Exploring Complementarities Between Turkey and Armenia for Regional Cooperation: Potentials and Challenges

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Abstract: *The objective of this study is to find out whether Turkish and Armenian economies happen to have sufficient level of complementarities to prepare foundation for mutual trade if border closure were to be ended. Armenia and Turkey have geographic proximity, which promise a solid background for economic cooperation between the two countries. However, the product and the trade composition of Turkey and Armenia need to be evaluated to see what kind of trade may take place between them not only under open borders but also under free trade conditions. Beyond the evaluation of general potential bilateral trade conditions, this study intends to investigate what border trade, which often creates economies of scale, diversification, income and welfare effects, may contribute to close communities surrounding the Armenian-Turkish land border and/or riparian communities around the Aras(Araz) River, Arpaçay and Mirmir brooks.Possibilities of economic cooperation between Armenia and Turkey around the bordering towns in terms of sectoral cooperation in energy, fishing, agriculture, environment is also going to be scrutinized in this paper.*

The study assumes that all existing political and security related issues between two countries are settled before any cooperative effort starts and flourishes. It also hypothesises that unless ending of the border closure is accompanied by improved bilateral trade in particular and bilateral economic relations in general, the viability of relations is likely to be dim. That is if the ending of border closure only serves the purpose of transit trade from and over both countries to all directions, negative spill over effects of transit trade may carry the risk of ofsetting the benefits of open borders and may result in the return of the undesirable border closure again.

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Introduction

The objective of this study is to find out whether Turkish and Armenian economies happen to have sufficient level of complementarities to prepare foundation for bilateral trade if border closure were to be ended. Armenia and Turkey have geographic proximity, which promises a solid background for economic cooperation between the two countries. However, the product and the trade composition of Turkey and Armenia needs to be evaluated to see what kind of trade may take place between them under open border and normal trade conditions.

Beyond the evaluation of general potential bilateral trade conditions, this study intends to investigate what border trade, which often creates economies of scale, diversification, income and welfare effects, may contribute to close communities surrounding the Armenian-Turkish land border and/or riparian communities around the Aras (Araz) River, Arpaçay and Mirmir brooks.

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1. Armenian and Turkish Economies from a Comparative Perspective

When we talk about the Armenian and the Turkish economies, we are making reference to two neighboring countries with diversified economic structures. However, in terms of GDP and trade figures, the Turkish economy is much larger than the Armenian economy. In the classical theory of international economics if two economies engage in trade, the small economy is likely to benefit from it [1]. The model Tharakan and Thisse developed predicts that when engaged in international trade the small country will benefit from the market expansion. It also predicts that the small country gains from the free trade, where the big partner loses from it. On the other hand, the trade structures of both countries reflect upon the level of economic diversification they possess[2]. Diversification and openness are two characteristics, which immediately promise possibility of trade with complementarities under the conditions of open border and normal trade, as well as possibility of intra-industry trade in terms of similar products to ensure level of sophistication in commercial relations for Armenia and Turkey. Nevertheless, a further detailed economic, administrative and infrastructure related inquiry is needed to evaluate the possibility of a substantial change in relations from no trade to trade, when and if political climate avails.

With the assumption that Armenia has so far initiated and partially completed reform programs to privatize its economy and restructure its banking and insurance systems since after it became an independent country in 1991, it must have a functioning market economy similar to Turkey's. Therefore, if border closure is to be ended and trade is established under normal circumstances, private actors will be involved in trade and trade related issues, with only little or no state

[1] Tharakan, J. and J.-F Thisse,, 2000, "The Importance of Being Small: Size Effects in International Trade", Core Discussion Paper. http://econpapers.repec.org/paper/fthlouvco/2000_2F1.htm
[2] Ibid

involvement. Nevertheless, public institutions such as ministries, foreign economic councils, undersecreteria of trade, and chambers of trade and commerce in both sides are supposed to take steps to have treaties signed to facilitate establishment of normal trade between Armenia and Turkey. Eventhough in full- fledged market economies administrative guidance of public institutions are not essential, in case of Armenia and Turkey, admintrative assistance and promotion would only reassure, legitimize and promote economic relations to be established between the two countries.

The total trade value of Armenia barely exceeds $2.5 billion as of 2005[3], whereas it is almost $200 billion for Turkey the same year. Armenia's economy prior to independence was based largely on chemicals, electronics, machinery, processed food, synthetic rubber, and textile industries. Metal-cutting machine tools, forging-pressing machines, electric motors, tires, knitted wear, hosiery, shoes, silk fabric, chemicals, trucks, instruments, microelectronics, gem cutting, jewelry manufacturing, software development, food processing, brandy industries are also reported as significantly developed with no reference to their competitive or cost efficiencies, which in turn create revealed comparative advantages in Armenian exports.

