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Economic Implications of Turkey's Regional Integration with its Neighborhood*

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Abstract
This paper analyzes the impact of Turkey's regional integration with the neighbourhood in an applied general equilibrium framework. The standard GTAP model has been extended to address the two main components of Turkey's possible integration: mutual elimination of import tariffs and free movement of labor among regions. The results suggest that all regions (Turkey, Russia, Former Soviet Union and the Middle East) would experience welfare gain under trade liberalization policy reform. Labor mobility does not cause considerable changes in real GDP (less than 0.1 percent) through increasing real wages in the labor exporting regions.

Keywords
Economic integration, trade liberalization, labor mobility, axis shift, CGE

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1. Introduction

There has been an ongoing debate recently on whether there is an "axis shift" in Turkey's international relations. It is argued that Turkey is turning its back to the West and its face to the East. Even though the Turkish government declared that "Turkey's axis is the whole world, hence there is no axis shift," it is clear that certain things have changed in recent years. No doubt that the greater Middle East, Asia and Africa capture more attention now in the new Turkish foreign policy as opposed to the past. Changing patterns or direction in Turkey's foreign trade could be taken as one of the indicators of the so-called shift in the country's economic and foreign policy orientation.

The possible implications of such an "axis shift" could be analyzed from a political as well as economic perspective. This paper looks into the latter: implications of Turkey's changing direction towards the East, in terms of its trade volume, trading partners, changing trade shares and the regional welfare.

The unfortunate events of 9/11 (2001), the subsequent American-led "War on Terror," Second Gulf War, and the recent domestic political turmoil have refocused world attention on Turkey's future path and progress. Turkey's history and experience with democracy, secularism, Islam, and ethnic minorities present a microcosm of the challenges facing its entire neighborhood. For the last several decades, Turkey, with its strict adherence to maintaining stability and the *status quo* in its region, has been trying to adjust to a world where conditions for traditional foreign policy making have been undergoing a radical change. Today Turkey stands at the threshold of all major trends within its neighborhood and is actively seeking to harness the assets that its geography and historical experiences afford it in its foreign and national security policy (Walker 2007: 32).

As far as the labor movement is concerned, Turkey was an emigration country for a long time in the post Second World War era. But things have changed recently. After the end of the Cold War and the collapse of the Socialist Bloc, immigration from the neighborhood to Turkey has grown considerably. Not only had Turkey a lively cross-border movement with the countries of the Former Soviet Union, but also with the Middle Eastern countries has taken place as well. On the other hand, European Union has become extremely reluctant to open up its borders to Turkish migrants. In the end, Turkey has become a country of emigration, immigration and transit (Elitok and Straubhaar 2010).

In this context, there will be two main scenarios in assessing the implications of free trade and factor mobility: the free movement of goods and services, free

movement of labor. All of the policy simulations are designed in accordance with Turkey's possible regional integration with the southern and eastern neighborhood. In the first simulation, goods are allowed to move freely between Turkey's southern and eastern neighboring countries. In the second simulation, labor is allowed to move freely between Turkey and these countries. Given the existing wage differential, we expect that a certain amount of labor would move from Russia, Former Soviet Union (XSU) and the Middle East (ME) into Turkey. The possible integration of Turkey also implies capital mobility with the ME. The rest of the paper is organized as follows.

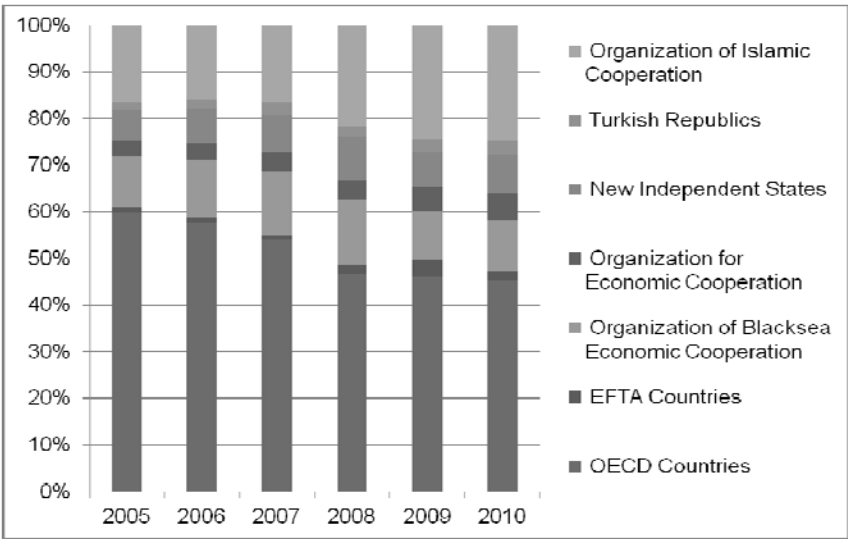
The following section discusses debate on Turkey's "shifting axis" in the context of foreign trade and factor mobility. Section 3 gives the model structure and the data followed by policy scenarios in Section 4. Section 5 interprets the results. The last section provides a general evaluation and conclusion.

