

University of Groningen

Macro-economic determinants of international migration in Europe

Jennissen, Roel Peter Wilhelmina

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version

Publisher's PDF, also known as Version of record

Publication date:

2004

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Jennissen, R. P. W. (2004). *Macro-economic determinants of international migration in Europe*. [Thesis fully internal (DIV), University of Groningen]. s.n.

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Chapter 6 ANALYSES ON INTERNATIONAL MIGRATION TYPES: CASE STUDIES ON SPECIFIC MIGRATION FLOWS

6.1 Introduction

It is important to study different migration types with regard to population projections because of two phenomena. Firstly, some international migration types taper off completely (ethnic migration to Germany) or decrease considerably (return migration to the former labour-exporting countries), because the population at risk of migration decreases, while others, for instance family (formation) or asylum migration, have an almost infinitely large population at risk. Secondly, migrant groups who use different channels of entry may have a different age and sex distribution. This, in turn may have a dissimilar impact on the other demographic components (fertility and mortality) and therefore a different impact on population projections. As already indicated in section 1.5, socio-economic determinants may have a different influence on various migration types. This chapter aims to identify differences in the influence of socio-economic determinants on important international migration types (labour, return, family, and ethnic migration) in Europe in the post-industrial era (i.e. the period 1985-1999). Asylum migration, which is one of the most important migration types in this period, will be discussed separately in chapter 7.

The results of the regression analyses conducted in chapter 4 reveal that the macro-economic determinants GDP per capita and unemployment have a significant impact on international net migration. This current chapter tries to differentiate between the impacts of these two determinants on different migration types. Unemployment in receiving countries may lead to social unrest, which may find expression in a less tolerant attitude towards foreigners. This, in turn, may lead to stricter entrance policies. Therefore, migration types which are largely affected by immigration policies (e.g. low-skilled labour migration or asylum migration) are probably more influenced by unemployment in the receiving country than migration types which are not or only affected to a certain extent by immigration policies (e.g. high-skilled labour migration or ethnic migration between successor states of the Soviet Union). GDP and unemployment differences are probably more important determinants of the latter migration types. Thus, the mechanism reflected by the arrows 13 and 4 in figure 3.5 underlies for a large part international migration types which are sensitive to immigration policies, while neo-classical and Keynesian mechanisms are the driving forces behind international migration types which are not sensitive to immigration policies. In principle, neo-classical and Keynesian theory refer to labour migration. Here, I apply these theories to other migration types as well, in view of the reality that migrants may have more than one

migration motive and that the real migration motive may not be known. Asylum or family migration, for instance, may be a cover for labour migration. Furthermore, the most important determinants of international migration, according to neo-classical and Keynesian theory (income and unemployment differences), may also have an impact on other migration types (see section 3.4.1).

This chapter contains six sections. In sections 6.2, 6.3, 6.4 and 6.5 time series regression analyses will be conducted on specific migration flows representing a specific migration type (labour, return, family, and ethnic migration). A concluding section summarises the main findings of the foregoing analyses.

The aforementioned regression analyses are conducted on rather short time series. This implies that the results of the analyses are quite tentative. I decided not to use dummy variables in the analyses conducted in this chapter to save degrees of freedom. Most dummy variables in chapter 4 refer to a temporary increase or decrease in a specific migration type, which could not be explained by variability of GDP per capita and unemployment. I took into account as much as possible that this had not occurred with the migration flows in the case studies.

6.2 Labour migration⁵⁰

Labour migration in the EU/EFTA region can be divided into low-skilled and high-skilled labour migration. Hence, time series regression analysis has been conducted in two case studies representing respectively low-skilled and high-skilled labour migration.

In section 6.2.2 socio-economic determinants of migration from Portugal to Switzerland, which is an example of low-skilled, 'classical' labour migration, will be estimated. Switzerland was chosen as the receiving country in this case study as it is a very attractive country for labour migrants in the EU/EFTA region. Therefore, the impact of socio-economic indicators on low-skilled labour migration can be estimated fairly accurately as potential labour migrants still prefer to go to Switzerland despite improving circumstances (e.g. lower unemployment, higher GDP, or lower cost of migration because of EU membership) in other labour-importing EU/EFTA countries. In other words, developments in other labour-importing EU/EFTA countries do not largely affect the supply of labour migrants that want to work in Switzerland. Another reason Switzerland was chosen as the receiving country in this case study is that family migration following labour migration to Switzerland is modest in comparison to other EU/EFTA countries, because of the Swiss guest worker model, which attempts to preclude family reunion (Lahav, 1995 in United Nations, 1998b). Among the classical labour-exporting countries in the EU/EFTA region Portugal has sent the