The most recent outlook of the Turkish economy on the other hand displays the features of an emerging industrial country which is becoming increasingly service oriented, yet also preserving its agricultural characteristics because of its factor endowments. Then Turkish exports are in compliance with the country's production structure predominantly industrial and increasingly service oriented with agro products still displaying significance.

For the last 5 years since 2001, the Armenian exports seem to be mainly dominated by manufacturing goods in the form of products of textile and metal industries. Nevertheless agricultural products also claim a significant part in total exports. Even though short-term export trends display an erratic outlook, and in absolute numbers exports are still relatively modest in both volume and value, Armenian exports show rapid change from one year to another, especially between 2001 and 2005.

So far as the production resources used in the form of raw materials, petroleum, natural gas, intermediate goods and investment goods the Armenian economy displays high dependency on imports.
Within its yet limited framework, main bulk of the Armenian imports seems to consist of consumer goods and raw materials, especially increasingly so to supply input for jewelry making industries in recent years, which may create a special niche for the country's exports in world markets, not only because of the quality and efficiency of artisanship of Armenian traditional jewelry making, but also because of the possible Diaspora connections throughout the globe in jewelry wholesale and retail markets. Nevertheless there are also imports of investment products, which claim only a small part of total imports and may create a source of opportunity for Turkish exporters to explore the Armenian needs in terms of capital goods and augment the already high growth of productivity in Armenian economy.

Turkey's main trade partners are the EU countries; Russia and the Middle East. The customs union arrangement with the EU, which ensures free movement of industrial goods between the EU and Turkey has resulted in a trade creation effect for Turkish goods since 1996, despite the fact that until the last enlargement of the EU to include the Central and Eastern European countries and until the free trade agreements with countries of the MENA region had become effective. On the other hand Armenia is currently engaged in international trade mainly with Belgium, Germany, USA, Israel, Russia, UAE and Iran. Armenia seems to be reaching international markets despite the problematic land trade routes.

[3] "Foreign Trade of the Republic of Armenia for 2002-2005, Subsections of Classifications of SITC"

However, since "the conflict with Azerbaijan over Nagorno-Karabakh has not been resolved, the blockade along both the Azerbaijani and Turkish borders reportedly harms the Armenian economy anyway, because of its dependence on outside supplies of energy and most raw materials. Land routes through Azerbaijan and Turkey are closed; routes through Georgia and Iran are inadequate or unreliable"[4]. Therefore, openning of the Turkish border would prepare greater opportunities for Armenian exports and would facilitate imports to nourish the growing needs of the Armenian economy. The only question is whether it would generate trade between Armenia and Turkey or not.

2. Levels of Trade Openness as Potentials for Armenia and Turkey

Armenia and Turkey have considerably open economies. Opening of the Armenian economy started with the collapse of the Soviet Union after 1989. It took Armenia a period of time to depart from the complex economic interdependencies of the Soviet regime and establish its own new international relations. Turkey's level of trade openness increased rapidly over years since 1980s on at the cost of high foreign trade and current account deficits in recent years, which happen to constitute a cause of concern for macroeconomic stability from time to time. The most important dynamic behind the trade openness in both countries is the economic reforms, which promote trade liberalization. The following table indicates the trade openness and current account deficit/GDP ratios for both economies in 2000s.

Table 1: Trade Openness and Current Account Deficit/GDP Ratios for Armenia and Turkey, 2001-2005

	Armenia		Turkey	
Years	Trade Openness (Trade Volume/ GDP)	Current Account Deficit/GDP , %	Trade Openness (Trade Volume/GDP) %	Current Account Deficit/ GDP, %
2001	75,0	-9,4	50	2.3
2002	79,3	-6,2	49	-3.4
2003	86,5	-6,7	60	-2.8
2004	73,0	-4,5	53	-5.1
2005	67,0	-3,9	53.5	-6.3

Source: for the Turkish data www.dtm.gov.tr; for the Armenian data WT, World Bank, National Statistical Service of Armenia

As the table 1 gives an idea about the macro economic aspects of trade in terms of trade openness and current account deficit ratios in the GDP, risks Turkish and Armenian economies carry provide us with elements for comparisons. Nevertheless both economies are fairly open, which must be considered as a guarantee for their bilateral future relations. From the point of view of comparative advantages of trading sectors, trade openness of sectors is important to beat the competitiveness challenge, when they have the necessary Ricardian elements and/or what complements the Ricardian comparative advantages as competitive efficiency. For instance, when Turkish manufacturing industries are investigated according to their export/production ratios the following sectors have the highest (43 sectors, which have above 25% export/production ratios) trade openness ratios: Clothing except furs; knitwear; ready textiles except clothing; TV and radio receivers; Processed vegetables and fruits; Spare parts of motor land vehicles.[5] It is not just a coincidence that in most world markets Turkey has comparative

[4] "Armenian Economy", www.armeniapedia.org
[5] http://www.dtm.gov.tr/ead/strateji/II-1.htm

advantages in these products. These products are what Turkey may also export to Armenia in addition to raw materials and agricultural products.