2. Debate on Turkey's Shifting Axis in the Context of Free Trade and Factor Mobility

In the last two decades, the global economic relations have changed significantly to the benefit of the Eastern countries, or, in a more general sense, the emerging market economies. The amount of financial-capital inflows and trade flows has steadily increased in the developing countries or emerging market economies. A quick look at the course of world merchandise trade statistics gives an idea on how things are evolving. Russia and China, which have shown interest in becoming members of the WTO, are already two giants of world commodity trade, and constitute a major part in world investments. Brazil, Russia, India, and China - abbreviated as BRIC-, the ASEAN+3[1] and the G-20 countries, as the rising stars of global economy in the post-2008 financial crisis period, are the signal rockets of the new global economic system (Babacan 2010: 19).

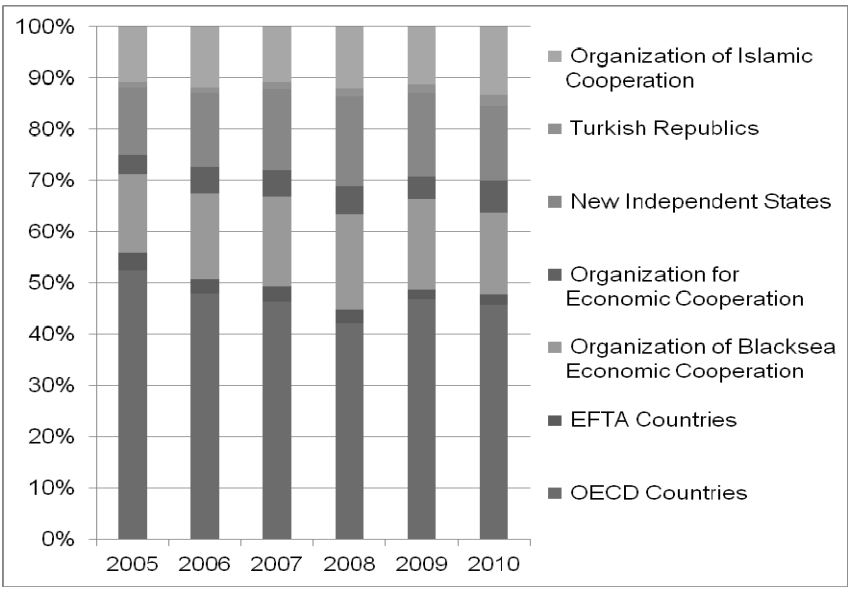
Is there a visible reorientation in Turkey's foreign trade in the context of "axis shift" debate? Figures 1 and 2 below provide a depiction of the evolving shares of the OECD, EFTA, Organization of the Black Sea Economic Cooperation (BSEC), Economic Cooperation Organization (ECO), New Independent States (NIS), Turkish Republics, and Organization of the Islamic Cooperation (OIC).[2] Total share of the OECD block in world merchandise trade is steadily declining over the period of 2005-2010, from 60 percent down to 45 percent in exports and from 52.5 percent down to 45.8 percent in imports. In the same period the share of OIC countries exports witnessed an increase from 16.5 percent up to 26.7 percent while imports were up from 10.9 percent to 13.3 percent. Therefore, if the term is applicable, it is quite evident that a slow but gradual 'axis shift' towards East is in place at a global scale. One can also see the gradual increase in the shares of OIC, Turkish Republics and NIS in Turkish foreign trade since the mid-2010s.