⁵⁰ An earlier version of this section has been presented at the annual congress of the European Regional Science Association, Dortmund (Germany), August 2002 (Jennissen, 2002).

most labour migrants to Switzerland in the post-industrial era (Eurostat, 2002). Therefore, Portugal was chosen as the sending country.

Section 6.2.3 comprises time series regression analysis on employed migration from Sweden to Norway, which is an example of high-skilled 'post-industrial' labour migration. High-skilled labour migration occurs between all EU/EFTA states. This particular flow was chosen as data on *employed* migration are available.

6.2.1 Hypotheses

The theoretical background of the labour migration hypotheses largely corresponds with the theoretical background of the net migration hypotheses, which can be found in section 4.2. Hence, the theoretical background of labour migration will only be briefly described here.

According to neo-classical economic theory international labour flows come about as a consequence of real wage differences between countries. Therefore, hypothesis 1 may be formulated as follows: *the real income difference between a receiving and a sending country has a positive effect on the volume of labour migration between these two countries.*

According to Keynesian economic theory, potential labour migrants are also attracted to high nominal wage regions. Therefore, the following may be stated: *the nominal income difference between a receiving and a sending country has a positive effect on the volume of labour migration between these two countries* (hypothesis 2). The proposition of Keynesian theory that international migration removes unemployment differences rather than real wage differences lies behind hypothesis 3 which reads: *the unemployment difference between a sending and a receiving country has a positive effect on the volume of labour migration between these two countries.*

The dual labour market theory argues that international labour migration is mainly driven by the demand for foreign workers in modern (post-)industrial societies. On the basis of this theory hypothesis 4 can be formulated as follows: *unemployment in the receiving country has a negative effect on international labour migration to this particular country.* This hypothesis refers to low-skilled labour migration, whereas hypotheses 1, 2 and 3 refer to both high-skilled and low-skilled labour migration.

The dual labour market theory also argues that there may be shortage of labour at the bottom of the job hierarchy in modern (post-)industrial societies because of motivational problems. These motivational problems and therefore labour shortages at the bottom of the job hierarchy will be larger if the average level of education of the country's population is higher. Hence, hypothesis 5 reads as follows: *the educational level in a receiving country has a positive effect on the volume of low-skilled labour migration to this country.*

The educational level may also influence net migration in labour-exporting countries. According to the relative deprivation theory the extent of inequality in a society will have a positive effect on (labour) emigration. Educational expansion usually results in larger equality

of educational opportunities. More educational equality, in turn, leads to more income and status equality as educational attainment has a positive impact on occupational status and income. This aspect of the relative deprivation approach forms the basis of hypothesis 6: *the educational level in a sending country has a negative effect on the volume of low-skilled labour emigration from this country.*

Social and cultural factors are also important with respect to labour migration. Of special importance are the effects of migrant networks and institutions. Within a large migrant population, migrant networks and institutions, which make labour migration easier and cheaper, may be formed. This is the basis of network and institutional theory. Keeping these theories in mind, hypothesis 7 reads as follows: *migrant stocks that are the outcome of recent (labour) migration have a positive effect on international labour immigration (both high-skilled and low-skilled).*

Table 6.1. Seven labour migration hypotheses

1.	The real income difference between a receiving and a sending country has a positive effect on the volume of labour migration between these two countries.
2.	The nominal income difference between a receiving and a sending country has a positive effect on the volume of labour migration between these two countries.
3.	The unemployment difference between a sending and a receiving country has a positive effect on the volume of labour migration between these two countries.
4.	Unemployment in the receiving country has a negative effect on low-skilled labour migration to this particular country.
5.	The educational level in a receiving country has a positive effect on the volume of low-skilled labour migration to this country.
6.	The educational level in a sending country has a negative effect on the volume of low-skilled labour emigration from this country.
7.	Migrant stocks that are the outcome of recent (labour) migration have a positive effect on international labour immigration.