3. Turkey's Comparative Advantages in Trade

As a result of the comparative advantages it has gained over the recent years, the Turkish economy has become an exporter of consumer (40.3%) and intermediate products (49.3%) as of 2004.[6] Although the share of investment goods in the total exports remains relatively modest in comparison to consumer and intermediate goods, the rate of increase in the exports of investment goods also indicate an important change in the composition of not only the Turkish trade but also the Turkish production from light industries to heavy and technology intensive industries. Exports have reached almost $ 73.476 billion in 2005.[7] The composition of exports of Turkey indicates that in addition to traditional export items, the following exportables have become increasingly important for Turkish trade because of the revealed comparative advantages they display in world markets: TV and radio receivers; sound and video apparatus; Electronic valves and tubes; Electrical motors and equipment; Insulated wires and cables; Automotive products-Land vehicles and parts; Main chemical products, pharmaceutical chemicals and chemical fertilizers; Metallic construction materials; Pharmaceuticals and Pharmacy products; Paper and pulp; Synthetic rubber and plastic materials.

When it comes to the imports of Turkey, which reached $116.773 billion in 2005, 68% of the total is the intermediate, 15% of the total is the consumer and 18% is the investment products. Imports are basically supporting the exports sectors. Especially the production of TV and radio receivers, tobacco products, electronic spigots and parts, chemical fertilizers, land transport vehicles and parts are heavily reliant upon imports. The production structure of the Turkish industry is changing into an investment good producing and exporting one. Therefore imports of materials are also used for the production of investment goods.

In foreign markets Turkey displays revealed comparative advantages (RCA) in the following products[8]: In general, 80% of Turkey's comparative advantages are in industrial products and in textiles and clothing, which is followed by fresh vegetables and fruits. In recent years Turkey has been increasingly gaining RCA in machinery and transport vehicles as well as colored TVs.[9] However, RCA numbers vary from country to country, and from one year to another. The following exports of Turkey seem to perform well in almost all EU countries in recent years: Woven fabrics; Floor tiles and carpets; Cement and construction materials; TV receivers and video monitors; Men's and Women's apparels; Men's and Women's knitwear; Other clothing; Socks, pantyhose's, gloves, scarves and shoals; Apparel other than woven material. While vegetables and fruits are losing RCAs in the EU markets, they still hold high RCAs in the NAFTA area with products like oilseeds, tobacco and stone and soil made construction materials. Food products as well as construction materials have high RCA in the Middle East markets. Although Turkey's exports to the Middle East and North Africa, this region only claims approximately 19% of the country's total exports, where Turkey holds RCAs in fresh and dry vegetables; iron; synthetic and artificial fabrics. Israel, which happens to be an unexhausted market for Turkish exports yet, constitutes a promising destination for products such as construction materials, fresh and dry fruits, cut wood and polyester fibers. Tires, plastic products

[6] see http://www.dtm.gov.tr

[7] op.cit

[8] In terms of Standard International Trade Classifacition – Revised 3 Turkey's exports are compared with imports of 57 countries to see which goods the country have competitive advantage (CA). If the coefficient is greater than 1 according to the Balassa index, it indicates the country's CA. The Balassa formula is as follows: Xij/Xj : Xit/Xt where $X_{ij:}$ Türkiye's ith export to country j; X_j: Türkey's total exports to country j; X_{it}: The world's export of i to county j; X_t: The world's total exports to country j. See http://www.dtm.gov.tr/ead/strateji/II-1.htm.

[9] Ertekin, M., March, 2005, "Sektörler itibarı ile Üretim –Dış Ticaret İlişkisi ve Koşulları"

and agro pharmaceutical products and clothing are products which Turkey has RCA in the MENA region. For newly reached markets such as China and New Zealand and other East Asian countries, Turkey's canned products; frozen seafood, tires and knitwear have the highest RCAs. Eastern European countries including Russia enjoy Turkish floor tiles and carpets; grain, confectioners products, gaseous beverages and men's knitwear with RCAs.[10]

4. Similarity Between Exports and Imports of Turkey and Armenia

Trade is considered as an extension of the domestic market performance. Therefore countries with similar demand patterns constitute potential markets for each other's products. Thus, the more similar the range of products demanded in the two nations, the greater would be the overlap of potential exports. Furthermore, if the product differentiation and diversification between nation's goods are high this may work as a trade- creating factor.

