

GROWTH AND IMMIGRATION SCENARIOS: TURKEY - EU*

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The purpose of the study is to estimate the eventual immigration from Turkey to the EU when Turkey becomes a full member and restrictions on labor mobility are removed. Alternative methods and scenarios are scrutinized in forecasting probable magnitudes for the period 2004 to 2030. The analyses are essentially based on the experience of countries that joined the EU. The estimation methods are those used in recent studies that analyze the membership consequences of the Central and East European countries. Special attention was paid to the experience of the southern “cohesion” countries - Greece, Portugal and Spain. Finally, forecasts were also made based primarily on the Turkish emigration record.

Occasionally, sensational news articles on the scary magnitude of potential migrants from Turkey take the headlines in EU media. Careless interpretation of casual opinion polls can put the number up to 25 % of a population of about 70 million. Magnitudes that emerge from serious research work are a fraction of that. The survey of this literature undertaken by the 2004 “Impact Study” (*Issues Arising from Turkey’s Membership Perspective*) of the EU Commission has reported that forecasts of immigration from Turkey to the EU-15 until 2030 range between 0.5 and 4.4 million, assuming free mobility of labor in about a dozen years from now. The Impact Study also underlines that to arrive at the higher end estimates (about 4 million), the studies have to torture the data and the methodology.

As a result of the literature survey that we have undertaken in the framework of this study and our contacts with the relevant research centers in the EU (see the references), we have not come across any net migration forecasts from Turkey to the EU that exceeds the probable magnitudes reported in the Impact Study.

Analytical studies follow two alternative methods in making immigration forecasts. The first one is statistical inferences based on scientifically designed surveys. The second one is econometric methods. The latter draws on the pre and post EU membership experiences of emigration countries. Quantifiable determinants of immigration - pull and push factors - are identified and their joint impact on immigration is estimated. These estimates are then used to forecast eventual migration from “to be” members.

Our simulation results for net migration from Turkey to EU-15 in the period 2004-2030 is between 1 and 2.1 million, foreseeing a successful accession period with high growth and free labor mobility starting 2015 - a rather optimistic assumption to explore the upper bound of the immigration potential. On the other hand, if Turkey’s membership process is endangered and high growth cannot be sustained, 2.7 million people may be penetrating the EU-15 despite the prevailing strict restrictions on labor mobility.

* This study has been presented at the conference “Immigration Issues in EU-Turkish Relations: Determinants of Immigration and Integration” held at Bogazici University, 8-9 October 2004. It is based on the findings of the “twin projects” - employment and immigration, at Bogazici University, Center for Economics and Econometrics (www.cee.boun.edu.tr) and Center for European Studies (www.ces.boun.edu.tr), sponsored by Open Society Institute Assistance Foundation (OSIAF). The authors are grateful to Nalan Basturk, Gunes Erturk and Engin Evrenos for important contributions in the research.

REFERENCE GROUP: 1967-2001 IMMIGRATION FROM ALL EUROPE

At the first stage of analysis, we followed the method of the EU Commission report by Brücker, Alvarez-Plata and Siliverstovs (2003) used in estimating potential migration from Central and Eastern Europe. Using an econometric model, the study estimates migrant stocks in Germany originating from 19 source countries (Austria, Belgium, Denmark, Finland, France, Greece, Holland, Iceland, Ireland, Italy, Luxembourg, Norway, Portugal, Sweden, Switzerland, Spain, Turkey, UK, and (former) Yugoslavia). Germany was chosen as the host country because of the size of the migrant communities in this country and the availability of robust time series data dating back to 1967.

We used the specification that yielded the best overall result in the EU Commission study.¹ As explanatory variables; income level in the country of origin (w_{ht}) captures the cost of migration, employment rates (e_{ft}), (e_{ht}), the probability of finding jobs, and, income differences between the home and host countries (w_{ft}/w_{ht}), the material return to migration. To these, the lagged migrant stocks ($m_{fh,t-1}$), ($m_{fh,t-2}$) were added to measure the impact of “networking” among immigrants.

Introduction of free labor mobility in EU members was captured by the FREE dummy variable while GUEST denoted the 1967-1973 period when “guest worker” agreements were operational. To correct for the jumps in immigration due to refugees and asylum seekers, WAR in (former) Yugoslavia and INTERVENTION (1980 military) and INSURGENCY (1990-94 terror) in Turkey were used. Table 1 gives the estimation results for the 1967-2001 period indicating the coefficients of the explanatory factors and their significance levels.²

It was observed that all the estimated coefficients were significant and the overall explanatory power of the model (the fit) was very high. However, the small values of the coefficients indicated that income and employment rate differences did not have powerful effects in determining inter-European migration during the period under consideration.³

¹
$$m_{fht} = \alpha_h + \beta_1 m_{fh,t-1} + \beta_2 m_{fh,t-2} + \beta_3 \ln(w_{ft}/w_{ht}) + \beta_4 \ln(w_{ht}) + \beta_5 \ln(e_{ft}) + \beta_6 \ln(e_{ht}) + u_{fht}$$

m_{fht} : The share of migrants from country h residing in country f (Germany) as a percent of home population

w : Wage (income, proxied by GDP-PPP per capita)

e : Employment rate (1-unemployment rate)

h, f, t : Home, foreign country and year, respectively.

Population data from World Development Indicators (2003), migrant stock data from the Federal German Statistical Office, per capita GDP from Maddison (2002) and Groningen Growth and Development Center, employment rates, from OECD Economic Outlook.

² The model is estimated using SUR. This method was chosen because of its superior performance with large databases in the EU Commission study. Common slopes were assumed for all countries but intercepts were allowed to be country specific.