Figure 1: *Turkey's exports by selected groups*



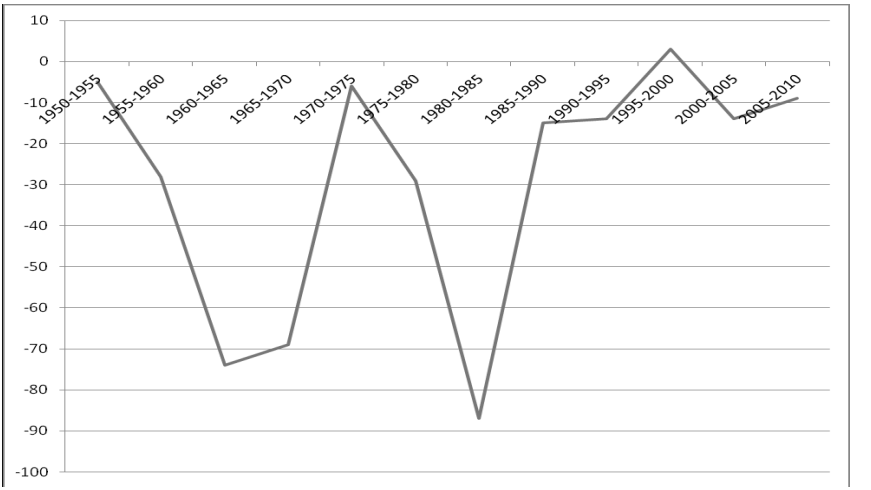
Source: TurkStat (www.turkstat.gov.tr), 2011 and own calculations.

Figure 2: *Turkey's imports by selected groups*



Source: TurkStat (www.turkstat.gov.tr), 2011 and own calculations

Figure 3: *Annual Net Migration Flows (Immigration minus Emigration) for Turkey (in Thousands)*



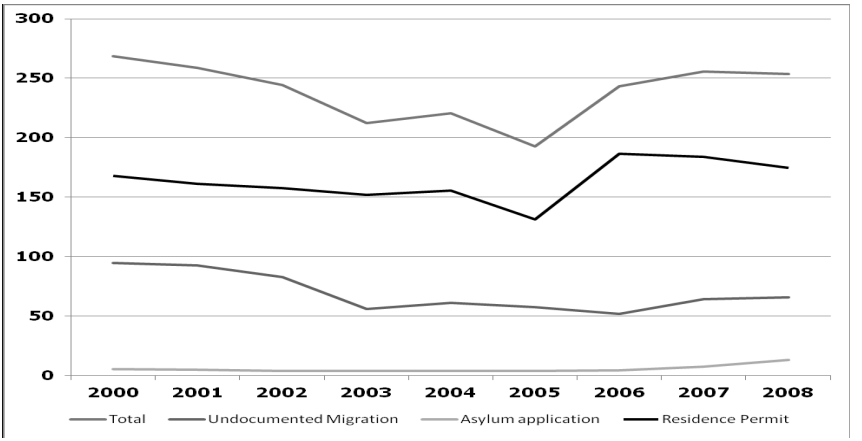
Annual figure is calculated as average over the period.

Source: United Nations: Population Division. Washington 2010. http://esa.un.org/UNPP/

In regards to labor movement, as shown in Figure 3, Turkey has been a typical emigration country for decades. The negative balance in the migration flows since the 1950s is quite clear. In the 1960s, a period of high emigration to Western Europe, Turkey sent 70 thousand workers per year, mostly to Germany. In the first half of the 1980s the same trend was repeated. In the 2000s, however, things seem to have changed considerably, showing nearly a balance between immigration and emigration.

As can be seen from Figure 4, in recent decades 250 thousand people per year have immigrated to Turkey. Immigration has taken place basically in three categories: asylum application, residence permits, and undocumented immigration. The data may contain rough estimation of illegal immigration. Some visa holders have overstayed the allowed period of time. Other people have crossed the borders without permission (Elitok and Straubhaar 2010:2).

Figure 4: *Immigration Flows into Turkey, 2000-2008 (in Thousands)*



Source Source: (Elitok and Straubhaar, 2010: 3).

The number of foreigners who have resided continuously for a year or had work permit in Turkey is relatively small (approximately 170,000, Figure 3). In addition, there are also foreigners who come to work in Turkey illegally working primarily in the housing and tourism sectors. They are mostly from former Soviet Union countries like Armenia, Georgia, Moldova, Central Asian Republics, Russia and Ukraine. Moreover, quite a number of students, retirees and people with dual citizenship from EU countries coming to work in Turkey are incorporated into undocumented migrants. Although the number of immigrants coming to Turkey does not actually represent the whole mobility, Table 1 shows that 15.9 million foreigners entered in 2009. This is ten times higher than the number of entries in 1990.