6.2.2 Low-skilled ‘classical’ labour migration: migration from Portugal to Switzerland

Although the level in the 1960s and 1970s was much higher, Portugal continued to send migrants to other countries in the 1980s and 1990s. France, Germany, Switzerland and Luxemburg were important European destinations of Portuguese low-skilled labour migrants. Switzerland has a long history of importing foreign labour. The Swiss labour force comprised more than 700,000 (18% of the total) foreign nationals in 1999 (OECD, 2001). Most foreign

workers in Switzerland are Italians, but the number of Yugoslavs, Spaniards and Portuguese is also large (United Nations, 1998b).

The dependent variable is the total emigration of Portuguese nationals to Switzerland divided by the midyear population of Portugal aged 20-44 per thousand (source: Eurostat (2002)). Not all of these Portuguese nationals necessarily come from Portugal and they are not all necessarily labour migrants. Nevertheless, this variable is a good indicator of the extent of labour migration from Portugal to Switzerland. The independent variables that have been used in the analysis are listed in *Table 6.2*.

Table 6.2. Independent variables used in the analyses on Portuguese migration from Portugal to Switzerland

Variable	Measured as	Source
Real GDP per capita in Switzerland and Portugal	1990 US\$ converted at Geary Khamis PPPs	Groningen Growth and Development Centre (GGDC) (2002)
Nominal GDP per capita in Switzerland and Portugal	US\$ (Current prices)	IMF (2000)
Unemployment in Switzerland and Portugal	Total unemployment as percentage of the total labour force	Gärtner (2000)
Portuguese migrant stock in Switzerland	Portuguese nationals in Switzerland at the beginning of the year	Eurostat (2002)
Educational level in Switzerland and Portugal	Average years of school of the total population aged 25 and over	Barro and Lee (2000) ⁱ

i The method employed to estimate missing years is described in section 4.3.

As a first step the correlations between the explanatory variables were calculated. All correlations between the independent variables are high and very significant. Therefore, separate models with each of the variables were estimated. Autoregression terms were used to remove autocorrelation from the models. Autoregression terms of the first and second order had to be used in the models with unemployment in Switzerland, the difference in unemployment between Portugal and Switzerland, the size of the Portuguese migrant stock per capita in Switzerland and educational level in Portugal. However, these models appeared to be non-stationary ($AR(1) > 1$). Therefore, I decided to estimate models, in which first differences are used. The correlation coefficients between the independent variables measured as first differences are not very high except one coefficient: the correlation between educational level in Portugal and educational level in Switzerland is -.99. The effects of real

and nominal GDP differences between Portugal and Switzerland and the effects of the difference in unemployment between the two countries and unemployment in Switzerland have also not been estimated jointly. Therefore, eight models have been estimated. *Table 6.3* presents the results of four models (A, B, C and D).

Table 6.3. Results of time series regression analyses to explain first differences of the natural logarithmⁱ of total migration rates per 1000 from Portugal to Switzerland in the period 1986-1999. All variables are measured as first differences ($T = 13$)

	Model A		Model B		Model C		Model D	
	Coefficients (t-values)							
Constant	-0.50*	(-2.37)	-0.52**	(-3.98)	3.61*	(2.02)	2.43*	(2.05)
$GDP_{S_{wi}} - GDP_{P_{or}}$ ⁱⁱ	2.69	(1.25)	2.46	(1.77)	2.48	(1.13)	2.30	(1.62)
$Unem_{P_{or}} - Unem_{S_{wi}}$	0.00	(0.02)	-	-	0.00	(0.00)	-	-
$Unem_{S_{wi}}$	-	-	-0.15*	(-2.84)	-	-	-0.15*	(-2.78)
Migrant stock $\times 10^{-5}$	-0.33	(-0.26)	1.88	(1.59)	-0.38	(-0.30)	1.84	(1.53)
$Education_{P_{or}}$	-	-	-	-	-39.63*	(-2.07)	-28.37*	(-2.28)
$Education_{S_{wi}}$	11.91*	(2.08)	8.57*	(2.34)	-	-	-	-
Adjusted R^2	0.38		0.69		0.37		0.68	
Durbin-Watson stat.	1.04		1.15		1.12		1.25	

* significant $p < 0.05$ (one-sided test)