³ As the estimation is semi-logarithmic, a coefficient with an absolute value of 1 implies that a change in this variable would affect the dependent variable at the same rate of change. Values smaller than 1 imply smaller impacts.

Table 1. Regression Results - “All Europe” Sample, 1967-2001

<u>Independent Variables</u>	<u>Coefficients</u>	<u>S.E</u>	<u>P-value</u>
M(-1)	1.23	0.019	0.000
M(-2)	-0.37	0.018	0.000
Ln(W_f/W_h)	0.05	0.006	0.000
Ln(W_h)	0.07	0.006	0.000
Ln(e_f)	0.34	0.033	0.000
Ln(e_h)	-0.10	0.008	0.000
FREE	0.01	0.001	0.000
GUEST	0.11	0.003	0.000
INTERVENTION	0.15	0.033	0.000
INSURGENCY	0.10	0.019	0.000
Adjusted R² = 0.99			

Migration Forecasts for Turkey: 2004-2030

The coefficients obtained from the estimations for migration into Germany from the “all Europe” sample of 19 source countries (including Turkey) for the 1967-2001 period were used to make simulations for emigration from Turkey. Following similar studies, German per capita GDP was assumed to grow 2% annually and the employment rate stay at the 1991-2001 average level. Income and employment projections for Turkey were adopted from our ongoing study scrutinizing alternative growth scenarios for Turkey, analyzing demographic developments, urban and rural growth and productivity, internal migration (urbanization) and unemployment.⁴ The main scenario used here foresees a successful EU accession with sustained high growth and gradually declining unemployment (Table 2). UN population projections were adopted in all computations.

Table 2. High Growth Scenario for Turkey, 2005-2030 (annual values))

Urban GDP Growth		0.065
Urban Productivity Growth		0.03
Rural GDP Growth		0.02
Unemployment – 2015	<i>Urban</i>	0.13
	<i>Average</i>	0.09
Unemployment – 2030	<i>Urban</i>	0.05
	<i>Average</i>	0.04

⁴ See, “Growth, Employment and Active Policies”, Bogazici University, June 2004, www.cee.boun.edu.tr.

Under these assumptions, projections were made for immigration from Turkey to Germany.⁵ According to latest available data covering the EU-15 area, Germany hosted 76 % of all immigrants in the EU originating from Turkey.⁶ Using this share as a benchmark, immigration estimates for Germany were inflated to represent the total for the EU-15 area.⁷

Two scenarios were simulated with these parameters. Both assumed that restrictions on labor mobility would be largely abolished in 2015. This rather optimistic assumption was adopted to arrive at an upper bound for immigration numbers.

The first simulation emulates for Turkey the actual experience of EU countries with free movement of labor (using the **FREE** dummy). This involves a considerable integration of these economies during the accession periods.

The second simulation emulates - repeats - for Turkey the experience of these countries (including Turkey) with guest worker agreements until 1973 (using the **GUEST** dummy). The purpose of simulating this *inferior* scenario is, again, to explore an upper bound for the migration potential.

⁵ The iterations include the decline in unemployment in Turkey (about 1 percentage point) resulting from migration to the EU.

⁶ The migrant stock data used in the simulations do not cover those who were naturalized in Germany. Data on naturalization of EU citizens were not available for Germany. Therefore naturalized immigrants could not be included in the estimations covering all European source countries. Data on naturalized immigrants originating from Turkey were available. This factor could be incorporated in forecasts based solely on the Turkish experience - reported further on in this study. Although naturalization entailed considerable numbers in the last decade, it did not affect the immigration projections significantly.

⁷ This assumes that all other EU-15 countries that host immigrants have the same “pull” effects as Germany.

