic Study" of 2002 is one of the first such studies concerning Armenian trade performance. Stating that Armenia's growth performance with all its components still bears a Soviet legacy, the study noted Armenia being poorly integrated into the world economy. This lack of integration is here reasoned by "partly due to geography - its landlocked location and subsequently high transportation costs -- as well as regional political conflicts. A decade-old dispute between Armenia and Azerbaijan over the Nagorno-Karabakh region has closed the border between the two countries, as well as the Turkish border. As a result, Georgia and Iran provide the only land routes to the outside world." (World Bank, 2002 p 10) The link between landlockedness and export concentration is being reasoned by "...because of high transport costs and the blockade of borders with Azerbaijan and Turkey, Armenia tends to export products with low import content or a high ratio of value to weight." (World Bank 2002, p. 10) The study as well points to fact that some of the hindering factors are of domestic nature. Nevertheless, no specific causality analysis is provided to indicate landlockedness impacting export performance.

Nathan Associates as well touched upon the issue of export performance though in the context of export competitiveness. In 2004 it published "Armenia Competitiveness Assessment" report through support of USAID. Addressing the fact that landlocked countries paid about 15% of their export earnings for transportation costs, the report noted that "landlocked countries typically experience slower growth overall and Armenia is no exception. High transport costs may have a considerable impact on trade and investment, and in choice of trading partners, if reasonable transit access cannot be secured." (Nathan Associates 2004, p 46)

In the first half of the 2000s World Bank conducted a series of studies<sup>9</sup> on Armenia's export in the face of potential opening of the Armenian-Turkish border. Nearly all of these studies touched upon the issue of transit and transportation costs as part of landlockedness costs to be reduced. Evgeny Polyakov addressed the issue of missed export opportunities in the South Caucasus applying gravity model analyses in his "Changing Trade Patterns after Conflict Resolution in South Caucasus" study. As other studies in the field landlockedness was attributed the blame for hindering export performance. Polyakov reported Georgia exercising higher than normal transit costs on Armenia. The study provided that Armenia could have considerable savings resulting from "straightening transport routes and switching to closer supply sources. Armenia could save over 50 million dollars a year, which would more than erase the deficit in freight services in the BOP and relieve the pressure on its domestic prices, especially energy." (Polyakov 2000 p. 41) The data was obtained from interviews with transporters, still Polyakov's claim about exports increasing was based on the conventional thinking that transportation costs hinder export by a certain percentage. "Trade Facilitation in the Caucasus" study on the other hand provided evidence for the poor state of trade under the economic blockade condition. Again landlockedness costs were indicated to be high<sup>10</sup> The same thinking was integrated in all the other studies of this World Bank series.

Recent studies have integrated another approach. Ghantarchian and Arzangulyan in their 2008 study "To Export or Not: The prosperity Choice of an Armenian Firm" analyzed export from market entry perspective, this being a first study to diverge from the landlockedness factor of hindering export to market entry costs hindering export. They noted the "... insufficient level of investment (including FDI) and 'know-how' flows in the previously

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<sup>9</sup> Those papers are the following: "Changing Trade Patterns after Conflict Resolution in South Caucasus", "Trade Facilitation in the Caucasus", "Armenia and Azerbaijan: Post-Conflict Study – Road Transport", "Post Conflict Study of Railways in Armenia, Azerbaijan, Georgia and Turkey", "Regional Study on Telecommunications in the Caucasus" and "Regional Study on Community-Based Tourism in the Caucasus."

<sup>10</sup> Moving a container from Bandar Abbas to Baku takes 10-12 days by road and costs \$700-800; moving the same container from Baku to Poti takes only 3-5 days by road but costs \$2200. (World Bank 2000)

export-oriented sectors, as well as the inherent burden of new costs, including tax, customs, transportation, exchange rates, finances and independent market entry costs (sunk costs)” hindering export performance. (Ghantarchian, Arzangulyan 2008 p. 18) Davit Narmania and Sargis Grigoryan on the other hand studied Armenia-Georgia trade relations to find issues hindering general trade. They noted that Georgian government eliminated the taxes and levies on transit as it once did in 1990s this greatly improving the so-called landlockedness factor. (Narmania Sargsyan 2010).

Overall, on the background of general early studies concerning Armenia’s export, recent year studies have the tendency of concentrating on specific issues. Landlockedness factor still remains a conventional argument for explaining the country’s poor export performance.

## **Chapter 1 Measuring Landlockedness Costs on Armenia's Export through Georgia**

Landlockedness, as already stated, has often been used in analytic discourse as a factor that hinders Armenia's export performance. Most of the studies, indicated earlier in this paper, have measured the so-called landlockedness factor defined in transportation cost perspective solely. Furthermore, some of these studies have often attributed these costs causality impact on export performance. This has usually been undertaken without strong statistical analyses of that impact. Current study makes analysis of the landlockedness factor impact on a two-fold basis: a) utilization and estimation of transit and transportation costs from Armenia to Georgian sea ports and then to an average destination, and b) statistical estimation of cost impact on export performance over time (1996-2010).

To conduct a precise assessment of landlockedness costs on Armenia's export through Georgia utilization of legal regulatory framework, transportation and transition mechanisms, and as well logistical analyses is provided.

### **Chapter 1.1: Armenia-Georgia Trade and Transit Relations: Regulatory Environment**

Armenia's borderline with Georgia is 225 km. Armenia's main trade proceeds through Georgia. This is basically reasoned by the fact that Armenia's first main trade partner (EU) lies closer to Black Sea, and Russia being its second main trade partner neighbors closes with

Georgia. Transportation through Georgia is, thus, cheaper than via Iran. Iranian port (Bandar-e-Abbas) though has a comparative advantage<sup>11</sup> versus Georgian Poti and Batumi, still even this advantage does not make Iran a suitable trade route.<sup>12</sup>

Since independence Armenia and Georgia have conducted multiple bilateral agreements concerning mutual trade, investments and cooperation in various other fields. Cross-border cooperation, check point mechanisms and export/import policies make an important aspect of these regulations. First of these agreements regulating check point mechanisms is the *“Agreement between the Customs Committee of the Republic of Georgia and the Customs Department of the Republic of Armenia on Setting up Border Check Points of 19 May 1993”* which came into force in both countries upon its signing. In line with this agreement Armenian-Georgian border contains six border check points. As seen from the chart above five of the check points are for road vehicles and only one is used for railway transportation (Airum-Sadakhlo). However, all of the checkpoints are suited for transportation of both passengers and all types of goods.

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<sup>11</sup> Iranian ports due to the geographic location of the Persian Gulf can employ ocean tankers for goods transportation. This is much cheaper than sea tankers used in Georgian Poti and Batumi ports because of the geographic inability to make use of ocean tankers.

<sup>12</sup> This is reasoned by two important factors: a) distance from EU, and b) sanctions on Iran

**Table 1. Border Check Points between Georgia and the Republic of Armenia***(Narmania, Grigoryan 2010)*

<b>N</b>	<b>Check Point in Georgia</b>	<b>Check Point in the Republic of Armenia</b>	<b>Purpose</b>	<b>Category</b>
1.	<b>Ninotsminda</b>	<b>Bavra</b>	All categories of goods and passengers	Road
2.	<b>Guguti</b>	<b>Gogaran</b>	All categories of goods and passengers	Road
3.	<b>Akhkerpi</b>	<b>Privolnoe</b>	All categories of goods and passengers	Road
4.	<b>Sadakhlo</b>	<b>Airum</b>	All categories of goods and passengers	Railway
5.	<b>Sadakhlo</b>	<b>Bagratashen</b>	All categories of goods and passengers	Road
6.	<b>Akhkerpi</b>	<b>Dilijan</b>	All categories of goods and passengers	Road

*“Free Trade Agreement between the Government of Georgia and Government of the Republic of Armenia of 14 August 1995”* with amendments in December 2008 covers regulatory process of export/import duties between the two countries. The agreement established a free trade area between the two countries. In line with bilateral obligations Armenia and Georgia agreed not to “impose higher internal direct or indirect taxes and levies as levied upon analogous domestic commodities, introduce rules for loading, storage and transportation as well as payment and remittances differing from domestically practiced ones, and levy customs taxes and duties on commodities produced/manufactured upon the territory of each country intended for export to the other country” (Narania, Sargsyan 2010). The agreement further obliged the countries not to impose on export/import goods produced in Georgia or Armenia customs duties, taxes and charges that could have equivalent affect. Quantitative restriction of any kind could not be employed as well.

However, the definition of “origins” of goods used in the text of the agreement has different interpretations in customs codes of the two countries. “Origin” in case of Armenian Customs Code necessitates full production or reprocessing in the originating country, for instance, animals born in the country, or plants producing goods in the country. Georgian context is different. Georgian Customs Code treats goods foreign if they are obtained or wholly produced in the originating country. Import and export restrictions employed between two countries carry a general nature: goods which endanger national security, human health and likewise. Export of military weapons, works of art is strictly prohibited. Nevertheless, free trade agreement does include safeguard mechanisms as specified by WTO. This means that to protect a specific industry from heavy import of products into the market a country can take all the measures not restricted by WTO principles. This, though sometimes viewed as landlockedness leverage on Armenia, still is not one of a type, as does not relate to transit. It

needs to be mentioned that both Georgia and Armenia make use of foreign trade 9-digit commodity nomenclature based upon the coding and description norms applied in EU.

Taxation of customs value of goods transported is regulated by the principle of avoiding double taxation, meaning “goods of Georgian origin are taxed either in Armenia and the opposite case in Georgia” (Bilateral Agreement on Avoiding Double Taxation, 1998). *“Agreement between the Government of Georgia and the Government of the Republic of Armenia on Principles of Levying Indirect Taxes on Export and Import of Goods”* into force on 2 April 1999 (Georgia) and 27 May 1999 (Armenia) regulates the VAT and excise tax mechanisms. The agreement specifies not to “levy VAT and excise tax upon directly exported goods to another country, and to levy VAT and excise tax upon directly imported goods from another county in accordance with domestic legislation.” (Narmania, Sargsyan 2010) Though in relatively little quantities, gains from export taxes under this agreement are less for Georgia than Armenia since taxation is based on export quantities, and Armenia directly imports more.

Armenia’s transit transportation through Georgia is conducted via the mechanisms outlined in the *“Agreement between the Governments of the Republic of Georgia and the Republic of Armenia on the Main Principles of Transit Transportation”* of 19 May 1993 in force in both countries upon signing. The agreement puts obligation on both states to ensure safe transit through their countries and cover expenses on transit measures evenly. The agreement as well clarifies the procedures for concealing transportation via any other non-specified border crossing. Both Article 201 of Armenia’s Customs Code and Article 242 of Georgian Customs Code set up a fine ranging in terms the customs value of illegal transported goods. Transit of both goods and passengers through both countries is carried out with no permission mechanisms. (Bilateral Agreement on International Vehicle Movement, 2006).



However, most of these bilateral agreements do not provide for a clearly harmonized and structured system of transit corridors and full regulatory mechanisms. The regulatory measures outlined above share a general character and give each country a chance to employ its own domestic policies concerning export and transit. This adds up logistics costs which by themselves do count for the so-called “landlockedness factor” impact. These costs need to be specifically assessed to enable precise calculation of landlockedness factor. Domestic mechanisms are outlined below.

### **Customs and Export Regulation: Georgia<sup>13</sup>**

Customs regulations in Georgia, as in Armenia are mostly defined by the Customs Codes of both countries. Georgian Customs Code harmonized with EU Customs Code has been in force since 2007. As specified by Article 7(30) of the Code customs procedures include:

1. release of goods for free circulation (import)
2. transit of goods
3. customs warehousing of goods
4. inward processing of goods
5. temporary admission of goods
6. outward processing of goods
7. exportation of goods

All the check points work for twenty four hours.

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<sup>13</sup> Information hereafter, if not specifically stated, is presented from the official website of Georgian Revenue Service

Release of goods for free circulation (import)

As underlined by the Customs code of the country, goods that enter Georgia's customs territory undergo the following procedures: (Narmania, Sargsyan 2010)

- Presenting the goods on check points
- Declaration of goods
- Writing out registration certificate
- Examining, collecting samples and tests of and sealing goods
- Releasing goods to the place of destination.