** significant $p < 0.01$ (one-sided test)

i $\ln(Y_t / Y_{t-1})$

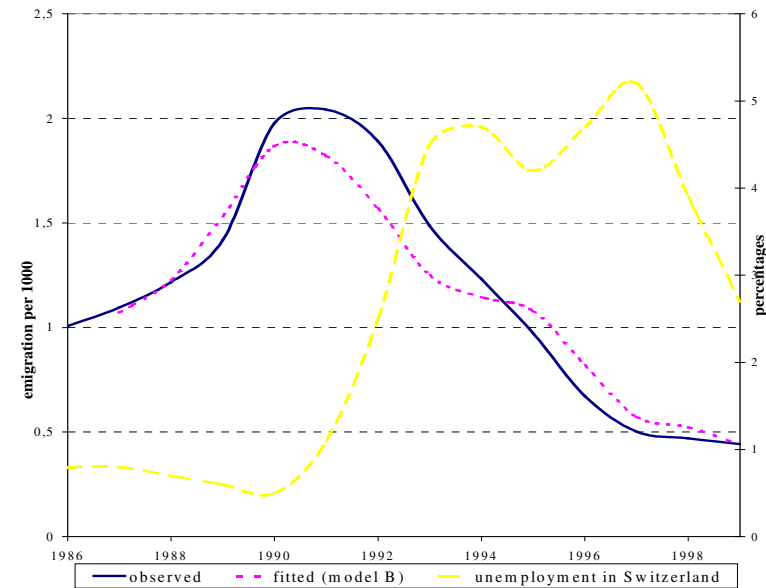
ii real GDP; coefficient $\times 10^{-4}$

The difference in real GDP per capita between Switzerland and Portugal has a positive coefficient in all models, although the coefficients are not significant. The right and similar magnitude of the coefficients can be seen as a tentative support for the neo-classical economic view on international labour migration, which is the theoretical basis for hypothesis 1. The difference in unemployment between Switzerland and Portugal has no effect on international migration from Portugal to Switzerland (see models A and C). On the contrary, models B and D reveal a negative significant effect of unemployment in Switzerland. This may be an indication that the dual labour market theory (hypothesis 4) is a more realistic view on low-skilled international labour migration than Keynesian theory (hypothesis 3). The effect of educational level in Switzerland is positive and significant in both models C and D. This can be seen as a support for hypothesis 5 and therefore as support for the dual labour market view on international labour migration. The results of the analyses also affirm hypothesis 6 and the relative deprivation theory with respect to the effect of the educational level in sending countries on low-skilled international labour migration as the coefficients of educational level in Portugal have negative significant signs in both models A and B. The effect of the Portuguese migrant stock in Switzerland has the expected positive sign in models B and D.

However, the effect is negative in models A and C. This may be an indication that network and institutional theory play only a modest role in migration from Portugal to Switzerland (hypothesis 7). Table 6.3 does not present the models in which nominal GDP per capita is used. These analyses did not provide additional significant coefficients. Thus, hypothesis 2 could not be validated.

The adjusted R^2 of models B and D is quite large. *Figure 6.1* plots the observed and fitted trend (using model B results) of Portuguese migration to Switzerland and unemployment in Switzerland.

Figure 6.1. Observed and fitted migration of Portuguese nationals (divided by the midyear population aged 20-44) to Switzerland and unemployment in Switzerlandⁱ



i Actual migration in 1986 was used to obtain the fitted trend.

Portuguese migration to Switzerland could have declined because of the removal of migration barriers in the EU after 1992. It would have been possible that Portuguese labour migrants preferred, for instance, Germany to Switzerland, or that German employers preferred Portuguese workers to non-EU workers after 1992. Therefore, I also conducted analyses on models which contained a dummy variable to correct for the free movement of persons between Portugal and other EU countries that has been possible since 1993. However, these analyses did not provide better results than the analyses without this dummy variable. This confirms my assumption that developments in other labour-importing countries do not largely effect the supply of labour migrants that want to work in Switzerland.

Developments in other labour-exporting EU countries may also have an effect on the number of Portuguese labour migrants that enter Switzerland. An example of such a development is the increased economic prosperity in Italy, which diminished the supply of

Italian workers wanting to go abroad. This increased the opportunities for Portuguese workers to enter the Swiss labour market.