MacDougall was the first to use export similarity between any country pairs (or groups) as a measure of trade potential.[11] However, the MacDougall index is considered as sensitive to the relative scale of exports of the two exporters, since it deals with the ratio of the product elasticity of substitution between imports from two different sources to the aggregate (across all products) elasticity of substitution of imports from those sources. The value of the index tends to approach unity when one exporter is larger than the other. Therefore it may be misleading to employ the MacDougall index for the Armenian Turkish data knowing the scale difference between the two economies. Finger and Kreinin[12], the index of whom only requires reliable trade data, approaches the matter within the General System of Preferences (GSP) among trading parties. Within this framework, similarities in exports may create two effects: trade creation and trade diversion. In this part of the study, considering the limitations of trade data, and the inapplicability of GSP in the case of Armenian trade, the following formula has been applied to determine export and import similarity indices between Armenia and Turkey.

$$\sum_i dxy = \sum_i |X_i - Y_i| / \sum_i X_i + Y_i \qquad (1)$$

where X_i stands for the share of ith commodity exports in the total exports (imports) of country A; Y_i stands for the share of ith commodity exports (imports) in the total exports of country B; $|X_i - Y_i|$ is the differences in respective shares of exported (imported) commodity in absolute terms; $\sum_i X_i + Y_i$ is the horizontal sum of total shares as 200; $\sum_i dxy$ is the cumulative total of share differentials as of exports(imports) as percentage export (import) similarity index.[13]

Table 2: Export and Import Similarities Between Armenia and Turkey (2002-2005)

Export 2002	Turkey,	1. % in	Armenia,	2. % in	(1-2)/200

[10] http://www.dtm.gov.tr/ead/strateji/II-1.htm
[11] MacDougall, G.D.A., 1952, ''British and American Exports: a study suggested by the theory of comparative costs".
[12] Finger, J.M. and M.E. Kreinin, 1979, "A measure of 'Export Similarity' and its possible uses".
[13] For the Bray-Curtis index see Tajoli, L., and L. de Benedictis, July 2003, "Economic integration, similarity and convergence in the EU and CEECs trade structures".

	million USD	total	million USD	total	
Agricultural products	3978	5,5	65	11,0	5,5
Food	3620	5,0	57	9,7	4,7
Fuels and mining products	1474	2,0	78	13,2	11,2
Fuels	683	0,9	13	2,2	1,3
Manufactures	30192	41,7	302	51,3	9,6
Iron and steel	2781	3,8	9	1,5	2,3
Chemicals	1525	2,1	2	0,3	1,8
Machinery and transport equipment	8690	12,0	23	3,9	8,1
Office and telecom equipment	1597	2,2	4	0,7	1,5
Telecommunications equipment	1543	2,1	4	0,7	1,5
Automotive products	3263	4,5	2	0,3	4,2
Textiles	4244	5,9	7	1,2	4,7
Clothing	8057	11,1	20	3,4	7,7
Other consumer goods	798	1,1	3	0,5	0,6
TOTAL	72445	100	589	100	64,6
Similarity index					0,68

Import 2002	Turkey, million USD	1. % in total	Armenia , million USD	2. % in total	(1-2)/200
Agricultural products	3981	4,1	202	12,4	8,3
Food	1903	2,0	191	11,7	9,8
Fuels and mining products	11477	11,8	197	12,1	0,3
Fuels	9026	9,3	169	10,4	1,1
Manufactures	33938	34,9	522	32,0	2,8
Iron and steel	2162	2,2	19	1,2	1,1
Chemicals	7886	8,1	70	4,3	3,8
Machinery and transport equipment	15597	16,0	124	7,6	8,4
Office and telecom equipment	3245	3,3	39	2,4	0,9
Telecommunications equipment	1087	1,1	25	1,5	0,4
Automotive products	2797	2,9	23	1,4	1,5
Textiles	2839	2,9	18	1,1	1,8
Clothing	283	0,3	9	0,6	0,3
Other consumer goods	1159	1,2	22	1,3	0,2
TOTAL	97380	100	1630	100	40,6
Similarity index					0,80

Source: Compiled and calculated by the author with the assistance of Fazil Kayikci, from dtm.gov.tr for the Turkish data and from Foreign Trade of Republic of Armenia for the Armenian data.