While crossing the border Georgian Customs Code necessitates submission of the following documents:

- By vehicle transportation –waybill, if unavailable, the copy of vehicle registration certificate.
- By railway transportation – railway bill.
- Goods Purchase contract, invoice or other payment document.
- Permits issued by Revenue Service (for instance, Permit for import of dual-use products, or Permit for import of medications subject to special control)
- Permits that are issued by the Ministry of Energy and Natural Resources of Georgia
- Permits that are issued by the Ministry of Defense of Georgia:

As noted by Narmania and Sargsyan, providing certificate of origin is not a necessity, though if provided this enables use of all the privileges outlined in the bilateral free trade agreement between Armenia and Georgia. Important is to note, that customs clearance is not applied to goods that originated in Armenia and are imported from Armenia.

Time frames for various procedures under this category are as follows:

- Goods delivery from border crossings to destinations: railway and vehicles (not more than 10 calendar days), oil products (5 calendar days)
- Commodity declaration period: within 30 days period after import of goods, though the time can be reduced or increased by 60 days if decided so by Georgian Revenue Service.

### Transit Procedures

While using Georgian territory as a transit route, the following documents are required:

- vehicle transportation –waybill
- sea transportation – bill of lading
- railway transportation – railway bill of lading
- Goods Purchase document
- Goods purchase contract or Invoice
- license/permit/certificate/ under the bilateral agreement between Georgia and Armenia concerning transit principles goods in transit do not require permits but in specific cases

Procedures involved in transition are as follows: (Narmania, Sargsyan 2010)

- Transporter or owner of goods presents documents and states that he intends to transit goods through territory of Georgia
- Customs office examines vehicle, customs official verifies the seal of sender country and its number and if necessary applies new seal

- Customs official must be provided with respective certificates, licenses and permits if goods imported require any
- Customs office issues certificate of the registry of vehicle with indicated place of departure from Georgia, destination customs office and time necessary to arrive there
- Transit procedures complete at departure customs office and goods are shipped from Georgian territory

At arrival to a departure customs office, vehicles undergo the following procedures:

- Provision of cargo and customs declaration (if defined by the legislation) and factual shipment of goods outside the territory of Georgian customs
- Provision of TIR-carnet instead customs declaration

Road fees in Georgia for transit transportation are as follows:

- For one cargo vehicle- 200 Lari (equivalent of \$120 dollars)
- Person moving goods on the territory of Georgia to the control zone located not more than 10km away from a sea border crossing point is exempt from road fee.

### **Customs and Export Regulation: Armenia**

Armenia's customs code has been ratified in 2000. It provides nearly identical customs regimes to that of Georgia. The code is currently under process of harmonization with EU Customs Code.<sup>14</sup>

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<sup>14</sup> Information presented under this section, if not otherwise stated, has been taken from Armenia's State Revenue Service.

### Export Procedures

Main export procedures underlined by RA Customs Code are as follows:

- Declaration of goods either by the person transporting or by authorized representatives
- External examination of transports (checking for presence of seals, good state of trunks and bonnets, presence of fingerprints near the vehicle doors )
- Examination Note release
- Customs control choice (three ways of customs control)

Documents to be submitted while exporting are as follows:

- Customs declaration
- The invoice or the contract of goods acquisition, or other corresponding substitute document
- The document proving the goods transportation (goods-transport consignment note)

Armenia's Customs Code employs the following customs fees:

- Customs duties: mandatory payments pursuant to the procedures (exportation duty-0%, importation-0-10%)
- Customs payments: compulsory payments levied by norms underlined in the Customs Code: 3,500 AMD for customs formulation; 1,000 AMD for up to 1 ton goods examination and registration/ 300 AMD for each additional or non-complete tone by same declarer; goods storage: 1,000 AMD daily each tone plus 300 AMD each additional tone; transport facilities customs control: 5,000 AMD other than 10-seat passenger transport

Thus main export and transit procedures and regulatory mechanisms are now underlined. These mechanisms are in force in Georgia since 2007 and in Armenia since 2000. As noted by Narmania and Sargsyan (2010) customs and transit procedures as well as costs contained various concealed costs prior to 2004 regime change in Georgia.

## **Chapter 1.2: Armenia-Georgia: Costs by Specific Logistics Indicators**

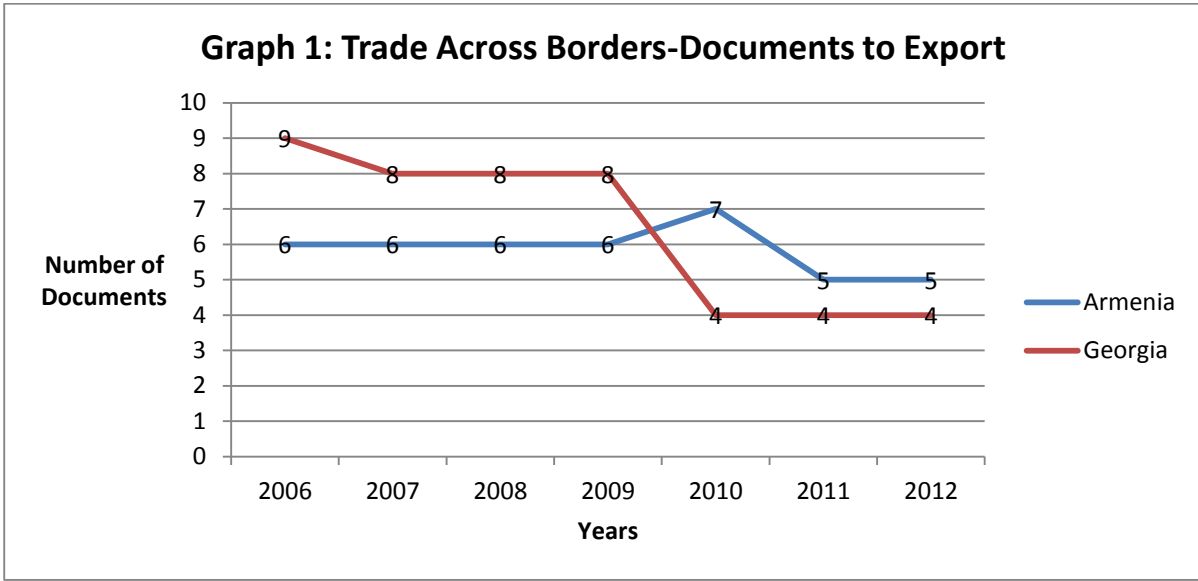
To analyze landlockedness costs further a cross-country logistics assessment is made. The assessment is based on data obtained from World Bank LPI index database of 2012 and World Bank Doing Business Reports of 2004-2012.

### **World Bank Doing Business Reports: Cross-Country Comparison<sup>15</sup>**

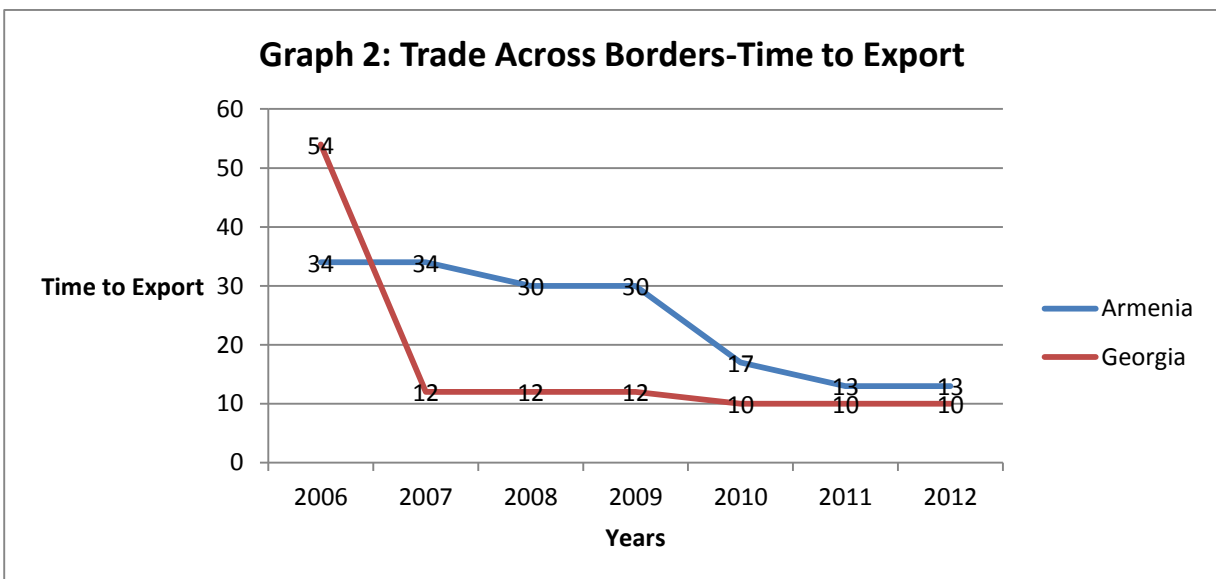
World Bank Doing Business database has been selected for the purpose of measuring cross-country trade procedural trends. As seen from Graph 1 number of documents required by customs services of both countries for export has decreased over time, still Armenian progress is only minimization of 1 document versus Georgian case of 5.

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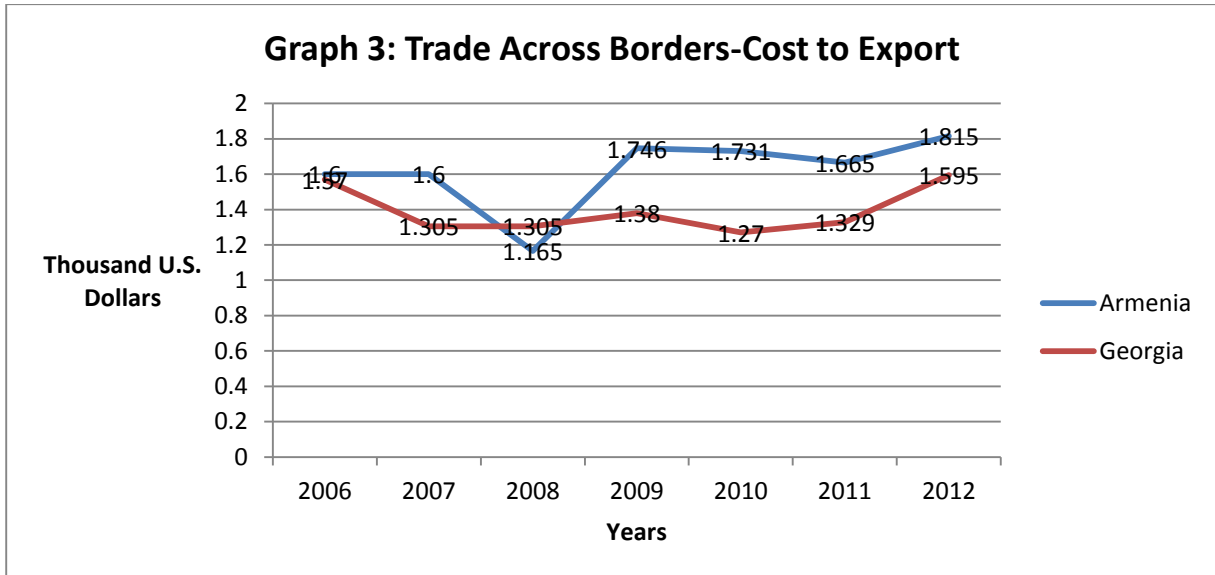
<sup>15</sup> All data presented under this section, if not otherwise stated, are obtained from World Bank Doing Business databases. Tables are constructed by the author based on the data gathered.



Similar picture is observed in case of time of exporting. On the background of 2006 data Georgian case took 54 days to export versus Armenia's 34. However, as noted in Graph 2, Georgia managed to decrease its export time down to 10 days (almost five times), while Armenia decreased only twice still lagging beyond Georgian experience.