Figure 1
Simulation of Free Movement of Labor

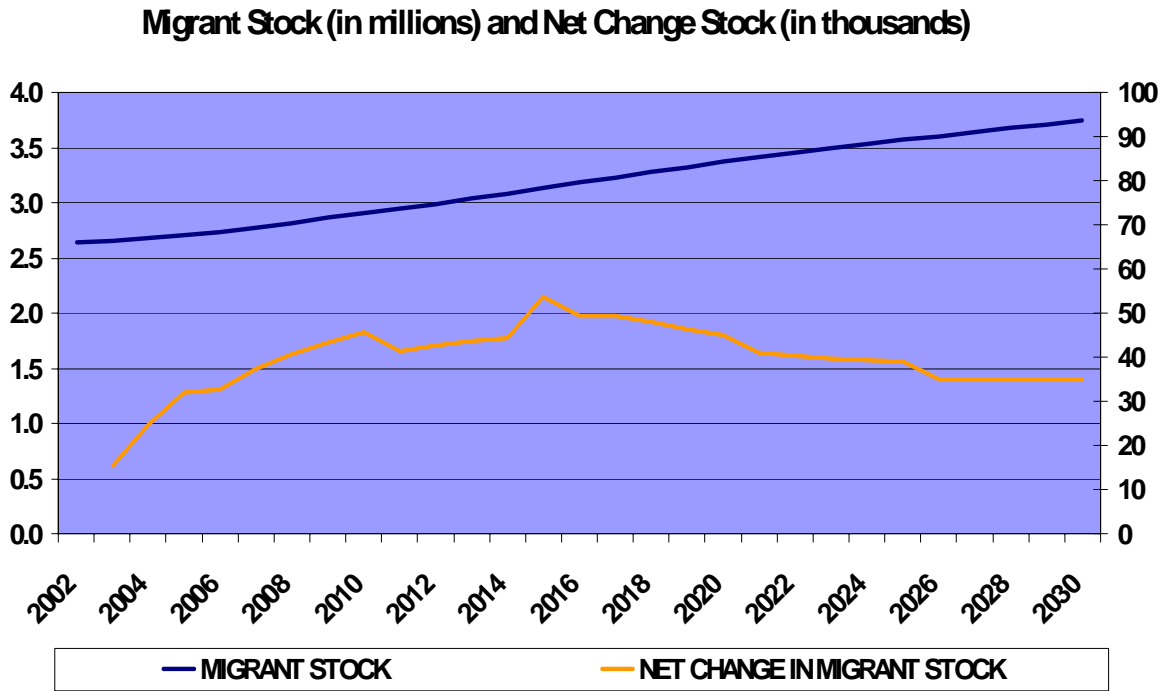


Figure 2
Simulation of Guest Worker Scenario

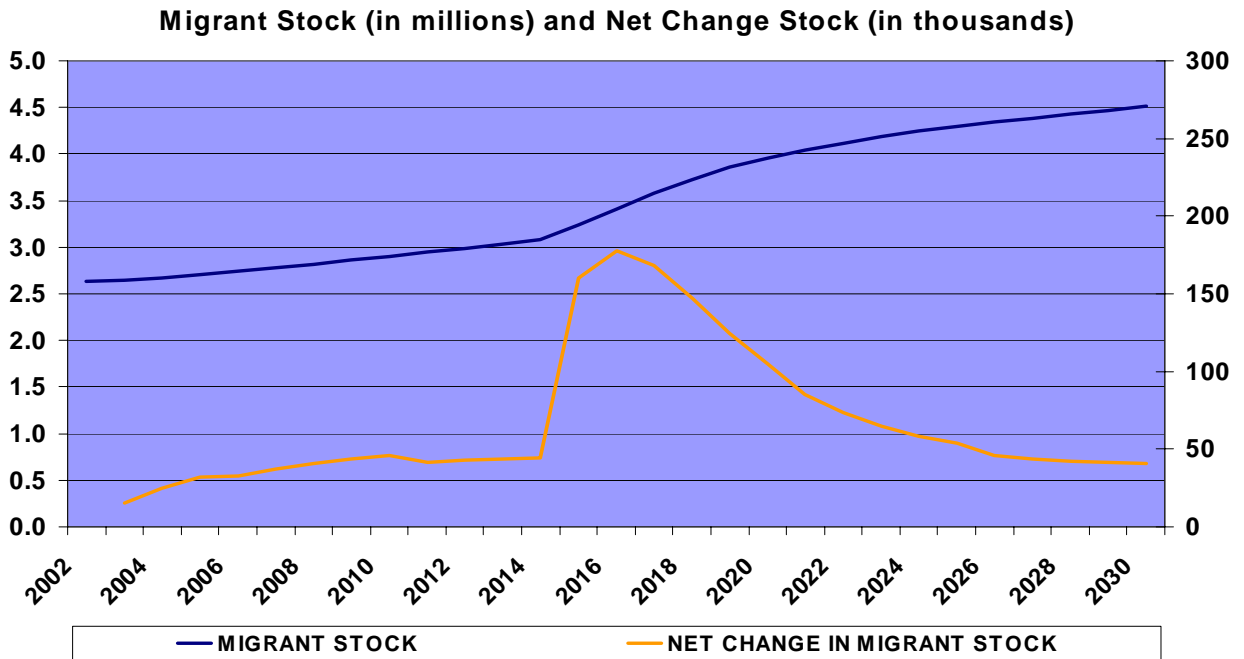


Table 3. Comparison of the Two Scenarios – Reference Group: All Europe

Net Change in the Turkish Migrant Stock	<u>2004-2015</u>	<u>2015-2030</u>	<u>Total</u>
Scenario FREE	460.000	613.000	1.073.000
Scenario GUEST	564.000	1.274.000	1.838.000
Turkish Migrant Stock	<u>2004</u>	<u>2015</u>	<u>2030</u>
Scenario FREE	2.675.000	3.140.000	3.750.000
Scenario GUEST	2.700.000	3.250.000	4.500.000

When the actual membership cum free labor mobility experience of the EU countries - an experience that Turkey has yet to live through - was taken as the benchmark, immigration forecasts from Turkey exhibited a rather smooth curve (Figure 1). The small hike of 2015 transformed into a declining flow. Total net migration barely reached 1.1 million by 2030 (Table3).

Instead of relying on the actual experience of the EU members with free labor mobility, when we emulated (and repeated) the guest worker episodes for Turkey in 2015, we observed a jump in migration, reaching moderate levels around 2020 (figure 2). Even under this *inferior* scenario, the total immigration projection to EU-15 from Turkey until 2030 was not drastic, about 1.8 million (Table 3). This inferior scenario depicts an accession process not properly utilized for structural adjustment and integration.

The authentic free movement of labor scenario (the first scenario) incorporated the *socioeconomic* improvements in the accession countries. These improvements relieved the migration pressures. Restrictions on labor became much less binding, hence, as they were removed, there was no major rush.

It should be emphasized that socioeconomic improvements were not simply higher incomes and more jobs. Otherwise the coefficients for these basic economic variables would have been much larger in the estimations. The improvements in accession countries covered dimensions such as social security, health, education and regional disparities.