Export 2003	Turkey, million USD	1. % in total	Armenia, million USD	2. % in total	1-2/200
Agricultural products	5257	5,5	84	10,4	5,0
Food	4735	4,9	79	9,8	4,9
Fuels and mining products	2011	2,1	121	15,0	12,9
Fuels	980	1,0	11	1,4	0,3
Manufactures	39778	41,4	429	53,3	11,9
Iron and steel	3342	3,5	15	1,9	1,6
Chemicals	1893	2,0	3	0,4	1,6
Machinery and transport equipment	12554	13,1	23	2,9	10,2
Office and telecom equipment	1980	2,1	2	0,2	1,8
Telecommunications equipment	1924	2,0	1	0,1	1,9
Automotive products	5112	5,3	3	0,4	4,9
Textiles	5262	5,5	8	1,0	4,5
Clothing	9962	10,4	23	2,9	7,5
Other consumer goods	1311	1,4	3,5	0,4	0,9
TOTAL	96101	100	805,5	100	69,96
Similarity index					0.65
Import 2003	Turkey, million USD	1. % in total	Armenia, million USD	2. % in total	1-2/200

Agricultural products	5265	4,0	225	10.8	6,83
Food	2791	2,1	213	10,2	8,11
Fuels and mining products	15248	11,4	214	10,3	1,19
Fuels	11575	8,7	177	8.5	0.20
Manufactures	45831	34,4	746	35,7	1,35
Iron and steel	3282	2.5	27	1.3	1.17
Chemicals	10428	7.8	89	4.3	3.56
Machinery and transport equipment	21510	16.1	186	8.9	7.23
Office and telecom equipment	4166	3.1	52	2.5	0.63
Telecommunications equipment	1530	1.1	35	1.7	0.53
Automotive products	6209	4.7	50	2.4	2.26
Textiles	3441	2.6	17	0.8	1.77
Clothing	422	0.3	15	0.7	0.40
Other consumer goods	1565	1.2	41	2.0	0.79
TOTAL	133263	100	2087	100	36.03
Similarity index					0.82

Source: Compiled and calculated by the author with the assistance of Fazil Kayikci from dtm.gov.tr for the Turkish data and from Foreign Trade of Republic of Armenia for the Armenian data.

Export 2004	Turkey, million USD	1. % in total	Armenia, million USD	2. % in total	1-2/200
Agricultural products	6501	5,0	92	10,0	5,03
Food	5892	4,5	82	8,9	4,41
Fuels and mining products	2895	2,2	153	16,7	14,44
Fuels	1429	1.1	20	2.2	1.08
Manufactures	53445	41,0	423	46.1	5.05
Iron and steel	6004	4.6	68	7.4	2.80
Chemicals	2566	2.0	2	0.2	1.75
Machinery and transport equipment	18280	14.0	24	2.6	11.42
Office and telecom equipment	2930	2.2	3	0.3	1.92
Telecommunications equipment	2859	6.2	3	0.3	1.87
Automotive products	8103	6.2	1	0.1	6.11
Textiles	6428	4.9	10	1.1	3.85
Clothing	11193	8.6	33	3.6	5.00
Other consumer goods	1745	1.3	4	0.4	0.90
TOTAL	130270	100	918	100	65.64
Similarity index					0.67

Import 2004	Turkey, million USD	1. % in total	Armenia, million USD	2. % in total	1-2/200
Agricultural products	6059	3,2	290	12,9	9,76
Food	3090	1,6	277	12,3	10,73
Fuels and mining products	20177	10,5	216	9,6	0,90
Fuels	14407	7,5	207	9,2	1,71
Manufactures	67417	35,2	725	32,3	2,87
Iron and steel	5325	2,8	29	1,3	1,49
Chemicals	14211	7,4	98	4,4	3,05
Machinery and transport equipment	33704	17,6	189	8,4	9,16
Office and telecom equipment	6200	3,2	48	2,1	1,10
Telecommunications equipment	2501	1,3	33	1,5	0,17
Automotive products	11512	6,0	51	2,3	3,73
Textiles	4170	2,2	18	0,8	1,37
Clothing	651	0,3	22	1,0	0,64
Other consumer goods	2304	1,2	42	1.9	0.67
TOTAL	191728	100	2245	100	4733
Similarity index					0.76

Source: Compiled and calculated by the author with the assistance of Fazil Kayikci, from dtm.gov.tr for the Turkish data and from Foreign Trade of Republic of Armenia for the Armenian data.