6.2.3 High-skilled ‘post-industrial’ labour migration: employed migration from Sweden to Norway

In this case study I analyse the number of employed migrants from Sweden to Norway (source: ILO (1999)) divided by the midyear population of Sweden aged 25-44 (source: Eurostat (2002)) per thousand. Here, employed migration means migration of a person with the status of employee in November in the same year as the arrival. Portuguese migration to Switzerland has been divided by the midyear population aged 20-44. Here, the age of 25 has been taken as the minimum, since high-skilled persons enter the labour market later in life. The independent variables in the analyses are: GDP per capita in Norway minus GDP per capita in Sweden (both real and nominal GDP), unemployment in Sweden minus unemployment in Norway, and the Swedish migrant stock in Norway. The exact definition and sources of these variables are comparable to those listed in Table 6.2.

The correlations between the independent variables are very high. Therefore, I used first differences. However, even with first differences the correlation between real GDP per capita in Norway minus real GDP per capita in Sweden and unemployment in Sweden minus unemployment in Norway is .81. Therefore, two separate models (A and B) have been estimated (see *Table 6.4*).

Table 6.4. Results of time series regression analyses to explain first differences of the natural logarithmⁱ of employed migration rates per 1000 from Sweden to Norway, 1989-1999 (T = 10)
All variables are measured as first differences

	Model A		Model B	
	Coefficients (t-values)			
Constant	-0.66	(-1.61)	-0.01	(-0.03)
$(\text{realGDP}_{\text{Nor}} - \text{realGDP}_{\text{Swe}}) \times 10^{-3}$	1.53*	(2.90)	–	
$(\text{nomGDP}_{\text{Nor}} - \text{nomGDP}_{\text{Swe}}) \times 10^{-4}$	-0.97	(-0.94)	-1.37	(-0.69)
$\text{Unem}_{\text{Swe}} - \text{Unem}_{\text{Nor}}$	–		0.33	(1.03)
Migrant stock $\times 10^{-4}$	1.56	(0.82)	-1.04	(-0.45)
Adjusted R ²	0.49		-0.05	
Durbin-Watson statistic	2.04		1.42	

* significant $p < 0.05$ (one-sided test)

i $\text{Ln}(Y_t / Y_{t-1})$

Model A reveals a positive significant effect of the differences in real GDP per capita. This is an indication that neo-classical mechanisms underlie high-skilled labour migration. The two models did not reveal additional significant effects.

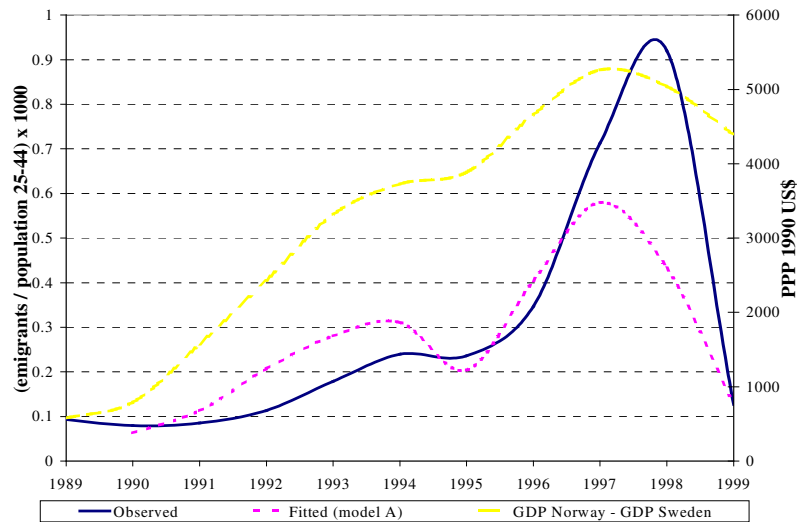
The use of nominal income differences is not a completely correct way to test the impact of the nominal wage level on international migration flows. Actually, the nominal wage level in the receiving country also has to be compared somehow with the real income level in the sending country. This might be a reason why this variable has a sign which turned out to be negative.

A possible explanation for the insignificance of unemployment differences can be found if we see the labour market as a 'job-competition model' (Thurow, 1975). According to this model, an increase in unemployment often has a disproportionate large influence on the availability of jobs at the bottom of the labour market. Even if many (middle) management jobs are downsized, the employment situation at the bottom of the labour market also deteriorates. Displacement of workers with little education by workers with a higher education is the underlying mechanism behind this phenomenon. On the other hand, a change in GDP per capita generally is more proportional in all segments of the labour market. Therefore, changes in GDP per capita may have a larger effect on high-skilled workers than changes in unemployment.