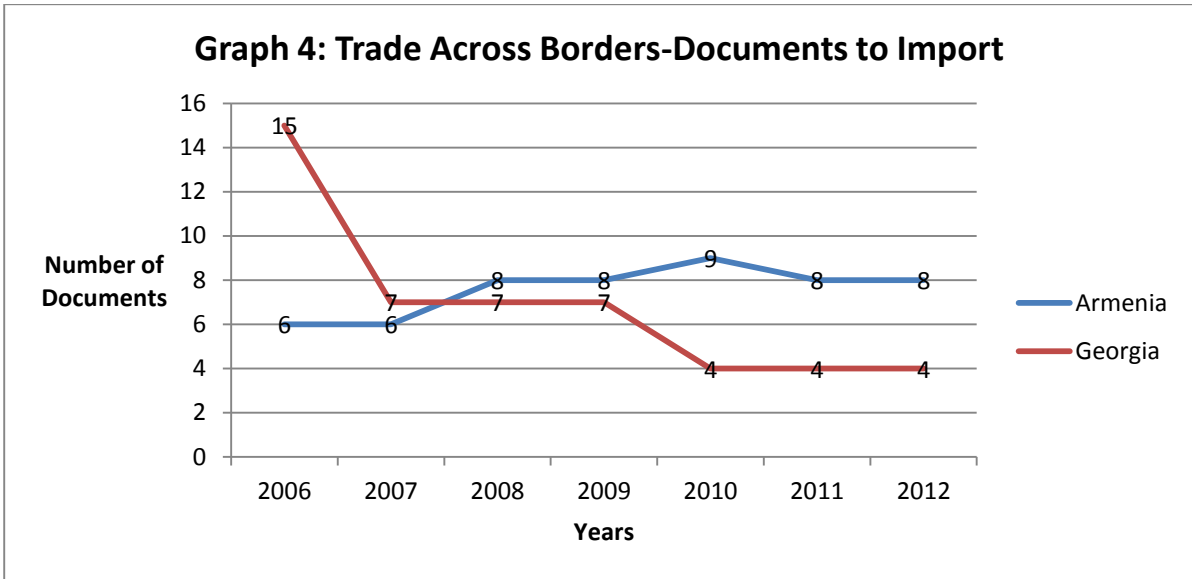
Costs for Export are, however, identical with small variation. The methodology employed by World Bank here takes account of fees levied on a 20-foot container excluding customs tariffs and duties.<sup>16</sup> As seen in Graph 3 Armenian costs to export remain higher than that of Georgia.



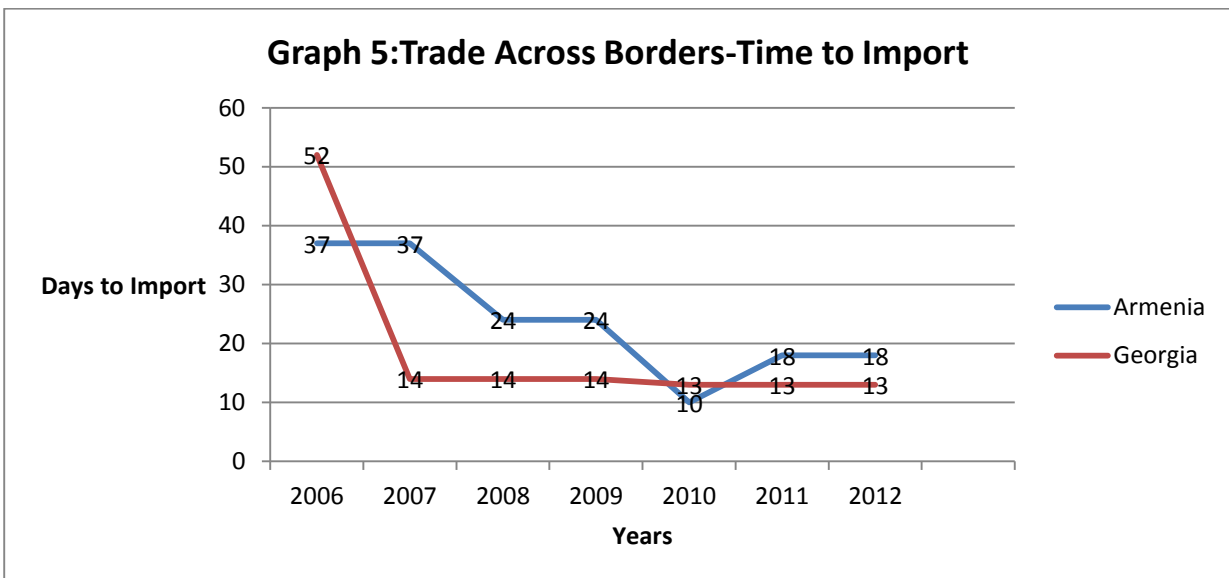
As for documents to import, Armenia lags beyond Georgia more than twice. As seen in Graph 4 Georgia has reduced papers demanded by 11 (almost thrice) since 2006, while Armenia has increased from 6 to 8. It needs to be noted that this does not affect export goods produced entirely in the country. Nevertheless, goods that are processed domestically and later exported are affected by this policy.

<sup>16</sup> As noted earlier Armenia does not levy customs tariffs and duties on export, while taxation is regulated by the bilateral free trade agreement.



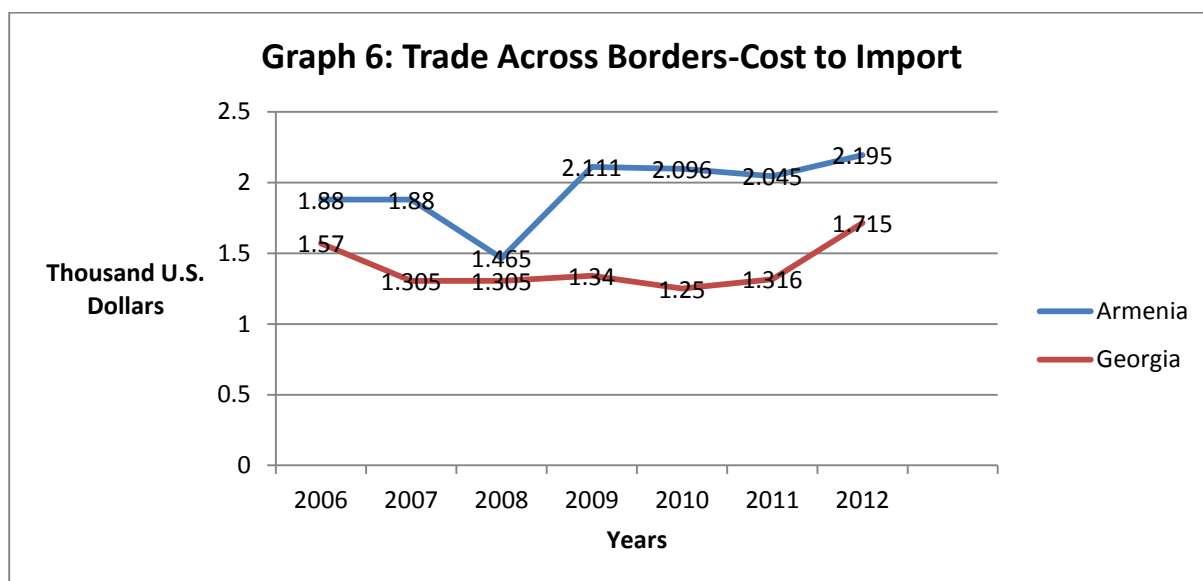


The picture in terms of time to import progress is the again not very encouraging. As indicated in Graph 5 Armenia has decreased import time nearly twice, still not competitive with Georgian example of more than three times. Needs to be noted that import time as import cost affects processed good export.



Cost to import is nearly identical to cost to export in case of both countries (Graph 6).

Though again, import cost in case of Armenia affects processed good export.



Divergence of Customs Codes as observed above is a main contributor to Armenia and Georgia sharing various ranks in Trade across Borders index as part of World Bank Doing Business Index. As outlined above, customs codes and customs regimes regulating transit of Armenian goods through and export to Georgia share both identical but as well various different aspects. Lack of a simplified and precise mechanism between Georgia and Armenia still adds costs in terms of export from Armenia and import from Georgia. Prior to 2010 the problems were even more serious. Georgian check points lacked customs scales (to measure quantities exported/imported) giving forth to constant bargaining and non-registered costs. Lack of credit card terminals, poor condition of roads in Georgia, as well several other factors added non-registered costs to export and import. Factors inside Armenia as well increased

export costs. As Narmania and Sargsyan (2010) note it was difficult to obtain statement of “origin” in Armenia, lack of harmonization of the Customs Code with that of EU and several other problems hindered Armenian export.

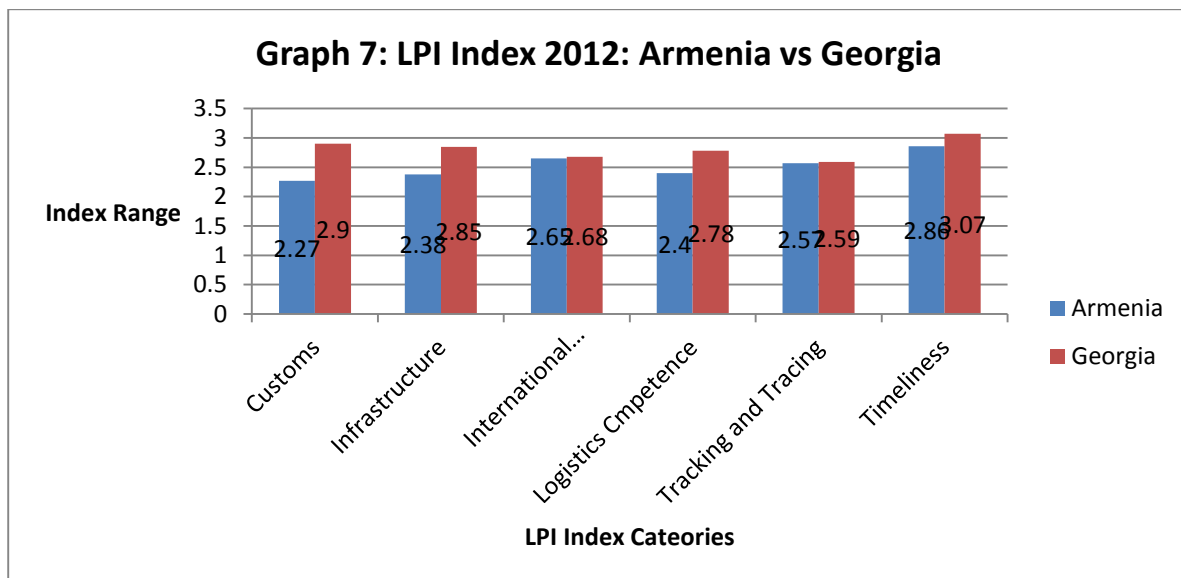
Respectively in line with 2011 data on Eastern Europe and Central Asia grouping Armenia ranked 13<sup>th</sup> while Georgia was 5<sup>th</sup> in terms of trade across borders. Still Armenia did better than other regional landlocked states as of Azerbaijan (20<sup>th</sup>) and Belarus (18<sup>th</sup>) . Summing up, the overall picture Armenian exporter faces while transiting export through Georgia is as follows:

Documents to Export	5
Time to Export	13 days
Cost to Export	1,815 U.S. Dollars

In the perspective of trade across borders index Armenia ranks 104<sup>th</sup> in the world decreasing its rank by one point in comparison to the 2011 rank (103). In terms of documents to export Armenia is now close to OECD (4) standard ranking 30<sup>th</sup> in the world together with several other states. In case of time to export Armenia is again close to OECD standard (10 days) ranking 46<sup>th</sup> . However, in terms of cost to export Armenia ranks higher than both its regional average (1,774 U.S. Dollar) and OECD average (1,032 U.S. Dollar).

## LPI Index: cross-country comparison<sup>17</sup>

LPI index comes to conclude the overall picture of Armenia-Georgia export and transit relations. Armenia has improved its LPI rank since 2007 (131<sup>st</sup>) down to 100, still the country lags well beyond regional top performer (Turkey) and Georgia. Armenia's improvement in terms of its customs has been rather modest<sup>18</sup> as well as in case of logistics competence<sup>19</sup>. However, more than modest improvements have been observed in terms of infrastructure (from 1.78 in 2007 up to 2,38 in 2012), international shipments (from 2 in 2007 up to 2,65 in 2012), and timeliness of shipments in reaching destinations (from 2,62 in 2007 up to 3,07 in 2012. ) Overall, Armenia ranked 100<sup>th</sup> in 2012 versus Georgian case of 77<sup>th</sup>. Interestingly enough in 2010 Armenia ranked 111<sup>th</sup> versus Georgia ranking 93<sup>rd</sup>. Thus within two years the gap between Armenia and Georgia increased by about 27 % in other words within two years Georgia managed to improve by 16 digits on the rank versus Armenia's 11. More precisely, as noted in Graph 7 Armenia still lags beyond in almost every category.



<sup>17</sup> All data below this section is generated from the World Bank LPI Database of 2012/ country scorecards (<http://lpiurvey.worldbank.org/international/scorecard>). All tables presented are constructed by the author based on the data.

<sup>18</sup> Customs index has been 2,10 in 2007 versus 2,27 in 2012

<sup>19</sup> Index for this section has been 2.11 in 2007 versus 2.40 in 2012.