Export 2005	Turkey,	1. % in	Armenia,	2. % in	1-2/200

	million USD	total	million USD	total	
Agricultural products	8309	5,5	111	9,0	3,45
Food	7714	5,1	103	8,3	3,20
Fuels and mining products	4564	3,0	215	17,4	14,35
Fuels	2641	1,8	29	2,3	0,59
Manufactures	60116	39,9	412	33,3	6,64
Iron and steel	5827	3,9	286	23,1	19,25
Chemicals	3060	2,0	3	0,2	1,79
Machinery and transport equipment	21600	14,4	31	2,5	11,85
Office and telecom equipment	3208	2,1	3	0,2	1,89
Telecommunications equipment	3190	2,1	4	0,3	1,80
Automotive products	9370	6,2	1	0,1	6,15
Textiles	7075	4,7	7	0,6	4,14
Clothing	11833	7,9	30	2,4	5,44
Other consumer goods	1990	1,3	2	0,2	1,16
TOTAL	150497	100	1237	100	81,68
Similarity index					0,59

Import 2005	Turkey, million USD	1. % in total	Armenia, million USD	2. % in total	1-2/200
Agricultural products	6480	2,8	380	14,1	11,26
Food	3284	1,4	354	13,1	11,69
Fuels and mining products	28100	12,2	261	9,7	2,55
Fuels	21254	9,2	247	9,2	0,09
Manufactures	78044	33,9	756		28,0
Iron and steel	6746	2,9	46	1,7	1,23
Chemicals	16438	7,1	154	5,7	1,44
Machinery and transport equipment	38028	16,5	235	8,7	7,83
Office and telecom equipment	6816	3,0	62	2,3	0,67
Telecommunications equipment	4469	1,9	51	1,9	0,05
Automotive products	11973	5,2	54	2,0	3,21
Textiles	4440	1,9	16	0,6	1,34
Clothing	788	0,3	30	1,1	0,77
Other consumer goods	3066	1,3	53	2,0	0,63
TOTAL	229925	100	2699	100	48,70
Similarity index					0,76

Source: Compiled and calculated by the author with the assistance of Fazil Kayikci, from dtm.gov.tr for the Turkish data and from Foreign Trade of Republic of Armenia for the Armenian data.

Table 3: Export and Import Similarity Indices

2002		2003		2004		2005	
X Similarity	M Similarity	X Similarity	M Similarity	X Similarity	M Similarity	X Similarity	M Similarity
0.68	0.80	0.65	0.82	0.67	0.76	0,59	0,76

Despite the size and per capita income differentials, but similarity in product and trade diversification outlooks, the objective of calculating the trade similarities between Armenia and Turkey is to assess to what extent these two countries are complementary (or competitive) in their exports to the world. Tables 2 and 3 indicate the existence of some similarities between the nature of exports between Armenia and Turkey. Nevertheless, the indices are not only relatively low, but also not steadily increasing either.

5. Promises for the Future: Trade- Creation under Open Borders

Is there a room for "trade- creation" between Armenia and Turkey if border closure ends and trade facilitating treaties come into effect to promote trade between two neighbors?

Having the product and trade diversification and trade openness levels of both countries in mind, moderate levels of export similarities in 2000s may be taken as potentials for complementarities between some economic sectors in Armenia and Turkey. The existing levels of similarity of exports between Armenia and Turkey may also be taken as criteria to assess the degree to which the respective economic structures are becoming more similar or more divergent. According to the Finger- Kreinin interpretation, if exports are not displaying similarity (subject to little or no commodity overlap), then there is less likelihood for trade diversion[14], which means more likelihood for trade-creation.

On the other hand similarities in product and trade composition may allow options beyond trade such as creation of scale economies with joint productions in various manufacturing sectors by taking advantage of different production possibilities through utilization of cost differentials. This may in turn foster trade between the two countries.

Furthermore, although the potentials of intra-industry trade in certain manufacturing products are there, the actual realization of such a trade option is left to how the Armenian economy performs and expands in coming years. Given the size differentials in their respective factor endowments, import similarities on the other hand indicate similar tastes and preferences in the two economies, which promise opportunities for complementarities rather than competitiveness. The level of significance in import similarity is relatively higher than the export similarities for the two countries during the period under investigation in this study. Therefore, opening of borders is most likely to help the transfer of similar importables to Armenia with greater ease and obviously create substantial reductions in terms of import costs for the Armenian economy. If opening of borders may initiate trade between Armenia and Turkey, and if Armenia starts importing what it has already been importing from the rest of the world from Turkey, similarities in product and trade structures may work in favor of trade- creation instead of diversion. It is impossible to say at this juncture that Armenia and Turkey are in a position of rival economies. Therefore, indeed the option of trade- diversion for Armenia and Turkey is limited, which in turn may prepare a background for the argument of trade- creation.