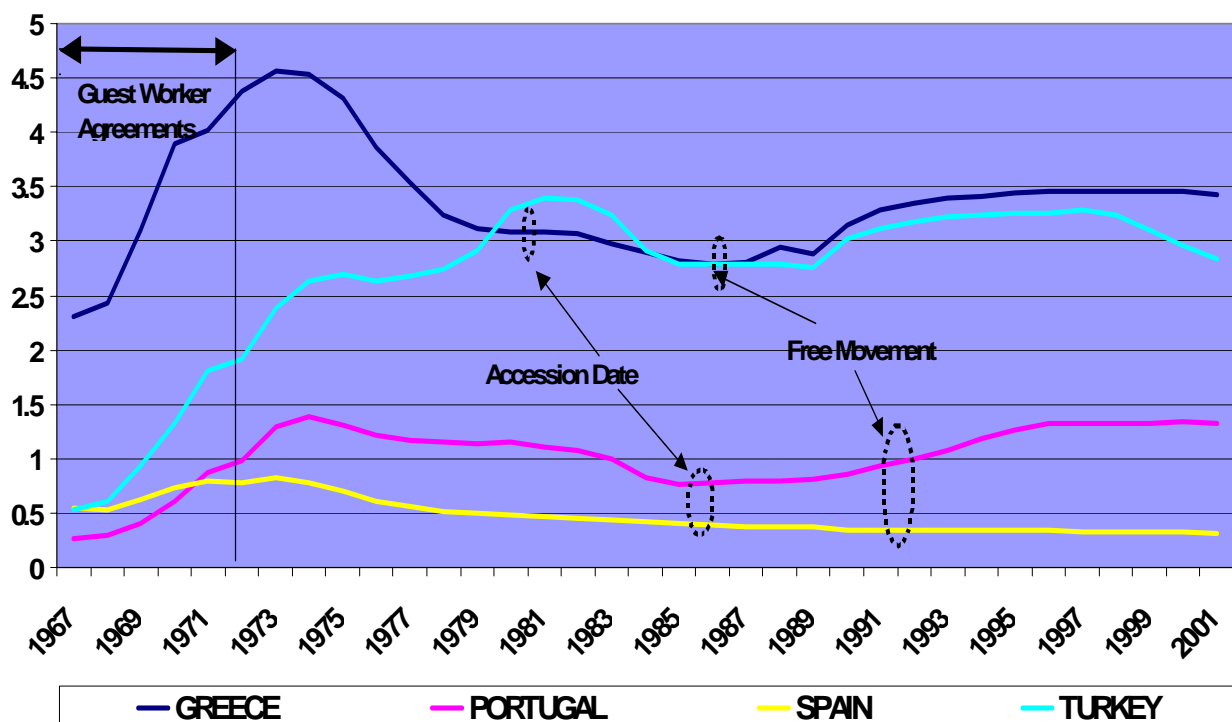
REFERENCE GROUP: 1967-2001 SPAIN, PORTUGAL AND GREECE

We have verified the methodological accuracy of our estimations reported above (Tables 1 and 3) by comparing them with the findings of research conducted for the EU Commission on Central and Eastern Europe. We have also exchanged notes with these researchers at the October 2004 Istanbul conference where this paper was originally presented. Nevertheless, to test for sensitivity of sample selection, we repeated our parameter estimations by excluding rich countries such as Austria and Denmark. We confined our sample to the southern “cohesion” countries - Greece, Portugal and Spain (and Turkey) - that had characteristics resembling Turkey at the time of their accession.

Figure 3 depicts the immigration episodes from these countries and Turkey to Germany. To adjust for differences in country sizes, the net immigration figures were given as percentage of their respective populations. There were major flows from all these countries during the guest worker agreements. As restrictions on labor mobility were lifted, the decreasing Spanish migrant stock continued its tendency. In Greece and Portugal there was a modest hike in the number of migrants but it smoothed shortly after. In the more recent years, the stock was declining, indicating reverse net migration.

Figure 3

Migrants in Germany as % of Source Country Population



Note: The apparent decline in the Turkish migrant stock stemmed from naturalization. Number of migrants from Turkey who were naturalized in Germany was less than a thousand per year until 1984. 1984-1990 this annual figure reached 2 thousand. There was a steep climb during the 1990s. For 1990-2003, the annual figures were, respectively, 2, 4, 7, 13, 20, 32, 46, 42, 60, 104, 83, 77, 65, 56 (000).

Migration Forecasts for Turkey Based on Southern Europe: 2004-2030

Estimates for the “determinants” of migration were obtained using similar specification as with “all Europe” for the period 1967-2001. Using these parameters, again the **two simulation** exercises were repeated - the **FREE** and **GUEST** scenarios. In both simulations, Turkey was assumed to be on its baseline high growth path (Table 2). 2015 was retained as the regime switching date. Computations for Germany were adjusted for EU-15 in the same way as in the previous exercises.