Table 1: *Entries of Persons to Turkey, 1990 and 2009 (in million)*

	1990	2009
Russia	-	2.7
Rest of Ex-Soviet Union	-	2.8
Total Ex-Soviet Union*	0.2	5.4
Balkan Countries*	0.9	2.6
Middle East	0.4	2.4
TOTAL	1.5	15.9

* Balkan Countries include Albania, Bosnia, Bulgaria, Greece, Kosovo, Macedonia, Romania and Serbia-Montenegro; Middle East countries include Iran, Iraq, Syria and Gulf states. Data for ex-Soviet Union for 2009 excludes Baltic States.

Source: (Elitok and Straubhaar 2010: 4).

While entries from neighboring countries, especially from the former Soviet Union, have been increasing, entries from the Middle East have been relatively low except Iran. But entries from neighboring countries in the coming years are expected to increase due to the recent decision by the Turkish government to lift visa requirements for a number of countries from the Middle East and Black Sea region. In other words, Turkey has become an attractive center in recent years for many people from the neighborhood because of fast-growing Turkish economy. It attracts people with various qualifications and skills, including people from the neighboring countries. To summarize, while Turkish migration to the EU has declined significantly due to strict visa requirements, rapidly improving macroeconomic conditions and political stability led Turkey to become a migration hub for its neighborhood in recent years. In some cases, immigration to Turkey serves as a first transit step on the road to further destinations, Europe or elsewhere[3] (Elitok and Straubhaar 2010:5).

3. Modeling and the Data

Before proceeding with the model simulations, we would like to discuss first the modifications we made to the standard GTAP model, originally developed by Hertel (1997), and the database. The standard model has been modified to address the factor mobility. The main structure of the GTAP model allows for the analysis of free movement of goods and production factors. We modified the standard model by incorporating labor and capital mobility using a migration database (Gmig2data).

3.1 Modifications to the Standard GTAP Model

The standard GTAP[4] model handles the bilateral trade of goods and services demanded by both domestic as well as foreign users in accordance with the Armington (1969) assumptions. In the standard model, production factors (land, natural resources, capital, and labor) are assumed to be fixed. It is thus not possible to analyze the effect of factor movements between regions. This means that a border opening for a production factor, labor or capital, cannot be considered simultaneously with the trade liberalization policies. Therefore, certain modifications in the model are needed.

To examine labor mobility or the migration between Turkey and other regions, the standard GTAP model was modified using the Global Migration Model[5] (GMig2) developed by Walmsley and Winter (2005) so that the adjusted model accounts for bilateral movement of labor. Accordingly, labor is allowed to cross borders and take part in the production processes of foreign firms in different regions, similar to production commodities.

The migration of labor generates an endogenous labor inflow and outflow according to each region's labor demand and supply and also leads to interregional wage differentials (Mansoor and Quilin 2006).

Some important features of the GMig2 model were incorporated for the implementation of the modified GTAP model; domestic and foreign labor force are treated as perfect substitutes. The labor supply is allocated across sectors to equate the changes in real wages. Migrant income depends on wages but is decreased by remittances, and migrants do not have income from the ownership of capital or land, but they do pay taxes. Remittances are the constant share of income being added to the income of the home region. The stated real income changes faced by migrants take into account differences in purchasing power indices (PPP) between their home and host regions. Non-movers' income depends on income from factors, taxes, and remittances received (Walmsley, Winters and Ahmed 2007).

3.2 Data and aggregation

The data used in this paper are derived from the GTAP 6 database. GTAP 6 includes 87 regions, 57 sectors and 5 factors of production (natural resources, land, unskilled labor, skilled labor and capital). The underlying model is a Computable General Equilibrium (CGE) model that uses variants of the Armington assumption to model intra-industry trade.[6] It is important to keep in mind that as a consequence of the Armington assumption, the results of the simulations will be driven to a large extent by terms of trade changes and will be sensitive to both substitution elasticities and trade shares. In this part we provide a description of the specific regional and sectoral specification adopted in this paper, an analysis of the data and an explanation of the specific assumptions introduced in our model.

The GTAP 6 database is well-suited to examine the consequences of trade and factor liberalization among Turkey, ME and XSU countries. We aggregate the GTAP database into 5 regions and 7 sectors. This section provides the background for regional and sectoral aggregation strategy.

Sectoral aggregation has been set up so as to provide a consistent picture of the effects of both trade liberalization and factor mobility. Thus, the 57 GTAP sectors have been aggregated into 7 representative ones of which 3 are manufacture, while the world consists of 5 regions (Table 3). Within manufacturing, light manufactures are unskilled labor intensive, heavy manufactures are skilled labor intensive, and technical manufactures are capital intensive sectors. Sectoral aggregation strategy was given in detail in Table 3.