Beyond the logistics costs a separate cost to measure while exporting through Georgia is the cargo shipping costs from Georgian ports of Poti and Batumi. These ports are medium size sea ports with a coastal breakwater harbor and modest depth meaning ocean tankers cannot be exploited. Therefore, shipping from Poti is exercised by sea tankers. Nevertheless, precise time-series estimation of those prices (in quantitative terms) remains now impossible reasoned by lack of specific data over time.

### **Chapter 1.3: Summary of Transition and Transportation Prices through Georgia**

Armenia and Georgia have signed and ratified various bilateral agreements regulating Armenia's export to and transit through Georgia. These agreements though providing a basis for action carried and still carry a general nature and do not precisely specify all the mechanisms for transit. To measure transit and transport costs the Armenian-Georgian cooperation period needs to be divided into two parts: a) 1996-2006, and b) since 2006. The first period is that of poor state of Georgian infrastructures, lack of regulatory environment of transit and high corruption costs associated with this and several other logistics sectors. As Armenia Trade Diagnostic study reported back in 2002, these factors hindered competitiveness of Armenian exports. Since 2006 Georgia embarked on a full program of reforms in customs and other logistics sectors greatly improving its logistics standing in world and reducing unofficial costs. According to Armenia Trade Diagnostic Study, logistics costs for moving one TEU from Northern Europe to Armenia via Georgia would amount to 2,770 official plus 602-710 unofficial U.S. dollars. (Armenia Trade Diagnostic Study, 2002)

However, the situation has changed. Customs codes of two countries due to different levels of harmonization with EU customs code provide for varying customs mechanisms. All this adds up to export costs as a lost opportunity cost first of all in terms of time spent on various border crossing procedures. However, in terms of customs regulation both countries have made improvements over time. The initial have been improved.

Nevertheless, it should be noted that Armenia's logistics performance remains in modest conditions measured on the global scale. It lags beyond Georgia. In terms of easing its export customs procedures development since 1996 up to almost 2007 has been very negligible. Same refers to nearly all other sectors of "trade across borders" domestic procedures. In this sense Armenia continues levying high costs on its exporters whether in face of time to export or documents to export. These costs tend to be more of lost opportunity costs, though as well of direct financial costs on the exporters. In terms of import, as noticed above, Armenia again lags beyond its regional sea-outs.

Thus, taking into account of the modest improvements over time on all the aspects mentioned above there seems little ground to state that transit and transportation costs have steadily increased over time. Furthermore, as shown by both LPI and Doing Business reports since 2006 up to now variation in terms of all the aspects has been more divergent than showing a clear tendency. While times to import and export as well documents needed for both practices have been reduced over time, still export and import costs have basically remained in a same range high in one year, low in the other.

Same picture is witnessed in terms of transportation costs. Because of the inability to estimate precise transportation and transit costs, this study has conducted a minimum transportation cost analysis. Based on the data presented earlier, the equation for a standard 20ft container exporting goods from Armenia and transiting through Georgia shall be :  $f(A_v.T_{cp})=A_v.M_{tc}$

+Ce/ where Av.Tcp is Average total cost at port, Av.Mtc is average minimum transit cost, and Ce is cost to export.

**Table 2: Minimum Transit Cost per 20ft Container**

Transit Directions	Length in Km <sup>20</sup>	Transit Fee <sup>21</sup>	Diesel Usage in liters <sup>22</sup>	Total Diesel Cost <sup>23</sup>	Total Transit Cost
Ninotsminda-Poti	365	328	146	261,34	589,34
Guguti-Poti	434	328	173,6	310,744	638,744
Akhkerpi-Poti	418	328	167,2	299,288	627,288
Sadakhlo-Poti	397	328	158,8	284,252	612,252

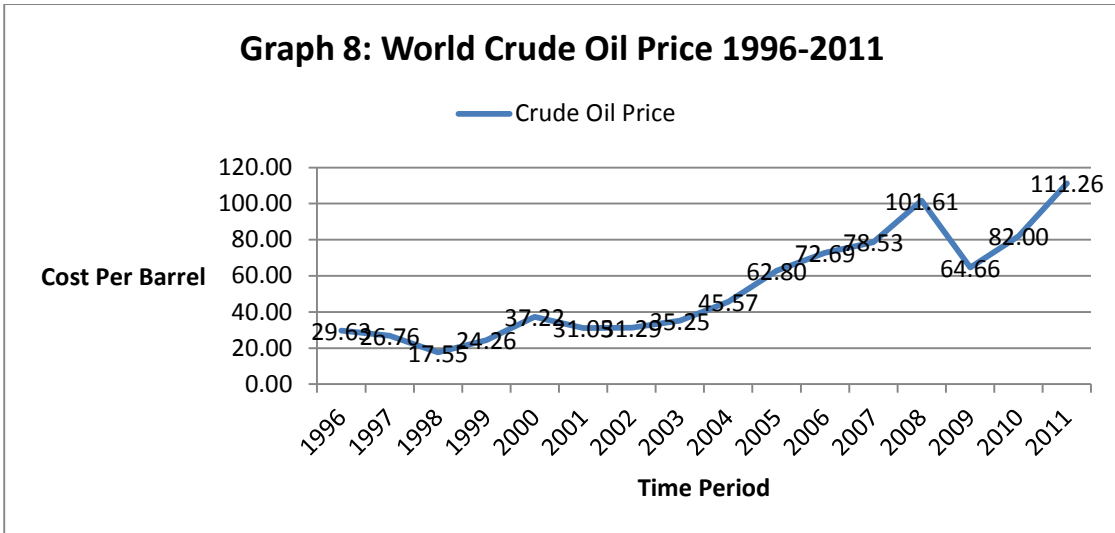
Taken into account divergent prices on diesel (Graph 8) and international maritime shipping over time, it can most surely be stated that transit and transport costs for Armenian exporters have neither decreased nor increased dramatically for the period 1996-2010. Even if comparatively being highest in world as almost all analysts of the Armenian case state, these costs have remained mostly in a same high range over time.

<sup>20</sup> Length of directions has been estimated as average length based on Google Maps indications.

<sup>21</sup> Transit fee is the standard road fee specified by Georgian Customs Code for one truck.

<sup>22</sup> Usage of Liters has been estimated for Volvo FH trucks employed by Armenia's main freight transporting company-SPAYKA on the basis of average diesel use on 100 km.

<sup>23</sup> Diesel cost has been estimated based on costs published by [www.petrol.am](http://www.petrol.am) as of 19.08.2012



Source: *BP Statistical Review of World Energy 2012*



## **Chapter 2 Measuring Landlockedness Impact on Armenian Export Performance: Georgian and Turkish Alternatives**

Before the collapse of the Soviet Union Armenia was a heavily industrialized country engaged in production and re-processing of various goods which were exported to other Soviet economies. As reported by Avanesyan and Frenkman (2003), Armenia's economy grew 9.3 times for the period 1960-1987. According to the same source Armenia had a 25 thousand R&D workforce.<sup>24</sup> Export in country's output comprised about 50% with manufacturing counting for 95% of total export.<sup>25</sup> Among the most traded items light industry comprised about 37.7%, machinery counted for 25.2% and food 14.3%.<sup>26</sup> However, as Tarr (1993) notices Armenia's trade links with non-Soviet Union states were very limited and only 2.5% of country's export reached those destinations. Almost 70% of total export was directed to Russia. (Avanesyan, Frenkman 2003).

With collapse of the union Armenia lost its previous economic ties and markets. Furthermore, the country got engaged in a war with Azerbaijan, was blockaded by Turkey, faced chaotic domestic political situation in Georgia impacting country's way out to sea. In line with these developments, a new non-communist government was elected and the country launched the process of the so-called "shock therapy" liberalization. Since 1991 Armenia embarked on a small-scale liberalization process which reached its height in 1995. In the meantime country's output decreased by almost 42% in 1992 (EBRD, 2000). Country's output dramatically declined; emigration rates grew, most of factories were closed down. According to EBRD 2000 estimations Armenia did not export for the period 1991-1994.

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<sup>24</sup> Ibid

<sup>25</sup> Ibid

<sup>26</sup> Ibid

Following the ceasefire in 1994, and economic reforms undertaken by then, Armenia's economic growth was resumed but on a moderate rate-on average 5% (National Statistical Service, 1994-2000). Armenia's economic growth at the time was largely foreign aid and remittances driven (World Bank, 2006). In line with these changes, Armenia's export resumed with Armenian companies finding new destinations and goods to export to. Growth of exports as percentage of GDP outstripping GDP growth let many economists state Armenia had export-led growth as well. (World Bank, 2006)

Most studies analyzing Armenia's export at the time almost unanimously identified landlockedness as a factor greatly hindering Armenia's export performance and therefore, the export-led growth. However, none of these studies brings quantitative assessments in order to prove Armenia's export performance being deeply affected by landlockedness. The argument, thus, remains in the field of conventional assessments which again face a huge lack of specific data beyond. This chapter, as already noted earlier, makes a two-fold analysis of the landlockedness impact. First Armenia's export performance is statistically analyzed in time-series from 1996 up to 2010. This analysis is carried out to reveal the precise picture of Armenia's export, its structure, dynamics and other characteristics.<sup>27</sup> Next impact of landlockedness (defined as logistics and lost opportunity costs) is measured.

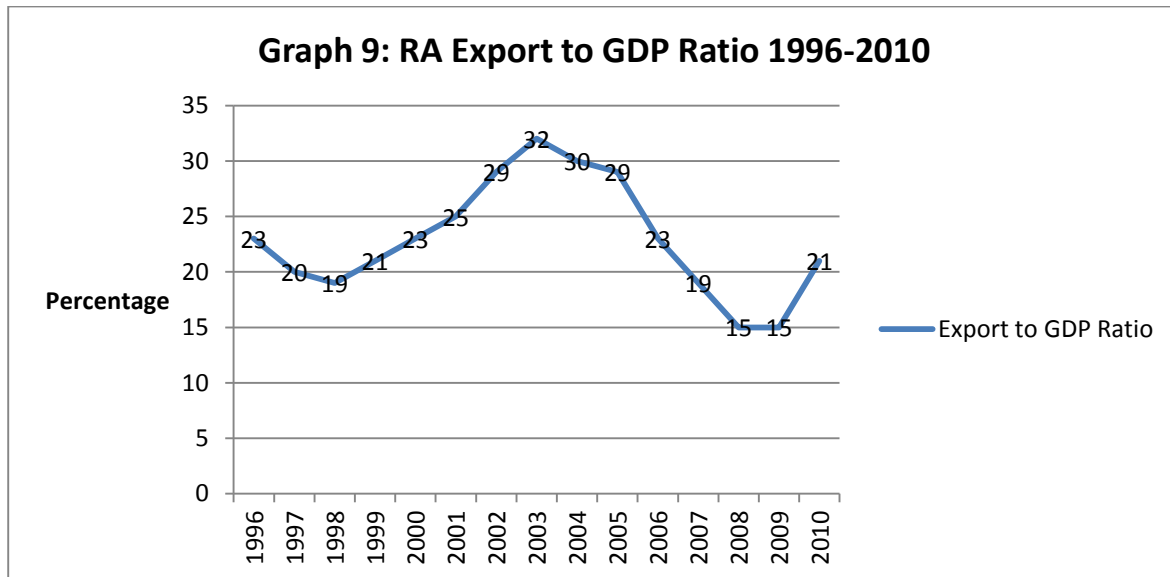
Initial certitude before conducting the study has been that landlockedness, though a hindering factor, still does not seriously impact export performance in case of Armenia. Nevertheless, since 2000 Armenia may be claimed to have remittances-led growth, construction-led growth and so forth. Since 2011 RA government has embarked on a new policy of export diversification and, as a result, prolonging of the so-called export-led growth. Interestingly enough Armenian export to GDP ratio has always ranged between 15 (in 2008, 2009) and 30

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<sup>27</sup> Time-series analysis has been absent from most studies on the field .

(in 2004) percents- a modest indicator for a country claiming to have export-led growth.