Figure 4
Simulation of Free Movement of Labor

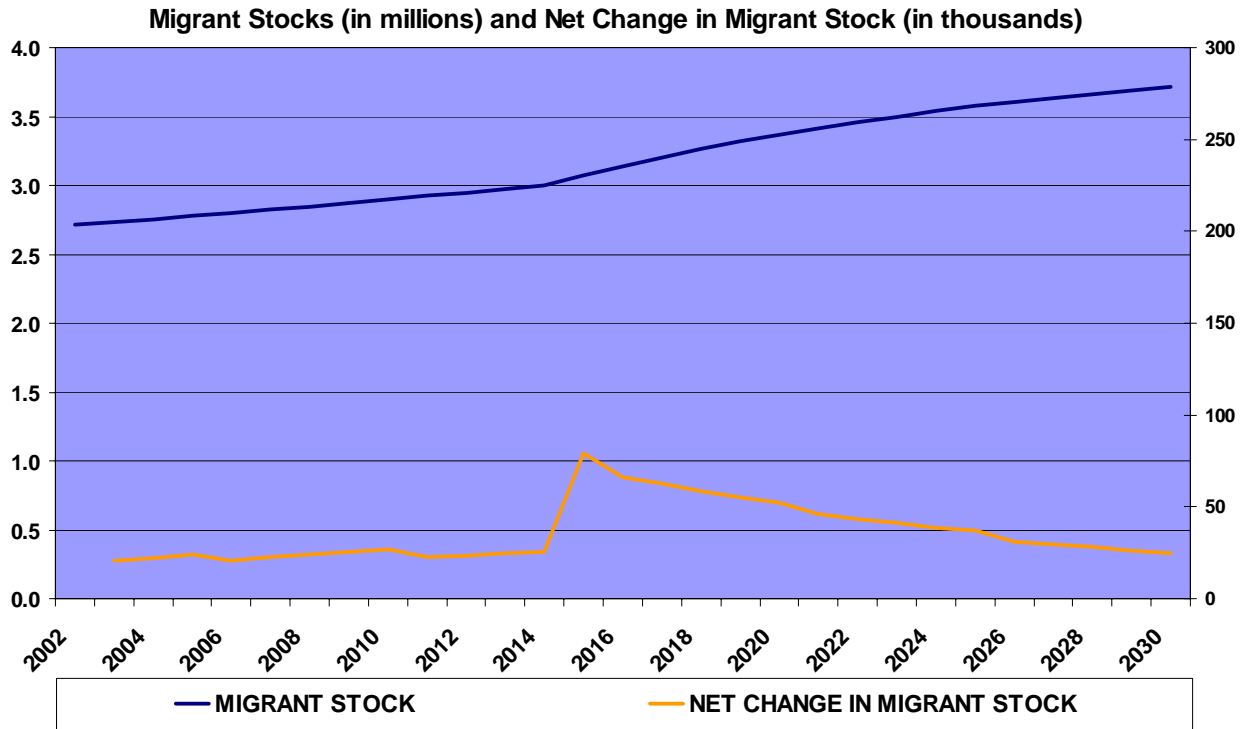


Figure 5
Simulation of Guest Worker Scenario

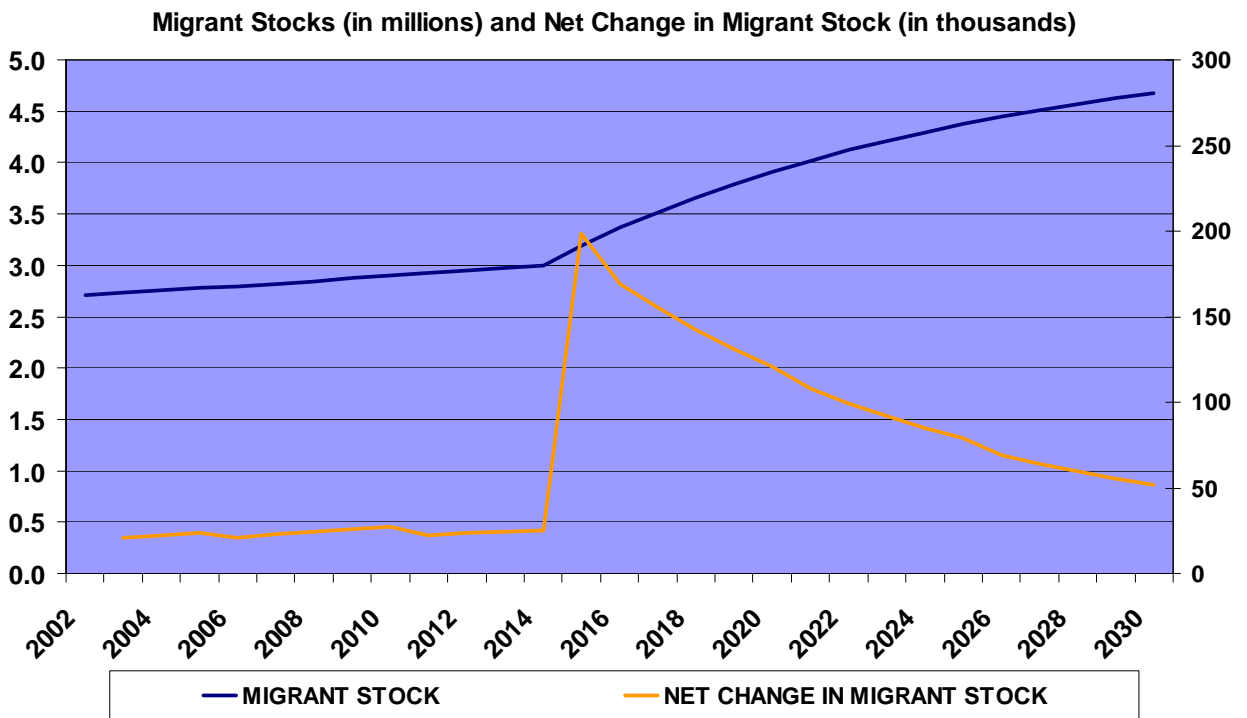


Table 4. Comparison of the Two Scenarios – Reference Group: Southern Europe

Net Change in the Turkish Migrant Stock	<u>2004-2015</u>	<u>2015-2030</u>	<u>Total</u>
Scenario FREE	320.000	640.000	960.000
Scenario GUEST	440.000	1.480.000	1.920.000

Turkish Migrant Stock	<u>2004</u>	<u>2015</u>	<u>2030</u>
Scenario FREE	2.755.000	3.075.000	3.715.000
Scenario GUEST	2.755.000	3.195.000	4.677.000

The picture that emerged (Figure 4) closely resembled that with “all Europe” sample. When the free labor mobility experience of Greece, Portugal and Spain was emulated for Turkey, a small hike occurred in migration that stabilized promptly at a low level. In this scenario, total net migration forecast until 2030 was not exceeding 1 million (Table 4).

The experiment using the Southern Europe sample but mimicking the guest worker syndrome led to a major jump that normalized in due course (Figure 5). The total net migration estimate approached 2 million, doubling the previous forecast based on the actual membership experience of these countries. Nevertheless, even this inflated figure was considerably below sensational projections.