Table 2: *Regional Aggregation*

Russia	Russia
Turkey	Turkey
XSU	Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Republic of Tajikistan, Turkmenistan, Ukraine, Uzbekistan
ME	Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian Territory, Qatar, Saudi Arabia, Syrian Arab Republic, United Arab Emirates, Yemen
ROW	Rest of the World

Table 3: *Sectoral Aggregation*

Agriculture	Animal agriculture, i.e. animal products not elsewhere classified (nec); raw milk; wool, silkworm cocoons; cattle etc.; meat; meat products Sugar cane and beet Paddy rice; wheat; cereal grains nec; oil seeds; crops nec; vegetables, fruit, nuts.
FuelMin	Fuels and minerals, i.e. coal; oil; gas; minerals nec
Food	Food products, i.e. vegetable oils and fats; dairy products; processed rice; food products nec; sugar; beverages and tobacco products
Light Manufactures	Textiles and clothing, i.e. textiles; plant-based fibers, e.g. cotton; wearing apparel; leather products
Heavy Manufactures	Chemical, rubber and plastic products; paper products and publishing; wood products; petroleum, coal products; mineral products nec; metals; ferrous metals; metals nec; metal products
Technical Manufactures	Motor vehicles and parts; transport equipment nec; electronic equipment; machinery and equipment nec; forestry; fishing; manufactures nec
Services	Electricity; gas manufacture, distribution; water; construction; trade; transport nec; sea transport; air transport; communication; financial services nec; insurance; business services nec; recreation and other services; public administration, defence, health, education; dwellings

4. Policy Scenarios

Turkey's changing foreign policy vision turns itself into new engagements, co-operations or discontinuities at traditional lines. Coupled with the new global environment, policy implications of the new vision could be examined in terms of the following two issues:

i- More Trade with the East: Exports to the EU27 faced a sharp decline of 25.8% in 2009. On the contrary, Turkey's exports to the Middle East, especially to the Gulf Cooperation Council (GCC) increased dramatically.

ii- Labor movement: Significant determinants of an 'axis shift' should have also revealed themselves in labor flows. As Turkey's trade and investment flows with its neighbors increase, labor movement becomes a relevant issue. To analyze the implications of labor mobility, the standard GTAP model has been modified as described above. In order to evaluate the impact of Turkey's "shifting axis" towards the East from an economic angle, we design the following two policy scenarios:

Scenario 1- Trade liberalization: Liberalization takes place in both goods and factor markets in the process of integration. Import tariffs are abolished bilaterally among trade partners.

Scenario 2- Labor mobility: The production factors—capital, natural resources, land, and labor—is assumed to be regionally fixed in the standard model. However, regional integration processes may involve factor mobility. Therefore, the standard model has been modified to account for cross-border factor flows. The purpose of this scenario is to investigate how labor flows would affect the regional economies.

5. Simulation Results

In this section, first the macroeconomic impact of trade liberalization and factor movement on regional GDP, terms of trade, imports, exports and factor returns etc. will be presented. Second, the sectoral implications of trade liberalization and labor mobility will be discussed.

5.1 Impact of Trade Liberalization

Before discussing liberalization process between Turkey and Eastward trading groups, a glance at the extent of tariff protection would be useful to see which sectors are most protected and, consequently, where the largest cuts may have to be made once a reciprocal FTA is implemented. Table 4 shows the tariff rates faced by Turkey in individual trading regions. Tariffs are highest in food products (reaching 19 and 28 percent in Russia

and the ME region respectively) and light manufacture and agriculture. Russia also imposes rates about 14 percent on technical manufacturing imports from Turkey. Turkey also faces similarly high tariffs in all manufacturing sectors and agriculture, with important exceptions, such as the 4.3 percent tariff on heavy manufacture and services from all regions. In all these sectors, Turkey faces comparatively lower tariffs in the ROW than the other regions.

Table 4: *Tariff Rates on Imports From Turkey by Sector and Destination*

	Russia	XSU	ME	ROW
Agriculture	6.9	15.1	8.6	7.9
Energy	5.0	7.4	5.5	1.5
Food Processing	19.2	15.5	28.3	17.8
Light Manufacture	17.3	16.9	10.1	5.2
Heavy Manufacture	9.8	10,2	4.3	4.8
Technical Manufacture	13.8	5.6	6.3	3.7
Services	0	0	0	0

Source: GTAP 6 database, Dimaranan, McDougall 2006

One can be seen from Table 5 that Turkey imposes high tariffs on food processing, agriculture, and light manufacture (except from ME) imports from Russia, ME and XSU.