(Graph 9)

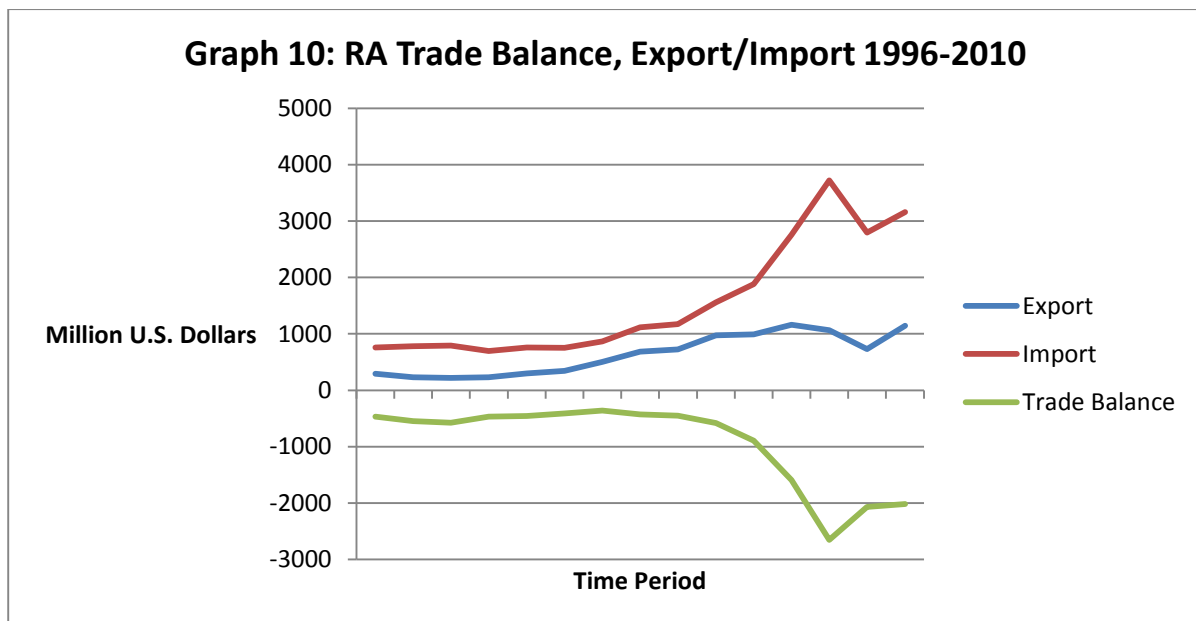


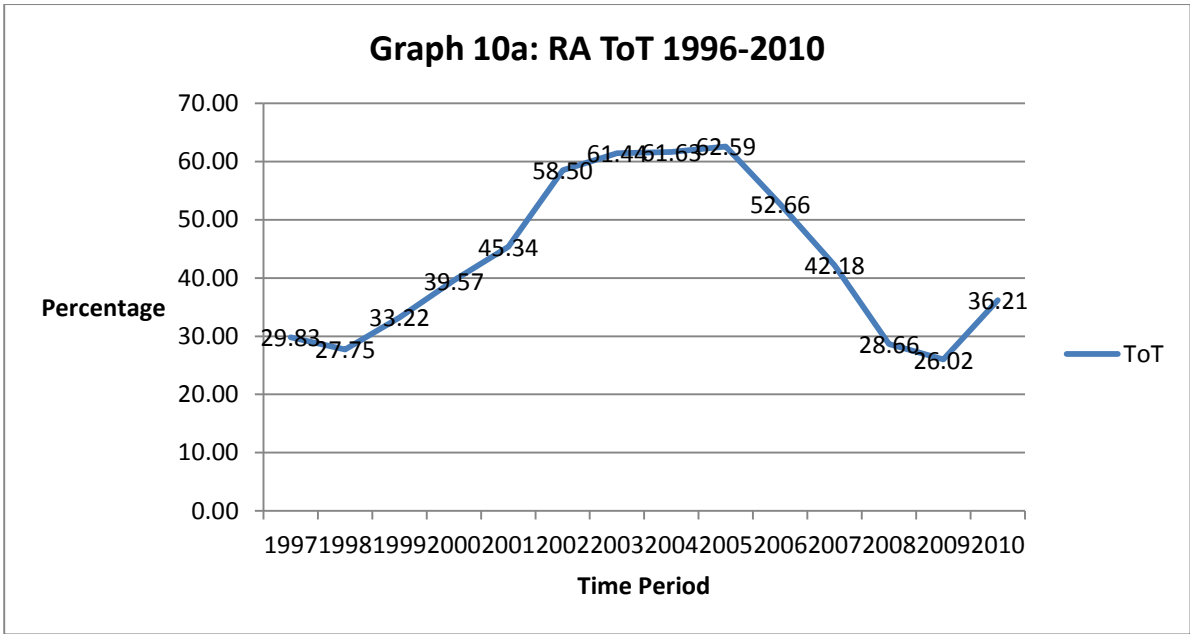
## Chapter 2.1: Exporting Through Georgia: Indicators of the “Landlockedness impact”

As already stated, lack of time-series data on specific landlockedness costs creates impossibility to employ quantitative methodology for measuring causality between landlockedness and export performance. In the face of this, causality is measured by employing analyses of export performance statistical data grouped into two large performance groups, or indicators. All the statistical data covered under this section reflects Armenia’s export through Georgia.

## Export/Import Growth rates

As indicated in Graphs 10 and 10a Armenia's trade balance has always been negative starting since 1996 with both export and import steadily growing over time. Meanwhile highest ToT percentage has been observed for a three-year period from 2003 to 2005 comprising about 61%. On the contrary to this, in the period of crisis (2008-2009) ToT percentage reached the 1996-1998 period ToT percentages of about 25-26%. Thus, during the so-called export-led growth period export growth itself did not reach dramatically high levels. Armenia's export share in world total export has been negligible. It comprised 0.01% in 2010 similar to that of Georgia and in contrast to that of Azerbaijan 0.17%. (WTO Country Trade Profiles, 2010) Additionally, Armenia ranked 146<sup>th</sup> in world with its export levels in 2010 versus Azerbaijan's 62<sup>nd</sup> and Georgia's 134<sup>th</sup> in terms of merchandise exports. (WTO Country Trade Profiles, 2010)





Armenia’s export for the first five years (1996-2001) witnessed extremely modest and slow annual growth rates. Export in 2001 comprised about 341.8 million U.S. dollars growing only for 51.5 million compared to export rate in 1996 (290.3 million U.S. dollars). In other words export in 2001 grew for about 17 percent versus the export rate in 1996. Meanwhile, import for the same period decreased from 757.4 million U.S. dollars in 1996 to 753.8 in 2001. In contrast to this, Armenian export growth for the period 2001-2008 comprised about 724 million U.S. dollars. Put otherwise, export rate of 2008 grew for about 211 percent from the growth rate in 2001. In the mean time, import grew from 753.8 million U.S. dollars in 2001 up to 3719 million U.S. dollars-that is for about 393 percent.

To some analysts these export/import value shifts present a certain proof for landlockedness impact as a factor causing the export rates to shift from year to year. However, statements of this type have little ground to base. Several factors need to be reviewed and analyzed. Georgian logistics, as indicated in studies mentioned earlier, had very modest improvements since 1990s up to 2004. On the other hand annual transportation costs do not grow at

dramatic levels meaning transit and transportation costs for the period have remained in a certain range though growing over time. Thus if landlockedness hinders export, then explanation is needed why exports fell in 1997-1999 period for about 50 million when no serious price change in transportation and logistics occurred. Furthermore, landlockedness does not explain for the import reduction of 1999. Additionally, both export and import have grown over time with transportation costs being high as conventionally claimed. Last but not least, “logistics cost reduction” reforms together with either growing or decreasing transportation costs do not explain the fact that export from 2008 versus that of 2005 grew for about 9 percent, while import grew for 139.

The failure to explain is directly linked to the notion that both export and import undergo nearly the same landlockedness challenge. Thus, it can surely be stated that landlockedness is not the most decisive factor explaining export/import over time shift rates. It may have a limited “export-hindering” effect because of adding transportation and logistics costs and affecting competitiveness of exports to certain extend.

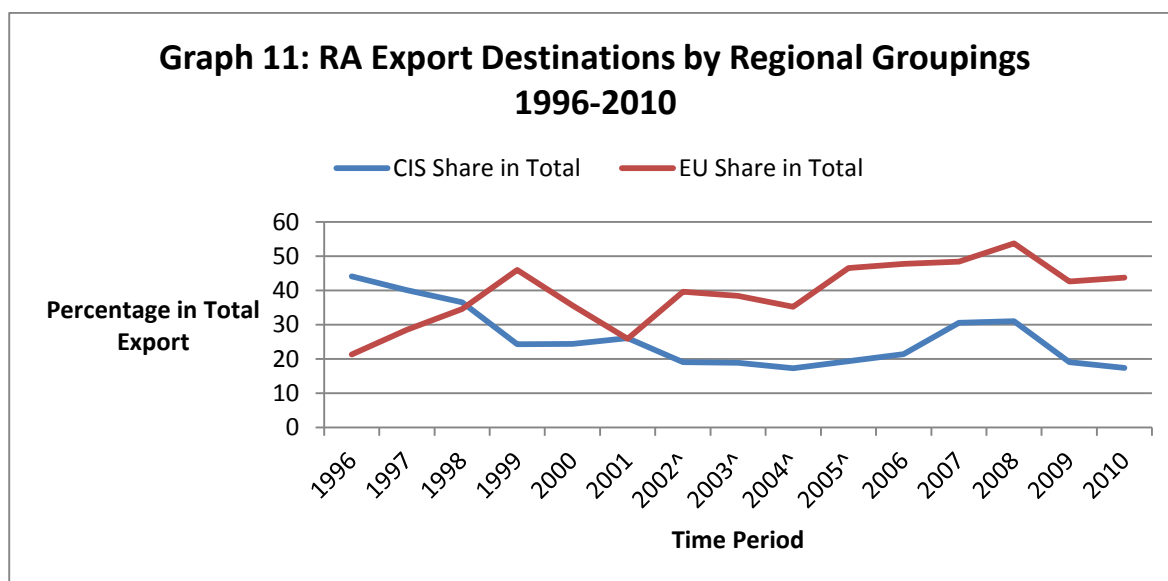
### **Export Concentration & Structure Dynamics**

Export concentration and export structure are often used as indicators of the landlockedness impact in terms of hindering export. Armenian case, as the analysis herein presented, shows a different case.

Armenia’s main export destinations in terms of regional groupings have changed over time. For the period 1996-1998 CIS countries counted for on average 40% of the total export. Nevertheless, since 1998 CIS share in total export gradually decreased reaching 17% in 2010. On the contrary, EU share in total export being low for the period 1996-1998, gradually

increased over time remaining stable average 47.8% since 2005 and reaching 43% in 2010.<sup>28</sup>

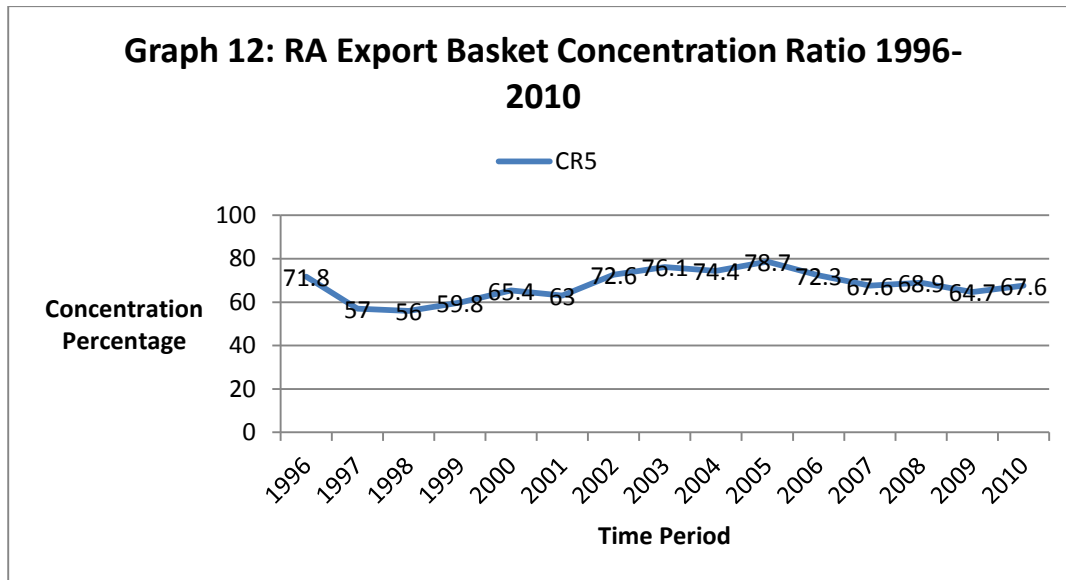
(Graph 11)



Armenian export basket has been and is extremely non-diversified. Since 1995 Armenia’s export basket has gradually changed. Goods that were depictive of Armenia during the Soviet times as a result largely fell out from the basket. These being primarily capital-intensive ones, as Ghantarchian and Arzangulyan noted “gradually lost market share and missed expansion opportunities when they proved unable to improve their quality, upgrade production assets and processes, reduce costs and adopt effective cost and quality management tactics, as well as customer-oriented export marketing techniques in order to retain export competitiveness.” (Ghantarchian, Arzangulyan 2008) Export basket of the country has always contained alimited number of products. In 1999 it contained about 57 SITS 4-digit export products. In 2010 this number was about 50 products.