TURKEY’S OWN EXPERIENCE 1967-2001 AS THE ONLY REFERENCE

How to inflate further the migration forecasts? “Turkey is not any other South European Country”, “unlike Greece, Portugal and Spain, Turkey has a nomadic tradition”. If these prejudices are taken for granted, Turkey’s own experience would be the only benchmark.

The model was estimated for the period 1967-2001 for immigration from only Turkey to Germany. The coefficients of the explanatory variables denoting income and employment differences were again significant. So were the INTERVENTION and INSURGENCE dummies. The absolute values of the income and employment parameters were considerably greater than those obtained in estimations with the “all Europe” and “Southern Europe” samples. This was expected since Turkey has not had yet the socioeconomic transition that the current EU members have accomplished during their accession periods.

Using the parameters obtained from these estimations, migration projections were made for the 2004-2030 period, and they were adjusted upward for EU-15. Obviously,

these parameter estimates and projections, unlike the previous ones, did not contain any information on actual EU membership or free labor mobility experience. The only labor mobility Turkey had in accordance with an agreement was the guest worker episode of the 1960s until 1973.

High Growth, EU Membership and Free Movement of Labor: Forecast 2004-2030

In our first simulation with the Turkish record as the only benchmark, we retained our baseline high growth scenario as depicted in Table 2. Following a successful accession period, Turkey becomes a EU member and free labor mobility is introduced in 2015. Given that Turkey’s only experience with a labor arrangement was the guest worker episode, free movement of labor could only be introduced in the forecast as the repetition of this experience.

The resulting projection exhibited a major jump in migration that moderated gradually (Figure 6). The forecast for total net migration until 2030 reached 2.1 millions. This somewhat exceeded the higher scenario based on the South European experience (Table 5).

Figure 6
EU Membership Emulating the Turkish Guest Worker Episode

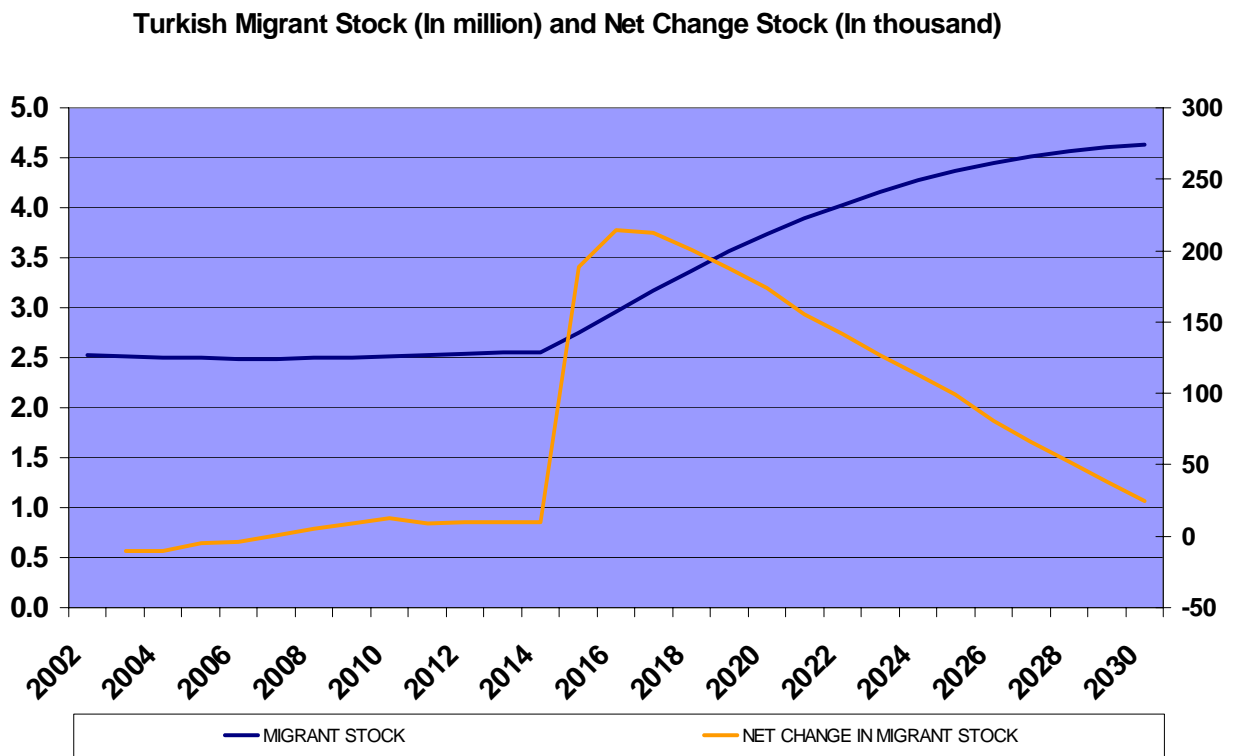


Figure 7
No Membership and No Free Movement of Labor

Turkish Migrant Stock (In million) and Net Change Stock (In thousand)