Table 5: *Tariff Rates on Imports from Trading Regions to Turkey*

	Russia	XSU	ME	ROW
Agriculture	7,1	6,4	14,7	16,3
Energy	0,1	1,5	0	0,1
Food Processing	16,7	24	29,7	17,7
Light Manufacture	5,4	6,9	4,3	3,5
Heavy Manufacture	8,1	7,5	3,3	1,1
Technical Manufacture	4,9	2,4	0,9	0,8
Services	0	0	0	0

Source: GTAP 6 database, Dimaranan and McDougall 2006

The first simulation considered removing import tariffs imposed on the multilateral trade between Turkey and its south and eastward neighbors. The economic impact of this simulation on macroeconomic indicators and the resulting percentage changes in sectoral output are reported in Table 6 and 7 respectively. All regions face positive growth in real GDP under trade

liberalization scenario (Table 6). Bilateral liberalization result in the highest real GDP increases in Turkey followed by XSU, Russia and ME.

In this scenario Turkey's volume of merchandise imports rise by about 2.4 percent and volume of merchandise exports rise by about 0.7 percent. As a result of the export price increases by about 0.9 percent and import prices decreases by 0.001 percent, Turkey experiences an improvement in the terms of trade by 0.88 percent and real investment by about 1.6 percent. As seen from Table 5, Turkey experiences a welfare gain of US$ 491 million. All regions face welfare gain: XSU by US$ 70 million, ME by 33.8 million, and Russia by 65.7 million under this scenario.

Table 6: *Impact of Trade Liberalization on Macroeconomic Indicators*

	Russia	XSU	ME	Turkey
Welfare ($ m)	65.76	63.99	33.85	491.60
Investment (%)	0.15	0.28	0.03	1.66
Imports (%)	0.29	0.56	0.11	2.44
Exports (%)	0.09	0.42	0.11	0.72
Terms of Trade (%)	0.02	0.03	-0.02	0.88
Trade balance ($ m)	-85.36	-50.34	-43.41	-332.09
Real GDP (%)	0.02	0.05	0.01	0.06

Source: Simulation results

Table 7 reports the decomposition of welfare results in terms of allocative efficiency, terms of trade, and Investment-Savings effect for all regions. For Russia and Former Soviet Union, 75 percent of total welfare gains are due to allocative efficiency gains. While four-fifth of welfare gains are due to terms of trade gains in Turkey, the Middle East struggle with negative terms of trade effects.

Table 7: *Welfare Decomposition*

	Allocative Efficiency	Terms of Trade	Investment Savings	Total
Russia	50.8	27.6	-12.6	65.8
FSU	47.8	16.6	-0.4	64
ME	70.5	-40.1	3.5	33.8
Turkey	94.9	411.5	-14.8	491.6
ROW	-77.4	-415.6	24.4	-468.6
TOTAL	186.6	0	0	186.6

Source: Simulation results

As shown Table 7, eliminating import tariffs will adversely affect some of the sectoral output in Turkey because of the increased competition from import competing industries. The most affected industry is energy (0.24 percent), followed by light manufacture (0.26 percent). However there is a considerable increase in food processing (1.89%) and heavy manufacture (0.41%). However trade liberalization will adversely affect sectoral output in Russia except for heavy manufacturing sectors.

Table 8: *Change in Sectoral Output (%) (scenario-1)*

	Russia	XSU	ME	Turkey
Agriculture	-0.04	0.00	-0.02	0.08
Energy	-0.04	-0.01	0.02	-0.24
Food Processing	-0.08	0.00	-0,33	1,89
Light Manufacture	-0.41	-0.29	-0,24	-0,26
Heavy Manufacture	0.22	0.08	0,03	0,41
Technical Manufacture	-0.20	-0.11	0,08	0,14
Services	0.02	0.02	0,00	-0,17

Source: Simulation results

5.2 Impact of Labor Mobility

The results of simulation 2 are presented in Table 8. It is estimated that, as a result of changes in real wages, the number of unskilled labor decreases in Russia by about 65 thousands and in the XSU by 146 thousands, the number of unskilled labor decreases in the ME by 87 thousands while increasing in Turkey by about 298 thousands.

These changes in labor supply will obviously affect real GDP through production changes. As such, increase in the supply of labor in Turkey leads to a rise in real GDP by 0.55 percent, while the falling labor supply reduces real GDP by 0.05 in Russia and 0.11 percent in XSU and reduces real GDP by 0.06 percent in ME. We expect that real wages of unskilled and skilled labor would fall in Turkey due to the increase in labor supply. As such, real wages of unskilled (skilled) labor fall by 0.62 (0.24) in Turkey due to the increasing supply of unskilled (skilled) labor by 1%.