The insignificant role of the Swedish migrant stock in Norway is not surprising as high-skilled labour migrants often have already a job, a dwelling and a permit to stay before they leave their country of origin. Therefore, contrary to low-skilled labour migrants, they often do not need migrant networks and migrant institutions to make such arrangements.

Figure 6.2 displays the observed and fitted trend of employed migration from Sweden to Norway and the trend of real GDP per capita in Norway minus real GDP per capita in Sweden. This figure illustrates that the difference in real GDP per capita and employed migration have a common pattern. However, the peak of the observed migration trend in 1998 was more extreme.

Figure 6.2. Observed and fitted employed migration from Sweden to Norway and the difference in real GDP per capita between Norway and Swedenⁱ



i Actual migration in 1989 was used to obtain the fitted trend.

6.3 Return migration

Often, return migration is the reverse move of a former labour migrant. Therefore, although their effects are supposed to be opposite, one would think that the same economic determinants, which are the underlying mechanisms behind labour migration, apply to return migration. However, the relationship between economic determinants and return migration is more complex. We have to make a distinction between return migration within and from the EU/EFTA region.

Return migration from Germany to Italy serves as a case study for return migration following (labour) migration within the EU/EFTA region, while return migration from Germany to Turkey serves as a case study for return migration in the wake of (labour) migration from the EU/EFTA region. Return migration from Germany to Italy can easily be compared with other return migration flows following earlier low-skilled labour migration within the EU/EFTA region. It is unclear whether this flow can be compared with return migration after high-skilled labour migration within the EU/EFTA region. Return migration of Turks from Germany can be seen as a representative case study of return migration following labour migration from the EU/EFTA region.

6.3.1 Hypotheses

Hypothesis 1 states that *the unemployment difference between the original sending and receiving country has a negative impact on both return migration within and from the*

EU/EFTA region. Hypotheses 2, 3 and 4 refer to GDP per capita. Smaller income differences between destination and origin countries can be an incentive for return migration. On the other hand a high income in a receiving country provides the possibility for elder (labour) migrants to return to their country of origin. In the latter case return migration can be seen as a form of retirement migration. Return migration within the EU/EFTA region has a less definitive character (it is easy to re-enter another EU/EFTA country) in comparison with return migration from the EU/EFTA region. Moreover, *within* the EU/EFTA region GDP per capita is expected to have a positive effect on the mobility of young people. Van Solinge *et al.* (1998) found a positive effect of income on internal outmigration rates of young age groups in the countries of the European Union. International return migration of second-generation migrants can be compared with internal migration of young age groups in the EU/EFTA region. Second-generation migrants often go to the country of origin of their parents, for instance to work (temporarily) or to study. The decision to migrate to Milan for study is probably a less drastic decision for a second-generation Italian, who lives in Munich and speaks Italian, than the decision of a native German fellow townsman to move to Hamburg for a similar reason. Therefore, the hypotheses (2 and 3) are worded as follows: *GDP per capita in original receiving countries has a positive effect on return migration within the EU/EFTA region and a negative effect on return migration from the EU/EFTA region.* Finally, I assume that *GDP per capita in the original sending country has a positive effect on both return migration within and from the EU/EFTA region* (hypothesis 4).

As mentioned in section 3.4.2, the extent of assimilation of a migrant in the host society (the original receiving country) has a negative impact on his or her intentions to return. This assimilation is positively influenced by duration and negatively by age. ‘Ties to home’ have a positive impact on return intentions. The proportion of females in the migrant population, which is a variable in the analyses, captures a part of these social effects. We may state that the ‘ties to home’ are less strong if the partner (and children) of a migrant has come over as well. In addition, the proportion of females in the migrant population is an indication of the proportion of children in a migrant population⁵¹. The number of females and children, in turn, may be seen as an indication that the migrant population has lived longer in the host country and hence that they are more assimilated. Furthermore, in all likelihood, the children of migrants are more assimilated than their parents. Taking this into consideration, hypothesis 5 can be formulated: *the proportion of females in the migrant population has a negative effect on return migration.*

I focus on return migration after labour migration here. Of course, return migration is a phenomenon, which may follow any migration type. GDP per capita and unemployment

⁵¹ In general a migrant population which has originated from labour migration consists of a disproportionate number of males. The sex ratio will normalise if females and children come over and children of migrants are born.

probably have a larger impact on return migration following labour migration than upon return migration in the wake of other migration types (e.g. asylum, family or colonial migration). Nevertheless, an impact of these factors on return migration following other migration types is far from inconceivable.