6. Options beyond Trade for the Armenian and Turkish Economies

Trade is the simplest form of economic cooperation between countries. Among neighboring countries, which share borders, border trade[15] offers options for communities to make business in closer proximity. However, advantage of time and distance must be accompanied by the variety, quantity and the uniqueness /distinctness of products (services), which are mutually made available for consumption so that border trade is justified. Under normal circumstances, border towns are expected to produce, export and consume the imported merchandize bilaterally, and benefit from the welfare effects of price differentials, for trade to qualify as border trade. If items that are subjected to border trade are shipped to other parts of countries, the rules of border trade is violated. Than regular international trade takes over border trade and the mission of creating

[14] Finger, J.M. and M.E. Kreinin, 1979, ibid

[15] "Border trade, in general, refers to the flow of goods and services across the international land borders between countries. In this sense, it is a part of normal trade that flows through standard EXIM frameworks of nations. However, the economic, social and political implications of border trade are far deeper than normal trade that flows through the sea and airports. Border trade is the increased trade in areas near a national border caused by a price difference."
See http://en.wikipedia.org/wiki/Border_trade

welfare for bordering communities go somewhat unaccomplished. Locally produced cheaper and plentiful fruits and vegetables, meat and poultry, genuine handicrafts may find opportunities for relatively enlarged markets when bordering towns of Armenia and Turkey start trading. Kars, Iğdır, Ardahan communities of Turkey may find opportunities to sell their dairy products, fruit and poultry to their neighbor communities beyond the border and purchase what is offered to them from their Armenian counterparts.

Despite the border closure and zero trade situations between the two countries, hundreds of Armenian nationals find job opportunities in Turkey as jewel makers and household aids. Work permits are granted regularly to Armenian nationals by Turkish authorities. If one of the most difficult issues of international trade that is the movement of people is handled with relative ease, why should border trade be so difficult to implement since temporary travel of traders is unlikely to constitute problem?

Border trade often results in decline in local prices of goods in general and decline in prices of goods like tobacco and alcoholic beverages. Therefore, consumers tend to favor border trade, which creates the impact of market differentiation. However, the level of unemployment in Eastern Anatolian provinces is considerably high. They send migrant workers to big towns of Western or Southern Turkey, who either settle in those towns in due time or return to their hometown with decreasing frequency. Consequently the average level of income in Eastern Anatolia is lower than the national average[16]. Economic activities of the region are limited to agriculture, some small-scale light industries, handicrafts and public sectors. Therefore, Armenian goods must really bring comparative price advantage in competing products to capture local markets and/or variety with competitiveness. In a region, which suffers from insufficient purchasing power, even if border trade is allowed it may take time for markets to adjust their buying behavior according to the variety of goods at competible cost. Thus, allowing border trade may not automatically flourish normal commercial activities on the Turkish side.

Nevertheless, beyond the argument for border trade, there is a growing sentiment among local communities in favor of ending of border closure anyway, with the claim that “reopening the border crossing with Armenia will not be simply a move that will boost the local economy of the region but will also constitute a major breakthrough for Turkish exporters who have been dreaming of acquiring cheap and secure land and rail access to markets in Central Asia and beyond”[17]. Nevertheless, there is also the counter argument, which concentrates on the possibility that the opening of the border may facilitate the smugling of undesired commodities into Armenia and Turkey and countries beyond, instead of serving infavor of normal trade. It is my contention that smugling may occur with or without border closure. The remedy to such a problem depends on collaborative actions of authorities from both sides. Therefore, the ending of a 13-year long closure must be accompanied by cooperation in customs controls and regulations. Common security measures may enforce friendly cooperation. Rather than the political decision itself, good will in the background is the first step towards ending of the border closure to boost border trade between the two countries.

If the ending of border closure only serves the purpose of transit trade from and over both countries to all directions, negative spill over effects of transit trade may carry the risk of offsetting the benefits of open borders. Therefore, bilateral trade must be established and flourish between the two countries.

[16] The per capita GDP in 3 bordering towns on the Turkish side were as follows in 2002: Kars: $886, Ardahan: $842, Iğdır: $855.

[17] Turkish Daily News (Sunday, July 30, 2006) “Kars”, http://www.armeniapedia.org/index.php? title=Kars

Opening of the border, which has been closed since 1993 must be expected to have immediate repercussions on the transport sectors as well. Kars-Gyumri railroad would start operating to commute passengers and commodities both ways. Upgrading of railroads and equipment would obviously revive the declining railway sectors and encourage tourism and trade. The economic impact of an activity rather than cost generating transport route for both Kars and Gyumri should not be overlooked but not underestimated either.

There are also options for Armenia and Turkey beyond trade in the sense of cooperation in power generation and electricity trade; Joint processing of river products; Environmental preservation and control are open to both Armenia and Turkey. Bordering waters of Aras(Araz) river, Arpacay and Mirmir brooks pass through wide and barren lands of both countries. Riparian communities may benefit from joint water use, treatment, irrigation, as well as joint forestation and land development projects.

Local authorities in riparian Turkish towns seem sensitive on environmental issues. They are especially distressed about the old Soviet made Metzamor nuclear power plant, which according to reports, "is located on a major fault line and constitutes an environmental safety threat for Kars, Igdir and other towns around the border because of the possibility of radioactive leakages and spill-over[18]. According to the EU sources, union officials offered a compensation of 100 million Euros to Armenia to close down the plant, upgrade the infrastructure and help finance the immediate energy need of Armenia. But according to the same source the offer was rejected by Armenia[19].