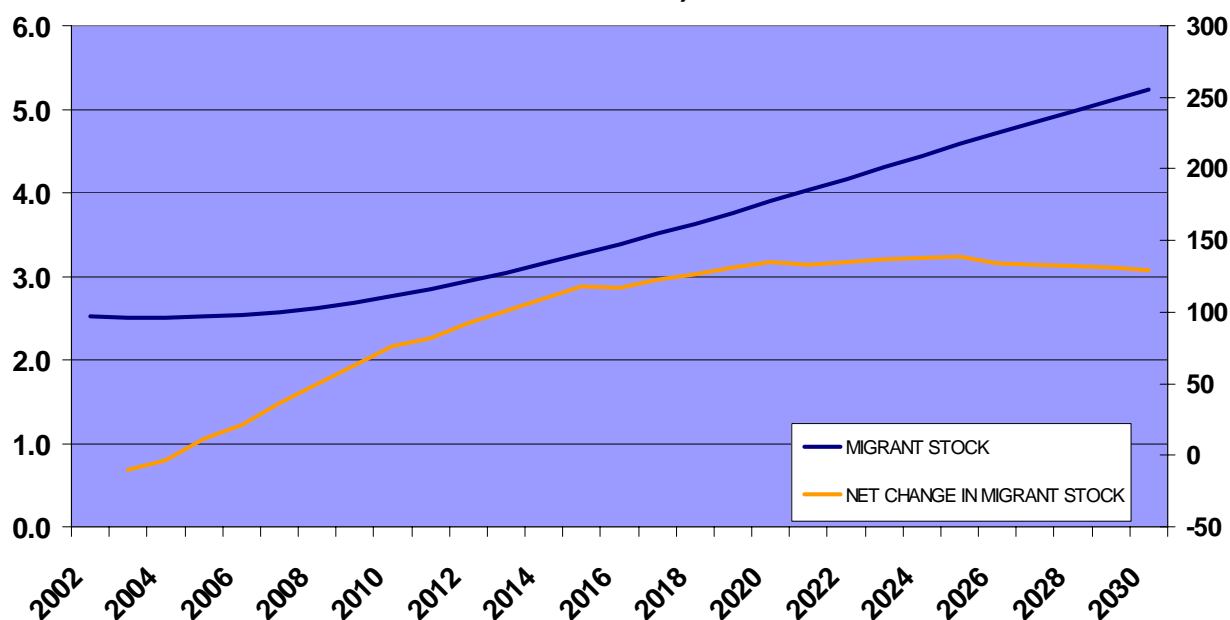


Table 5. Comparison of the Two Scenarios – Reference: Only the Turkish Experience

Net Change in the Turkish Migrant Stock	<u>2004-2015</u>	<u>2015-2030</u>	<u>Total</u>
High Growth – Membership – Free Movement of Labor	246.000	1.888.000	2.134.000
Lower Growth - No Membership – No Free Movement of Labor	760.000	1.974.000	2.734.000

Turkish Migrant Stock	<u>2004</u>	<u>2015</u>	<u>2030</u>
High Growth – Membership – Free Movement of Labor	2.499.000	2.745.000	4.633.000
Lower Growth - No Membership – No Free Movement of Labor	2.506.000	3.267.000	5.241.000

Suspended EU Accession, Lower Growth and No Free Mobility of Labor: Forecast 2004-2030

Our last simulation depicts a scenario where Turkey's EU accession is suspended. High growth cannot be sustained and unemployment climbs. More specifically, the urban GDP grows at 4 % annually with 1.5 % productivity increase and rural GDP stagnates. Unemployment approaches to 20 %.⁸

In this scenario, the prevailing EU visa regulations are retained. This obviously curtails major jumps in migration. However, the slow pace in income growth and the deterioration in the labor market increase migration pressures considerably. An increasing number of the potential migrants penetrate the EU (Figure 7). The forecast for total net migration until 2030 in this scenario exceeded 2.7 million. The result is a warning that if the membership perspective is lost, EU may end up having more immigrants from Turkey despite strict restrictions on labor mobility. This paradoxical scenario is indeed realistic for three reasons.

Firstly, Turkey's growth record clearly shows very high rates can be achieved but cannot be sustained without political stability and inflow of foreign savings. Without the EU anchor provided by the membership perspective, a growth performance that will cope with unemployment is not feasible.

Secondly, unlike successful accession scenarios, not only growth in Turkey would be slower and unemployment higher, but also sensitivity of migration to income and unemployment differences would be greater.⁹

Thirdly, the prevailing restrictive visa system of the EU and the absence of labor mobility provisions cannot stop immigration. EU currently receives about 70,000 (gross) migrants from Turkey, annually. (Because of return migration, net migration is about half of this gross inflow figure.¹⁰) Most of them come with family unification and family formation. In the presence of a very large Turkish migrant community in the EU of about 3 million (with major trade, investment, tourism and educational links), all conceivable tight door policies short of totalitarian rules would be porous. A relative deterioration in Turkey would certainly increase this inflow considerably and reduce return migration.

Finally, it should be noted that the eventuality of political turmoil was not incorporated in the projections. With the lost EU perspective and climbing unemployment, this is more than a slim possibility. Estimations based on past record show that political and security problems lead to waves of migration.¹¹ Add that on top of the 2.7 million forecast!

⁸ In this lower growth scenario, average (urban + rural) unemployment reaches 17 % in 2015 and 22 % in 2030. Migration to the EU reduces these figures to 16 % and 19 %, respectively.

⁹ Coefficients for income and employment differences have considerably higher values in the estimations with the "Turkish experience only" compared with that of the "all Europe" and "South European" samples. The reason is lesser convergence of the Turkish socioeconomic system.

¹⁰ We have crosschecked stock and flow data (OECD, SOPEMI) for current Turkish migrant inflow to EU-15. Due to missing data, we do not have exact figures. We infer that the gross inflow can be 60,000 to 90,000 and the gross outflow 30,000 to 40,000.

¹¹ As reported in the first section of the study, in the estimations covering 1967-2001, dummy variables INTERVENTION (1980) and INSURGENCY (1990-94) were highly significant and improved the fit considerably.