Under this scenario, Turkey's volume of imports rises by about 0.5 percent and its volume of exports rises by about 0.42 percent reflecting the fact that the pressure to increase imports is stronger than the increase in demand for Turkey's exports by labor mobility. As a result of the composite export price decreases by 0.08 percent and composite imports prices do not change, Turkey experiences a small deterioration in the terms-of-trade by 0.08 percent.

The current account of Turkey (-US$ 538 million) is estimated by including remittance flows (- US$ 351 million) which tends to decline as more remittances leave Turkey to the change in trading balance (- US$ 187 million). Returns to capital increase (0.39 percent) as greater labor supply and demand for goods increases the demand for capital. The increased return to capital causes investments to increase (0.94 percent), and in the long term this would result in even higher capital stocks and production.

The opposite is true in the labor-exporting Russia, XSU, and ME economies. As the supply of labor falls, real wages rise, production and real GDP fall as shown in Table 8.

Table 9: *Impact of Labor Mobility on Macroeconomic Indicators*

	Russia	XSU	ME	Turkey
Current account balance ($ m)	159	48	133	-538
Welfare ($ m)	-134.1	-64.4	-299.7	649.3
Imports (%)	-0.05	-0.05	-0.03	0.5
Exports (%)	0.0	-0.11	-0.05	0,42
Terms of Trade (%)	-0.0	0.02	0.01	-0.08
Real GDP (%)	-0.05	-0,11	-0,06	0.55
Change in the number of labor (000')	-65.5	-146	-87.2	298.7
Real Wage Unskilled (%)	0.06	0.15	0.12	-0.62
Real Wage Skilled (%)	0.0	0.07	0.01	-0.24
Real Return to Capital (%)	-0.03	-0.05	-0.04	0.39
Rental price of capital (%)	-0.03	-0.03	-0.02	0.31

Source: Simulation results.

Table 9 shows the changes in sectoral output in the labor importing Turkish economy from the unskilled and skilled migrants. The gains in output are greatest in labor intensive technical manufactures (0.7 percent) and heavy manufactures (0.63 percent). The relative size of the sectoral output gains from increased unskilled and skilled labor depends on the relative use of skilled and unskilled labor by the sector. Hence there is a tendency for light manufacture and agriculture to gain more from unskilled migrants than skilled.

Table 10: *Change in Sectoral Output (Scenario-2)*

	Russia	XSU	ME	Turkey
Agriculture	-0.04	-0.1	-0.07	0.46
Energy	0	-0.06	-0.01	0.42
Food Processing	-0.05	-0.1	-0.06	0.5
Light Manufacture	-0.07	-0.14	-0.09	0.4
Heavy Manufacture	-0.05	-0.13	-0.1	0.63
Technical Manufacture	-0.1	-0.13	-0.13	0.7
Services	-0.06	-0.1	-0.06	0.56

Source: Simulation results

6. Conclusion

In this paper the ongoing debate on Turkey's so-called axis shift is analyzed in the context of economic integration with the East through trade liberalization and factor mobility. One should underline though that this study do not possess full explanatory power in the so-called axis shift. The other economic, political, cultural factors affecting axis shift have not been included in this study. Nevertheless, this study can be regarded as a small contribution to this debate by analyzing the implications of Turkey's regional economic performance and orientation.

This paper addresses two main issues related to Turkey's possible regional integration with the Middle East, Russia and the rest of the Former Soviet Union. Using a general equilibrium modeling framework, we estimate economic impacts of trade liberalization and labor mobility on these economies. The simulation results indicate that there is a significant potential economic gain from Turkey's economic integration towards eastward and southward. All regions register positive growth in real GDP and real investment, exports and imports under the bilateral tariff liberalization.

Moreover, policy-makers are more interested in equivalent variation as a money-metric expression of consumer utility than in real output changes. We, therefore, looked into welfare changes as well. While 80% of welfare gains of Turkey come from the terms of trade effects, 75% percent of welfare of both Russia and XSU are due to gains in allocative efficiency.

The results suggest that labor mobility would not result in considerable change in the real GDP (less than 0.1 percent) through increasing real wages in labor exporting regions. As to the political economy of Turkish economic integration towards eastward and southward neighbourhood,

the economic implications of this integration will clearly be positive. Integration with its neighborhood under these policy reforms would allow these countries to achieve larger economies of scale, increase competitiveness and diversify their export basket, thus assisting domestic economic reforms, promoting urgently needed political reforms. Therefore, harmonizing economic policies and opting for higher degree of integration among neighboring countries must receive higher priority in the policy making process throughout the region.