7. Concluding Remarks

Armenian and Turkish economies differ in size, but display similarity in product and trade diversification. The export and import similarity indices calculated for this study do not indicate a possibility of trade diversion but a possibility of trade creation if trade is a possibility as a political choice. Technically, there is even room for possible intra-industry trade between Armenia and Turkey, for manufacturing products if Armenian producers start operating in scale economies. Furthermore, joint Armenian-Turkish ventures in the form of trade-creating investment may be sources of scale operations.

As the theory suggests, in case Armenia and Turkey engage in trade, Armenia is likely to benefit more than Turkey economically because of "the importance of being small". Therefore, not only ending of the border closure, but also engaging in trade with Turkey instead of no trade is more important for Armenia, than it is for Turkey. On one hand when it comes to the question of what can be traded between the two countries, there are more than one simple answer: Trade may take place in terms of comparative advantages, where Turkey's position can be approximated by looking at in which products the country happen to have the highest RCAs. Turkey may export manufacturing as well as agricultural products to Armenia. Since there needs to be a trade policy before trade takes place, rules and conditions must be determined as if trade would immediately start the day after border closure ends. In return for its exports, Turkey may import similar products as to lay way for intra-industry trade. Levels of export and import similarities calculated indicate that if border closure is to be ended and trade would pick up. Furthermore trade creation is a greater likelihood that trade diversion for the two neighbors.

On the other hand, although there may be a period of adjustment and unexpected difficulties, border trade is likely to create price and welfare effects in border towns of both sides. This is the reason why local representatives of border towns of Eastern Anatolia are in favor of ending of the

[18] " Nükleer Santral Tehlikeli" and "Nükleer Santral Yine Devrede", http://www.kenthaber.com/Arsiv/Haberler/2006/Mart/23/Haber_128753.aspx;

[19] op.cit.

border closure[20]. To prove how beneficial ending of the border closure would be they advocate that it would be to the benefit of Turkish exporters to move to Armenian markets beyond which they can rediscover markets of the Central Asia [21]. In reality border towns of the Turkish side is likely to benefit from open borders much more than the Turkish economy.

Trade partners and trade policy are political choices of countries. The border closure, which has been in effect since 1993, is a political decision of a political choice, not an economic one. It is the main reason why Armenia and Turkey cannot engage in trade activities. The possibility of changing the existing situation to a favorable one depends on the political rapprochement between Armenia and Turkey, which has not been a part of this inquiry. As for the economic relations, it is my contention that there is a possibility of sustainable trade between Armenia and Turkey. Under the given political circumstances, in the mean time, the technical and legal aspects of prospective economic relations must be prepared. Armenia has been a member of the WTO since February 2003. Furthermore, although the good news of signing of the treaty has not come out yet, Armenia has been engaged in a comity to discuss the framework of Free Trade Agreements with Azerbaijan, Tajikistan, Ukraine, and some other former Soviet countries since April 2003[22]. Armenia and Turkey may also start technical comity works on a possible opening of border and free trade.

Currently the most important element in the Armenian Turkish relations is that the border closure does not apply to Armenian Nationals[23] who find job opportunities in Turkey. They are granted work permits and most importantly welcomed by the Turkish society. Once again, this is a rare case of cooperation. The impact of cultural affinity, which supports such labor movement before movement of goods, should not be underestimated and must be considered as a solid background for more economic relations to come when political conditions allow.

Until the border opens to bolster normal trade, options beyond trade must be visited by two neighbors to initiate a period of economic rapprochement, which may help sooth political tensions in due time. Energy issues in the form of electricity trade through interconnected lines; common protection of environment, forestation, water sanitation, preservation of historical heritages may be attended jointly to cradle hospitable approaches for ending of the border closure and starting trade.

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[20] A research conducted indicates that 65.5% of those interviewed in Eastern Anatolian border towns are in favor of ending of the border closure. Those who are against it express their views because of political claims of Armenia on Turkey and because of the possible adverse effects of open Armenian-Turkish borders on Turkish Azerbaijani relations.

[21] The trade potential between Armenia and Turkey is estimated as $40 million to $200 million dollars http://www.kenthaber.com/Arsiv/Haberler/2006/Mayis/06/Haber_136479.aspx

[22] WTO http://www.wto.org/english/thewto_e/countries_e/armenia_e.htm

[23] According to Mesrop Mutafian there are 30 to 40 thousand Armenian nationals in Turkey as of 2006 (see Milliyet 29.09.06:25)

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