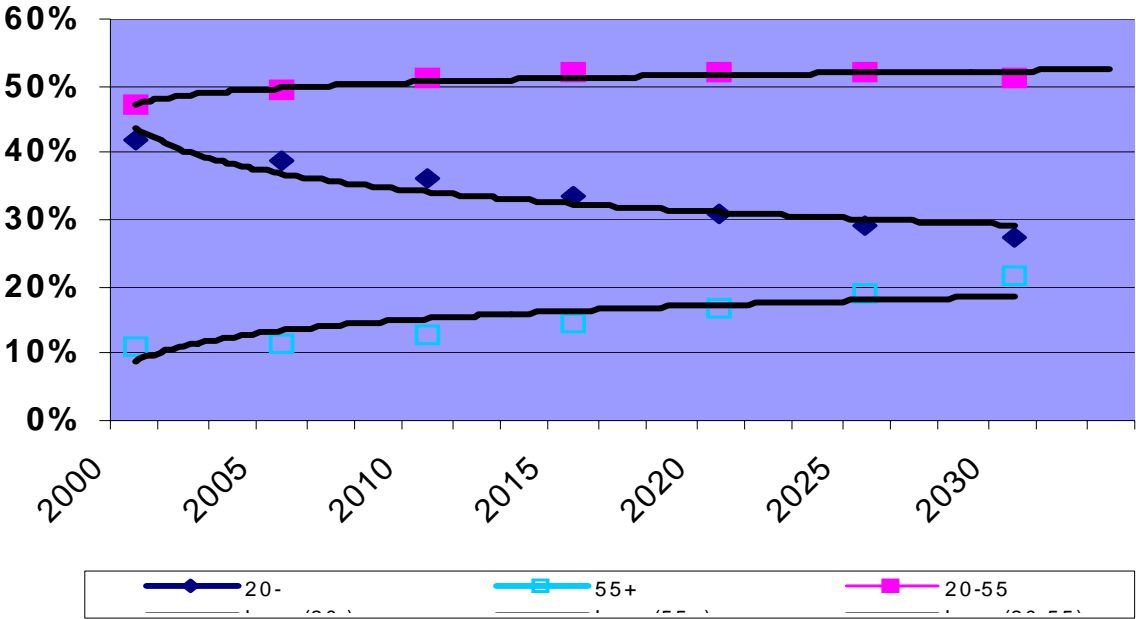
IMPACT OF THE AGING OF TURKISH POPULATION ON MIGRATION

In the current study, as the estimations were based on past population structures, the impact of the changes in the age composition of Turkish population was not specifically taken into consideration.¹² However, the propensity to migrate differs among age groups considerably and the very young Turkish population is bound to age.

A regional survey conducted in Turkey by Hacettepe University, Ankara, jointly with the Netherlands Interdisciplinary Demographic Institute (NIDI) and Eurostat (2000) revealed that the migration tendency of people aged 55 and above was extremely low.¹³ Hubert Krieger’s (2004) study based on Eurobarometer surveys corroborated these results. Turkish population is aging. According to the UN projections, the share of people aged 55 and above in Turkey will nearly double by 2030 (Figure 8). When this demographic development was crudely incorporated in our projections, it was found that total migration forecasts until 2030 had to be scaled down by about 300,000.

Figure 8

Share of Age Groups in Total Population



CONCLUSION

As Turkey becomes a EU member and enjoys free movement of labor, the net inflow of migrants will most likely be in the direction to the EU-15 in the foreseeable future. The projections for potential Turkish migration based on the experiences of various

¹² The estimations based on 1967-2001 data do implicitly incorporate the aging experienced in the sample countries. However, the projections implicitly assume the same average population structure as in the past.

¹³ The regional coverage of this study was not representative for Turkey as a whole. Therefore, the age configuration of propensity to migrate was not formally incorporated in our projections.

groups of countries differed. However, the magnitudes involved were by no means sensational, despite the fact that we wishfully assumed that free movement of labor would be introduced as early as 2015.

It should be emphasized that the EU cannot exercise a zero migration policy. Even under the currently prevailing strict regime, there is an annual net migration from Turkey to the EU-15 in the order of 35,000 people. What should be scared of is the consequences of a slowdown or suspension in Turkey’s accession process. The economic impact of such an eventuality is lower growth and climbing unemployment in Turkey. The political impact would be a slowdown or reversal of the reform process. The outcome of the two would yield a drastically higher number of potential migrants. A considerable proportion of them would be finding their way into the EU. If Turkey loses the membership perspective, the EU may end up having more immigrants than a free movement of labor regime with Turkey. And the composition of this migration would be less conducive for the EU labor markets - and - for integration in the host societies.

The experiences of Greece, Portugal and Spain indicate that a successful accession period with high growth and effective implementation of the reforms reduces and gradually eliminates the migration pressures. There is no *a priori* reason why Turkey would not go through a similar experience.

Table 6. SUMMARY: MIGRATION FORECASTS FROM TURKEY TO EU-15

Reference Group: “All Europe”			
High Growth – Membership – Free Movement of Labor	<u>2004-2015</u>	<u>2015-2030</u>	<u>Total</u>
Scenario FREE	460.000	613.000	1.073.000
Scenario GUEST	564.000	1.274.000	1.838.000

Reference Group: Greece, Portugal, Spain and Turkey			
High Growth – Membership – Free Movement of Labor	<u>2004-2015</u>	<u>2015-2030</u>	<u>Total</u>
Scenario FREE	320.000	640.000	960.000
Scenario GUEST	440.000	1.480.000	1.920.000

Reference Group: Only the Turkish Experience			
	<u>2004-2015</u>	<u>2015-2030</u>	<u>Total</u>
High Growth – Membership – Free Movement of Labor	246.000	1.888.000	2.134.000
LOWER Growth NO Membership NO Free Movement of Labor	760.000	1.974.000	2.734.000

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