<sup>28</sup> Data for Georgia is excluded from CIS grouping data since 2009.

Armenia's export basket concentration ratio<sup>29</sup> has been very high on average constituting about 70% (Graph 12). Though annual concentration ratios have remained mostly the same, inner-concentration product groups' percentages have varied greatly. All other export components taken together have hardly ever counted for more than 25% of the export basket.



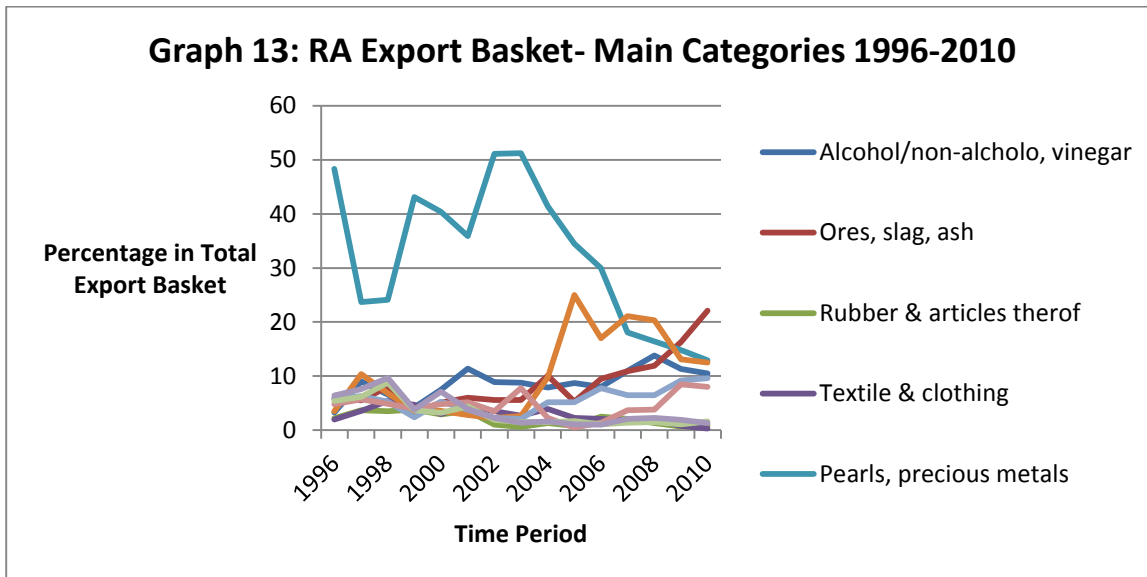
Since 1996 the export basket has contained nine main items all from the manufacturing sector (Graph 13). These items have been and still are:

- Alcohol products
- Ores, slag, ash
- Rubber and articles thereof
- Textile and clothing
- Pearls and other precious metals
- Ferrous metals
- Copper and articles thereof

<sup>29</sup> Concentration ratio for Armenian export basket has been measured on the principle of first five products.



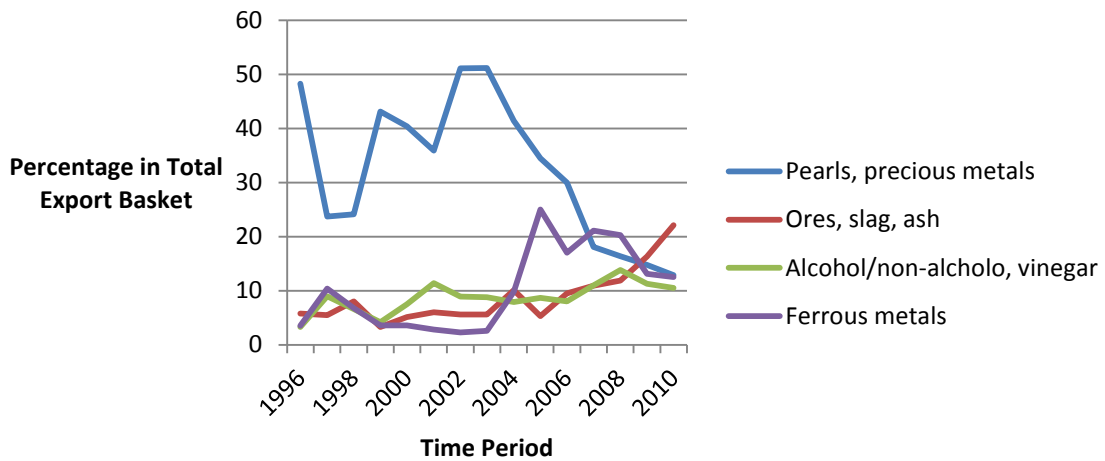
- Aluminum and articles thereof
- Nuclear reactors, boilers
- Electrical machinery and equipment



Out of these nine product categories four categories have almost always dominated the basket: pearls, ores, alcohol and ferrous metals. (Graph 13a) Besides three years (1997-1999)<sup>30</sup>

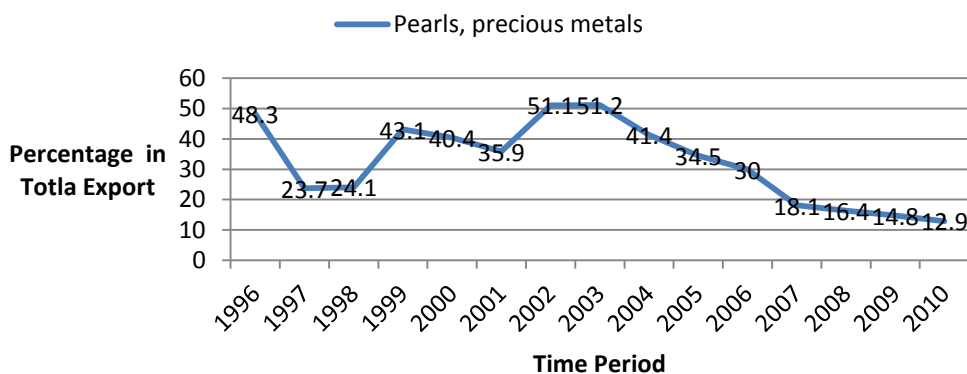
<sup>30</sup> CR5 for these years has comprised about 57% marking the basket as average concentrated.

**Graph 13a: RA Export Basket-Four Main Categories**

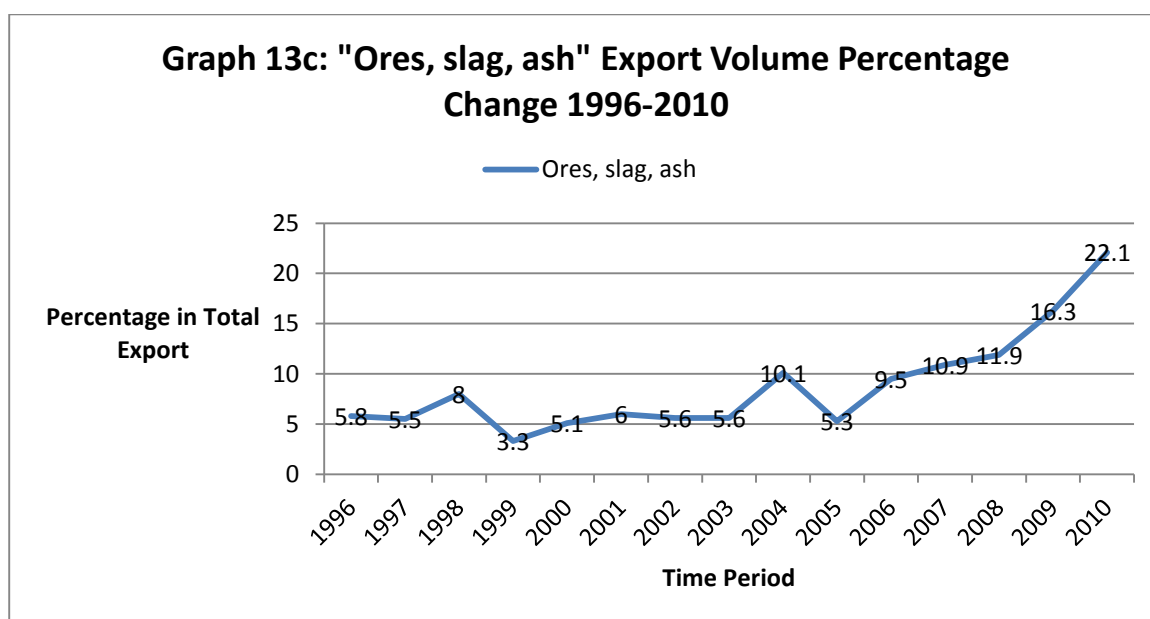


Pearls and precious stone category has dominated the basket for the period 1996-2006 constituting a range of about 23-51 percent of the total export baskets for the period (Graph 13b). Nevertheless, since 2006 this percentage declined to about on average 15.55 percent. If compared to the 1996-2006 arithmetic average of 38.5 percent, decline of pearls and precious stones category percentage comprised about 50% or, in other words, a double decrease.

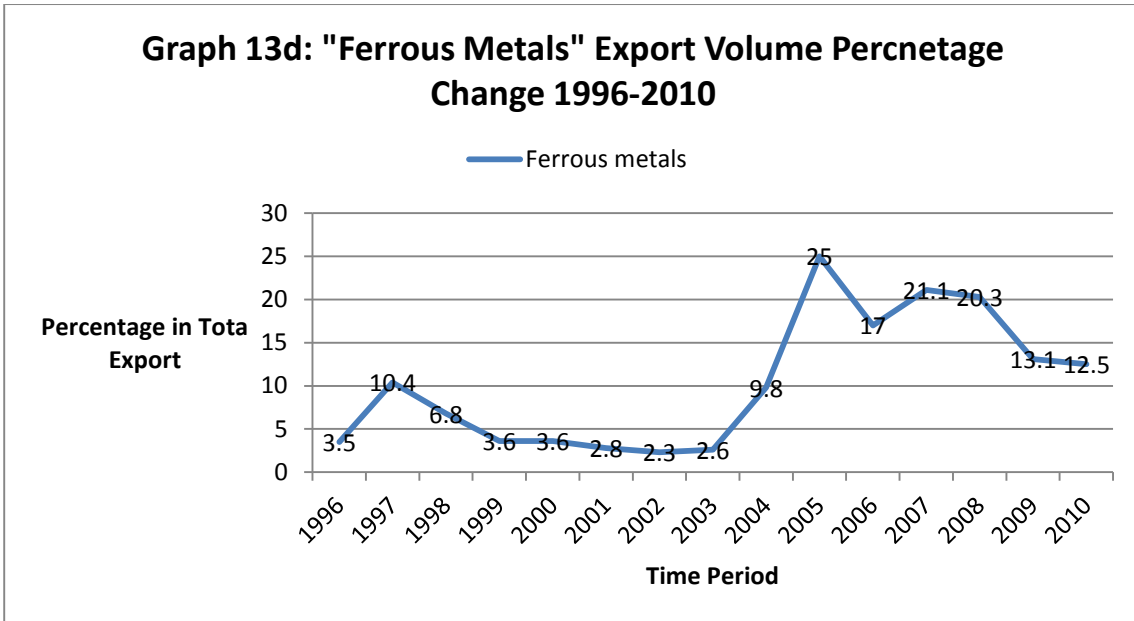
**Graph 13b: Pearls & Precious Metals Volume Percentage in Total Export**