Instructions

[1] Including Indonesia, Malaysia, Philippines, Thailand, Singapore, Brunei, Vietnam, Laos, Myanmar, Cambodia plus China, Japan and South Korea.

[2] The OIC's Name has changed during the 38th Council of Foreign Ministers meeting (CFM) in Astana, Kazakhstan in June 2011 to Organization of Islamic Cooperation. Previously the name was Organization of the Islamic Conference.

[3] See Erzan (2009) and Kirisci (2008) for more details.

[4] GTAP (Global Trade Analysis Project) is a global network of researchers and policy makers conducting quantitative analysis of international policy issues. The standard GTAP Model is a multi-region, multi-sector, computable general equilibrium model, with perfect competition and constant returns to scale. Bilateral trade is handled via the Armington assumption and is implemented using GEMPACK, which provides software for calculating accurate solutions of an economic model, starting from an algebraic representation of the equations of the model. The GTAP database describes the world economy as 113 regions and 57 sectors, as well as all bilateral trade flows between these regions. This database forms the basis for a range of CGE models that start from the same theoretical framework but are adapted to addressing different economic contexts or research questions. The prominent role of GTAP in the trade policy debate has inspired further developments of the database and models to deal with changes over time (the regular model is static and thus does not provide trajectories of changes over time), international migration (capturing the flow of persons and remittances between nations), energy use (capturing the impact of bio-fuels in relation to developments in markets for non-renewable fuel) and climate change. For the latter, additional databases are developed with more detail on land use (production by agro-ecological zones in each region) and carbon emission. The latter developments have led to an increasing role of GTAP-based analyses in the Intergovernmental Panel on Climate Change (IPCC) to assess policies for limiting greenhouse gas emissions. The framework of Standard GTAP model is well documented in chapter 2 of Hertel (1997) and available on the Internet http://www.gtap.agecon.purdue.edu.

[5] For more details, see Walmsley, Winters and Ahmed (2007), Walmsley al., (2006) and Walmsley, et al. (2005).

[6] Armington (1969) has proposed that similar domestic and imported goods, as well as goods imported from different origins, should be regarded as imperfect substitutes. Trade models like GTAP incorporate this assumption by differentiating products on the basis of their country of origin. The effect of a trade policy measure on the relative price of similar traded and domestically produced goods leads to a substitution of domestic for imported goods or vice versa, or to a substitution between imports from different sources.

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Türkiye'nin Komşuları ile Bölgesel Bütünleşmesinin Ekonomik Etkileri

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Öz

Bu makale uygulamalı genel denge modeli çerçevesinde Türkiye'nin komşu ülkeleri ile bölgesel bütünleşme etkilerini analiz etmektedir. Standart GTAP modeli, Türkiye'nin olası bütünleşmenin iki temel bileşeni olarak, karşılıklı ithalat tarifelerinin kaldırılması ve bölgelerarası işgücünün serbest dolaşımının etkilerini analiz edecek biçimde geliştirilmiştir. Sonuçlar ticaret serbestleşmesi politika reformunun tüm bölgelerin refahını artırmaya yönelik olduğunu göstermektedir. İşgücü hareketi, işgücü ihraç eden ülkelerde reel ücretleri yükseltse de, bu etki reel GSYH'da önemli bir değişmeye yol açacak düzeyde değildir (yüzde 0.1 den az).

Anahtar Kelimeler

Ekonomik Bütünleşme, Ticaret Serbestleşmesi, İşgücü Hareketi, Eksen Kayması, HGD modeli

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Экономические последствия региональной интеграции Турции с соседними странами

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Аннотация

Данная статья анализирует последствия региональной интеграции Турции с соседними странами в рамках прикладной модели общего равновесия. Стандартная модель GTAP разработана на основе анализа двух основных компонентов при возможной региональной интеграции Турции: взаимной отмене импортных пошлин и свободного межрегионального передвижения рабочей силы. Результаты показывают, что реформа политики либерализации торговли повысит благосостояние всего региона. Мобильность рабочей силы даже если и приведет к увеличению реальной заработной платы в странах-экспортерах, это будет несущественно и не вызовет значительного изменения реального ВВП (менее 0,1 процента).

Ключевые Слова

Экономическая интеграция, либерализация торговли, профсоюзное движение, смена оси, модель КГЭ

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