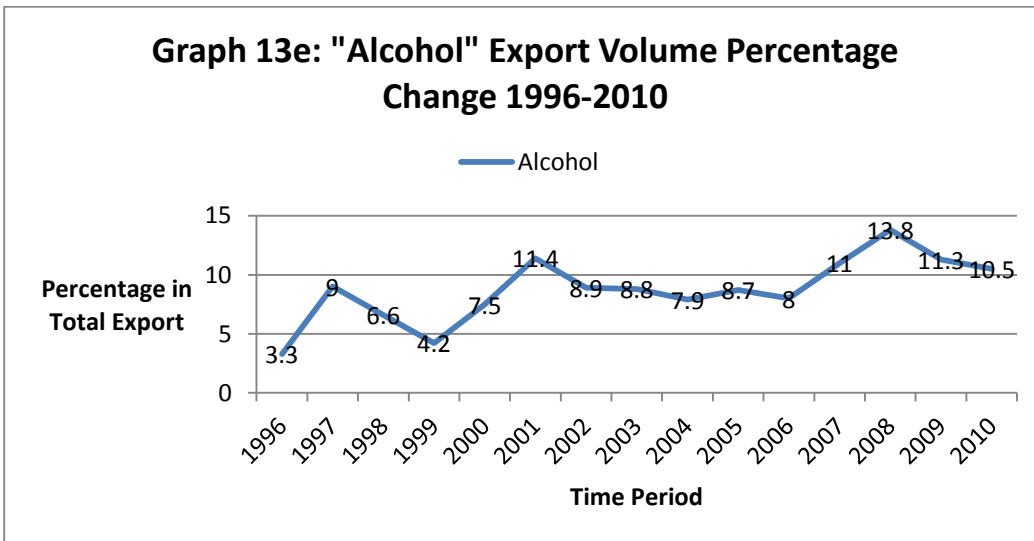
In contrary to this decline, volumes of the other three categories (alcohol, ores and ferrous metals) have increased versus their prior 1996-2006 periods. For the period 1996-2006 these three categories had a maximum 11% presence in the total export basket. Nevertheless, since 2007 percentage of ores, slag and ash category showed a steady increase growing from 11,9 % in 2007 up to 22,1% in 2010- almost a double increase. (Graph 13c)



Percentages for ferrous metals, though increased up to 21.1% in 2007 from the on-average 7.9 % for the period 1996-2006, still showed a continuous decrease for the period 2006-2010. It reached 12.5% in 2010 versus its 2007 percentage of about 21. (Graph 13d).



Alcohol as well reached about 11 percent presence in total export basket for the period 2007-2010 (Graph 13e).



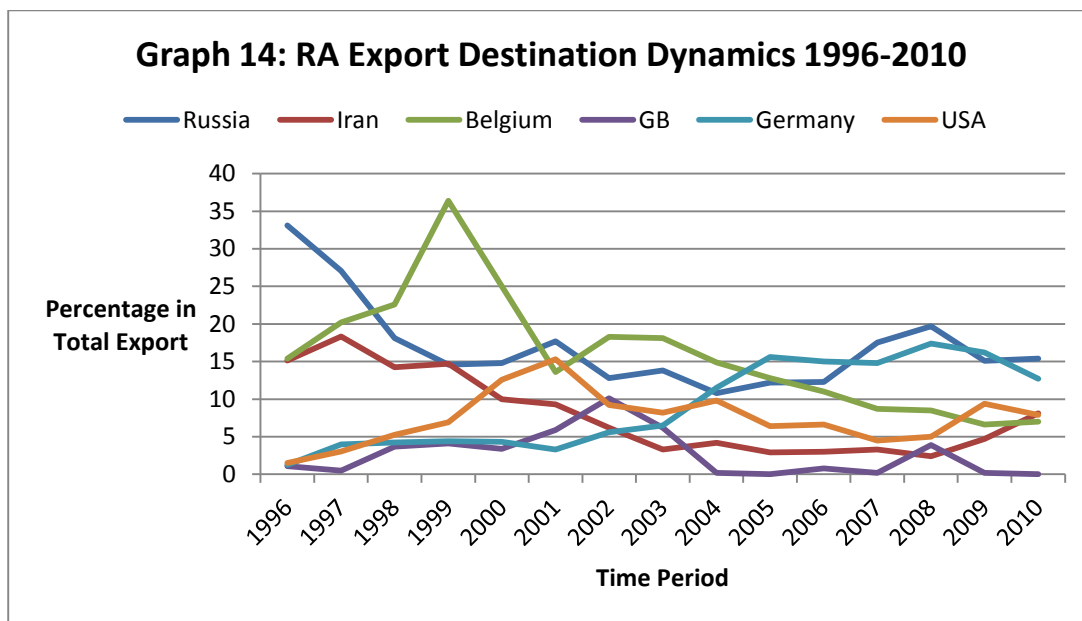
Taken all the data presented above into account some analysts claim there to be causality between landlockedness factor and Armenia's export basket concentration, as well between landlockedness and basket structure. To analyze whether these statements hold true, first the link between landlockedness and export structure is analyzed. First notion to be analyzed is

the specific export good category percentage share variations. In order to be more precise the analysis here shall be periodic depending on reforms in the transit and transportation sector.

Thus, in the period 1996-1999 pearl export decreased from 140232 thousand U.S. dollars (1996) to 55214 thousand U.S. dollars in 1997, 53062 thousand U.S. dollars in 1998 and again went up in 1999 comprising 99879 thousand. Evident is the fact that the transit and transportation prices could not impact on this variation in such a short time period. Same refers to the 200-2004 period when pearl exports ranged between 122848 thousand U.S. dollars and 258327 thousand, in other words comprised a range of about 35-51 percent. (Armstat Yearbooks). A similar picture is witnessed in all other cases: year by year export volumes for different categories shift with transit and transportation costs remaining mostly in a same range. Furthermore, a precise analysis of Armenia's export basket structural dynamics reveals a clear divergence for the whole 1996-2010 period. This is another indicator revealing landlockedness factor not being decisive for export. Landlockedness does not explain these shifts also because the logistical part of the factor did not change that quickly and still does not. Therefore, the claim that logistics hindered export may be correct but to a very small extend.

Additionally, study of some main export destinations as well reveals high possibility for a "destination market" factor being decisive in hindering export. To be more precise, since 1996 Russia has been Armenia's first export destination. However, starting from 1997 Russia's share as Armenia's export destination has gradually declined. Being about 27.05% in 1997 it has comprised 18.13% in 1998 and 14.6 in 1999. (Graph 14) Thus immediately in one-two years the share has declined by almost 10%, a big number taking into account of the very modest changes in transportation and transit prices. In the meantime, shares for Belgium have increased from 15.41% in 1996 up to 22.6 in 1999 with Belgium being more distant than Russia and, therefore, necessitating more transport costs. Most vivid in this aspect is rise

and fall of Great Britain destination shares. Ranging in between 3 and 10% in the period of 1998-2003, these shares immediately drop down to 0.2% in 2004 not increasing up to 1% till 2008. If landlockedness hindered trade decisively, this would necessitate an immediate increase in transportation and transit prices. In the meantime, increase of Germany's shares for the same period state landlockedness costs were not of hindering nature.<sup>31</sup>



Another claim often articulated is that high transportation costs have over time forced Armenian export to concentrate on high-value and low-weight goods such as jewelry and precious metals.(Armenia Trade Diagnostic Study). First of all it should be noted that Armenian export dynamics as already noted diverged annually over time. Therefore, no specific trend of any over-time growth can be observed. Furthermore, share of pearls in concentration of total export basket almost double declined in 2006 and gradually since then. Neither landlockedness costs nor logistics mechanisms explain the double decrease as well

<sup>31</sup> Armenia's export shares to Germany increased from 6.2% in 2003 up to 11.5% in 2004 and 15.6% in 2005.

the gradual decrease since 2006 taken into account of the fact that after monopolization of Armenian air transport by Armavia in 2003 air prices have never decreased. Additionally, landlockedness costs, extremely high as often claimed, do not explain the continuous growth of ores export, as well the growth of alcohol and ferrous metals export- all these are low-value high-weight goods.

However, further estimation of the possible causality (between landlockedness and export basket concentration) in terms of regression analyses is currently impossible because of a lack of a precise transportation cost data for 1996-2010.

To conclude- based on the analysis of the statistical data presented above, it becomes evident that landlockedness has never been the most decisive factor hindering Armenia's export performance. This does not mean that landlockedness does not impact export and trade in general. It's first and foremost impact is on import. Nevertheless, analyses of Armenia's export structure dynamics and export destination shares reveals that the cause of the poor performance of Armenia's export does not lie on Armenia's geographic disadvantage. On the other hand, the analysis undertaken under this chapter neither confirms nor rejects transit and transportation costs being high for Armenia. It does not since: a) there is no clear time-series estimation of those costs, b) there is lack of data to compare the costs with those of other landlocked states for the same time frame, and c) even if high, there is little ground to think Armenia's export performance decisively depends on them.

## **Conclusion: Drawing Implications**

By its 2011 “Export Oriented Industrial Policy” strategy RA government has initiated the long-term plan of implementing export-led growth in the country. This growth model, if instituted, is going to be the second trial in sense that, as claimed by certain analysts, Armenia has already once witnessed such growth during the first half of the 2000s. No matter the questionability of the growth model a comprehensive analysis of Armenia’s export performance is needed to institute a plan that addresses all existing problems.

Armenia’s recent 17-year long export performance experience is, however, in controversy with the country’s current aspirations for export-led growth. As already stated, studies of Armenian export are few. Even fewer are recent-year studies. It needs to be re-stated that most of these studies have been undertaken in the first half of 2000s and shared the common methodology of being more descriptive rather than analytical. Nevertheless, these studies are important in identifying the visible existing factors that can hinder export. Landlockedness of Armenia has been regarded one such factor having a decisive impact on Armenia’s export performance. Though with no direct proof of this; many analysts came to regard landlockedness as a top factors hindering trade.

The study undertaken herein brings forth a hypothesis opposing the conventional thinking described above. It aimed to analyze whether landlockedness impacts export decisively or is merely an obstacle impact of which very modest. To analyze the issue two research questions have been studied: a) assessment of costs incurred by landlockedness on Armenia’s export, and b) the impact of landlockedness as reducing export performance in volumes, affecting export basket structure and concentration. Time-series analysis approach has been integrated to measure more precisely the impact of landlockedness.



It needs to be mentioned that several limitations have hindered providing a more detailed and precise analysis. The biggest such limitation is associated with measuring landlockedness costs. Landlockedness costs are usually analyzed on a two-fold basis: costs incurred by logistics of transit countries, and b) costs incurred by transportation. In both cases several limitations have been faced. In terms of logistics costs the limitations have been and are as follows:

- Lack of time-series data on transit logistics procedures in Georgia: Since 1996 up to 2004 transit through Georgia was regulated both by law, however included concealed costs connected with check points, bribery and several other factors. Though there is an estimation of these costs for the year 1999, still this estimation can not be used as an aggregate data for analyzing impact on the total export that year. On the other hand, since 2004 regime change in Georgia procedures have been greatly improved; though logistics costs have been clarified since 2007 ratification of Georgian customs code. Therefore assessment of logistics transit costs per one standard 20ft. truck is possible only since 2007.
- Lack of freight transportation cost time-series data: Since 1996 up to close to 2002/3 Armenian goods have been exported via various trucking services not in use currently. This disables estimation of any aggregate data for the period specified. On the other hand since 2002 SPAYKA Transportation Company has acquired almost 80% of freight transportation to and from Armenia. However acquiring aggregate time-series data for the period 2002-2010 has been problematic as well: data of this type requires statistical assessment of freight transportation to all export directions under various export regimes provided by the company. Previous cases of cost assessment were made, as already indicated in the literature review part, based on author interviews with companies for specific years before 2002. However, to

acquire a specific time-series data has been impossible. Lack of data of this type thus disables regression analyses of possible causality links between landlockedness costs and export performance indicators.

In the context of such limitations for regression and/or correlation analyses, the methodology of time-series Armenian export performance statistical data review-analysis has been chosen. The analysis has been additionally grounded on assessments acquired from Armenian export literature reviewed, as well analysis of Armenian and Georgian customs codes and logistics performances reported by World Bank LPI and Doing Business Indexes. The study undertaken has revealed the following:

- a) Transportation costs have modestly varied throughout 1996-2010 mostly remaining in a same range: This range is explained by the following factors: a) high costs for the period 1996-200 have been connected to the poor conditions of Georgian roads and use of mostly diesel-inefficient trucks, while crude oil price per barrel for the same period has varied between 17.55 U.S.<sup>32</sup> dollars (1998) and 45.5 U.S. dollars in 2004 (BP World Energy Review 2012) b) low costs after 2005 have been connected with greatly improved Georgian road conditions and use of diesel-efficient cars<sup>33</sup>, while costs for crude oil per barrel have gone high ranging between 62.8 U.S. dollars in 2005 and 111.2 U.S. dollars in 2011.
- b) Logistics costs have improved again though varying in a same range: cost to import to Georgia, for instance, has varied between 1.5 thousand U.S. dollar in 2006 and 1.7 thousand in 2012.
- c) Landlockedness costs, thus have remained basically in the same range, while Armenian export has diverged annually: Export basket of the country contains a

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<sup>32</sup> Measured by 2011 prices

<sup>33</sup> SPAYKA Transportation Company has reported to use Volvo FH and IVECO cars which employ 13-liter engines being far efficient than truck used in 1996.

limited number of products, and has been highly concentrated (about 70% on average) for the entire period analyzed. Main export basket contains 9 SITS 4-digit products out of which alcohol, pearls and ores are the only ones constituting more than 1% in world total exports. Export performance, however, varies to large extend from year to year reporting high percentage increases in one year, and very low percentage in the next.<sup>34</sup>

- d) Even with lack of specific numeric data to regress export performance on landlockedness costs the current analysis reveals that landlockedness costs (remaining almost unchanged) could have not and cannot impact export concentration, structure and performance decisively.

Thus, even without having a numeric data on landlockedness costs; it is more than evident Armenia's export problems lie somewhere else but not in landlockedness of the country. This is the most important contribution of current study. On the other hand, this analysis points, though indirectly, to the idea that neither logistics (most possibly) impacts Armenia's poor export performance. Divergent nature of the export dynamics revealed by this paper shows a need to better analyze Armenian exporter's problems with foreign market penetration and expansion. This might for sure be one of the top factors hindering Armenian export.

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<sup>34</sup> For instance, export to Great Britain reports about 10% export share for the period 2002/3, still goes down to about 0.5% for the period 2004-2006.

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## **Appendix 1: Note on Export-led Growth**

The academic discourse on economics has always regarded economic growth as one of highly complex processes involving various mechanisms and variables ranging from human capital to political institutions and geographic aspects. Trade has been and remains a variable almost always existent in various models and hypotheses of economic growth since the times of Adam Smith, David Ricardo and John Stuart Mill. The recent three-four decades have exemplified the outburst of endogenous growth theories emphasizing the important role of trade in economic growth. These models have focused on variables spanning from degree of openness to tariffs and exchange rate regimes. Since the seventies of the past age export-led growth hypothesis (hence ELGH) has captured the locus of academic debate as a main trigger or engine of economic growth.

To draw a conventional definition- export-led growth hypothesis postulates export as a main variable of economic growth providing for “resource allocation according to comparative advantage, greater capacity utilization, exploitation of economies of scale, generation of technological improvements in response to competition abroad and, in labor-surplus countries, contribution to increased employment” (Balassa, 1978 page 1). Substantive amount of academic argumentation pro and con the hypothesis has been summoned during the last four decades. The classification of the main arguments of academic discourse concerning ELGH provided hereafter serves the need of underlying the core aspects of export-growth nexus this paper extensively hinges upon.

Academic discourse on ELGH has developed from early analyses of correlation in export-growth nexus employing cross-country studies up to exploring causality links between export and growth on country-specific cases. Previous attempts to make the classification mentioned above have basically focused on methodological axis as in cases of Jung and Marshall (1983), Dodaro (1993), Greenaway, Morgan and Wright (2006), Dreger and Herzer (2011). The classification employed under current analysis shall concentrate along two major lines or axes: a) export-economic growth correlation studies, b) export-economic growth causality studies.

### ***Export-economic growth correlation***

Early studies on the role of export in economic growth undertook the correlation aspect of the nexus. Most of these studies were more empirical analyses of exploring links between export and economic growth in search of cross-country evidences. Initial empirical studies explored economic growth in terms of export expansion using the method of bivariate correlation. (UNCTAD, 2011) Starting from 1970s the relationship between export and economic growth was studied in a neoclassical framework including export into production function along with other variables of labor and capital. Bela Balasa in his ground-setting study used regression analysis to test for correlation including export into production function under the argument of export raising total factor productivity<sup>35</sup>. Balasa's arguments were framed along three variables: export growth, GNP per capita (to test for both direct and indirect effects on economic growth), and GNP net of exports (to test for indirect effects) with strong correlation between the first two and a weak correlation between export growth and GNP net of exports.

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<sup>35</sup> Balasa followed the concept set earlier in 1973 by Michalopolous and Jay

An important finding of the study was that “export growth rates are sensitive to the choice of the base year”. (Balasa, 1978)<sup>36</sup>

Contrary to Balasa Feder, instead of aggregate production function, used a simplified two-sector economy model to explain growth in terms of resource-allocation optimality between export and non-export sectors. Feder concluded that export oriented policies bring the economy to optimal resource allocation thus providing for economic growth. Along with this, important was the finding that “on average, there are substantial differences in marginal factor productivities between the export and non-export sectors in part derived from externalities reasoned by positive impact of export on productivity in non-export sector.” (Feder, 1982) Following Balasa Rati Ram studied export-GNP correlation furthering the academic discourse on four aspects: a) study of a larger sample (73 states in 1985, and 88 in 1987), b) separation of export impact on GNP in LDCs and MDCs thus counting for the industrial base variable in Balasa’s study, c) annual time-series country-specific data<sup>37</sup>, and d) two-model analysis including both aggregate production function and Feder’s simplified bisectoral model of economy. (Ram, 1985/ 1987) Ram concluding that “cross section reinforces the time-series results about the importance of exports for growth in most cases” stated for predominantly positive correlation between export growth and GNP.

Later studies on export- economic growth nexus concentrated more on specific country cases furthering the argumentation to the direction of ELGH being a unique-case applicability model rather than a general-applicability one as argued earlier. Country specific studies, however, not in all cases fully confirmed exports being an engine of growth. Fosu studied LDCs in Africa for two sub-periods (1960-1970, 1970-1980) including exports into a production function. Employing regression analysis Fosu found support for ELGH between

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<sup>36</sup> Balasa’s sample included 11 countries with already established industrial base.

<sup>37</sup> Ram argued that previous studies has the shortcoming of omitting parametric differences while concentrating on cross-country analyses. (Ram, 1987)

the variables of manufactured goods export rate growth and GDP growth. (Fosu, 1990) Studying the link between export promotion and economic growth Subasat found a weak positive correlation in case of middle-income countries and no significant correlation in case of low- and high-income ones. However, Subasat made the point that exports do not harm the economy still too narrow focus on them would be “deceptive” (Subasat, 2002). Correlation analyses in cases of four Asian tigers often indicated support for South Korea only as in cases of Sengupta (1991), Darrat (1987) and others (UNCTAD, 2001). Summarizing it should be mentioned that most of the studies under this classification provide for positive effects of ELGH still do not draw upon the causality issue. As Sheehy stated in his analysis of the methodologies employed by students of correlation “...large body of evidence that is supposed to demonstrate the superiority of this [ELGH] strategy has no bearing on this [ELGH] controversy.” (Sheehy, 2002, page 5)<sup>38</sup>. However, it is worth noting that Sheehy did not argue against the export-economic growth nexus.

### ***Export-Economic Growth Causality***

Starting primarily from Michaely aspect of causality became another important part of the academic discourse on ELGH. Studies based on correlation method came to be considered inherently faulty and even a priori since the fact that economic growth was correlated with growth of export did not explain the major ELGH argument of export being the engine of growth. Michaely noted that “...since exports are themselves part of the national product, an autocorrelation is present; and a positive correlation of the two variables is almost inevitable,

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<sup>38</sup> Analyzing the tests done by Balasa and Feder (here BF), Sheehy argued that sectoral growth would lead to GDP growth in all sectors. He indicated the failure of interpreters of BF in sense that Balasa’s correlation was observable if developing countries would reallocate resources from one sector to the other since Balasa assumes developing countries to be on their production possibility frontiers.

whatever their true relationship to each other” (Michaely, 1978 Page 2)<sup>39</sup>. Michaely furthered the discourse replacing the variable of rate of export growth with proportion of export growth in GNP thus testing not for sole increase of export levels, but increase of export to GNP ratio. Testing for link between export-growth ratio and growth of GNP per capita for 41 less developed countries showed strong causality relation “particularly strong among the more developed countries, and not to exist at all among the least developed” (Michaely, 1987 page 4). Thus Michaely as well pointed to Balasa’s minimum-level growth requirement.

As Dodaro later pointed, Michaely concentrated on one-way causality from export to growth, while the opposite could also hold true and discredit the export-led growth hypothesis. Dodaro employed country-based time-series analysis to test for causality and reported weak relationship in both cases: from export to growth and the vice versa. Still, Dodaro argued that his results did not “challenge the notion that exports promote growth and that export promotion is the best strategy for LDCs” (Dodaro, 1993, page 243). Jung and Marshall provided another fundamental insight into causality relationship studying 37 countries for the period 1950-1981. Their study, following the basic notion of almost all previous ones, measured export growth as annual percentage change in real export and tested with real percentage change in GNP or GDP where applicable. The study reported only four cases of positive export-growth causality<sup>40</sup> and suggested that “the evidence in favor of export promotion is weaker than previous statistical studies have indicated” (Jung and Marshall, 1985. page 11). The notion of country-specificity of causality test support was as well reflected in Abu and Mansur study of East Asian countries. They suggested positive causality between real export growth and growth of GDP in only three countries (Pakistan, Srilanka

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<sup>39</sup> As already mentioned above Michaely was exemplary in choosing export/growth ratio as a variable instead of the export level per se.

<sup>40</sup> This was observed in Indonesia, Egypt, Costa Rica and Ecuador (Jung and Marshall, 1985)

and Bhutan), while an opposite correlation was found in cases of India, Nepal and Maldives. (Abu and Mansur, 2007) However, no strong support was found for the export-led growth hypothesis.<sup>41</sup>

Issue of causality attracted a major econometric analysis by Anwer whose study contained 96 countries testing for Granger causality.<sup>42</sup> Anwer's study followed Ram's logic of taking into consideration possible parametric differences among countries in even most homogeneous sample. Anwer reported unidirectional causality from export to GDP in only six countries, bidirectional in only two thus stating that majority of countries do not report for exports promoting growth (Anwer, 1997). The argument of ELGH being country-specific was reflected in the study undertaken by Riezman and Summers as well. The study tested for causality between export and income growth taking into account the import factor largely omitted in most previous studies.<sup>43</sup> Thirty of the countries studied showed modest positive causality between export and income growth. An important implication of the study was that "effects of export growth on income growth not only vary across countries, they are not uniform over time for the same country" (Riezman and Summers, 1995, page 20). Thus summing up causality studies, with some exceptions in methodological measures, mostly confirm the notion of export-led growth hypothesis being country-specific. On the other hand, these tests do not point to exports harming country economies.

A certain group of studies on ELGH also reflects on its externality impacts and concentrates on effects other than volume change in outcome merely. These studies constitute a second important building block for the current study and shall be addressed in a separate subchapter furthering the main argument under research. Export-led growth hypothesis, as indicated

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<sup>41</sup> The study contained cross-section data, again qualifying for the argument that ELGH may not work in all countries and is a rather country-specific model of economic growth.

<sup>42</sup> Granger causality can be simplified as predicting the "Y" variable from its causal "X" variable and previous "Y" variable together, rather than from previous "Y" variable alone.

<sup>43</sup> Income growth was measured as total real gross domestic product computed by multiplying CGDP series for each country by its population. (Riezman and Summers, 1995, page 4)

earlier, postulates export as a main engine for growth bringing to several positive impacts on the non-exporting sectors as well. However, summarizing the theoretic arguments under this subchapter it can be stated that:

- Most causality studies do not reveal strong evidence for exports leading to growth in majority of countries studied and most probably point to the country-specific applicability of the ELGH.<sup>44</sup>
- Correlation studies, no matter several deficiencies in methodological analyses pointed above, tend to support the positive role of exports in economic growth.
- It remains both theoretically and empirically well argued that boost of exporting sector as well positively impacts on non-exporting sector
- Academic discourse on ELGH points to positive correlation and not causality between exports and economic growth. Interestingly enough ELGH basically assumes export of goods and not services. Notable is also the fact that most initial ELGH studies analyzed landlocked states too; these being under the category of least developed countries, thus ELGH may apply to landlocked states as well.
- ELGH viewed under the fact of export as export of services is a generally new notion in the academic literature and hasn't been studied properly so far. Though it needs to be stated that on general global level there tends to be no big difference between the impacts of exporting services and exporting goods.

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<sup>44</sup> Yang states that if ELGH was true for all cases real exchange rate appreciation should have been identified in all scases under various correlation studies. (Yang 2008, page 5)