The number of migrants in a country is, of course, a very important determinant of the volume of return migration from this country. This obvious relationship will be taken into account by using the number of return migrants divided by the present migrant population as the dependent variable. Thus, I analyse return migration rates.

Table 6.5. Five return migration hypotheses

1.	The unemployment difference between the original sending and receiving country has probably a negative impact on both return migration within and from the EU/EFTA region.
2.	GDP per capita in the original sending country has a positive effect on both return migration within and from the EU/EFTA region.
3.	GDP per capita in original receiving countries has a positive effect on return migration within the EU/EFTA region.
4.	GDP per capita in original receiving countries has a negative effect on return migration from the EU/EFTA region.
5.	The proportion of females in the migrant population has a negative effect on return migration.

6.3.2 Return migration within the EU/EFTA region: migration of Italians from Germany

After the Second World War West Germany had to recover from the ravages of war. A very high demand for manual labour could not be met by the domestic labour force. Especially after the construction of the Berlin Wall (1961), when the inflow of East German workers stopped, a high shortage of manual labour came about. This shortage was solved by the ‘*Gastarbeiter* rotation system’ in which foreign (mostly Mediterranean) workers were supposed to stay for one to three years and then return to their home countries (Kurthen, 1995). However, many labour migrants stayed permanently. Many Italians were among the foreign workers in West Germany: the number of Italians living in West Germany increased from about 200,000 in the beginning of the 1960s to more than 630,000 in 1973 (Haug, 2000). After 1973 immigration to West Germany decreased. An *Anwerbestopp* or halting of labour recruitment from abroad was instituted in response to the increasing economic recession. Rising unemployment induced many labour migrants to return to their country of origin. In 1972, Italy was the first Southern European country that became an immigration country

(Martin, 1994). The transformation from an emigration country to an immigration country was the result of two important migration flows (Penninx, 1986 in Montanari and Cortese, 1993). First, there arose a considerable return migration from Northwest Europe. Second, increasing numbers of immigrants from developing countries in Africa, Asia and Latin America started entering Italy since the early 1970s. Return migration from Northern and Western Europe remained an important factor in Italian immigration. The emigration of Italian nationals from Germany, for instance, fluctuated between approximately 50,000 in 1985 and 31,000 in 1993 in the period 1985-1999 (Eurostat, 2002). Not all these emigrants are necessarily return migrants (including second-generation return migrants) as some emigrants may have gone to other countries than Italy. Nevertheless, these figures give a good indication of the volume of return migration to Italy.

The number of Italian migrants from West Germany (source: Eurostat (2002)) divided by the midyear Italian population (sources: Statistisches Bundesamt in Haug (2000) and Eurostat (2002))⁵² per thousand is the dependent variable in the analyses⁵³. An overview of the independent variables can be found in *Table 6.6*.

Table 6.6. Independent variables used in the analyses on Italian migration from Germany

Variable	Measured as	Source
GDP per capita in West Germany and Italy	1990 US\$ converted at Geary Khamis PPPs	Groningen Growth and Development Centre (GGDC) (2002) ⁱ
Unemployment in West Germany and Italy	Total unemployment as percentage of the total labour force	For Italy: Gärtner (2000); for West Germany: Eurostat (2002)
Share of females in the Italian migrant stock in West Germany	Female Italian population in WG divided by total Italian population in WG (midyear)	Statistisches Bundesamt in Haug (2000); for 1988 and 1997-1999: Eurostat (2002)

i The data for West Germany 1998 and 1999 are estimated as Germany x 1.155. The average value of GDP per capita West Germany / GDP per capita Germany was 1.155 in the period 1989-1997.

The correlation coefficients between all the independent variables are significant and considerably high. The correlations between unemployment difference and the other variables are the only correlations that are not higher than 0.80. Therefore, I estimated three models (A, B and C) with the difference in unemployment and one of the three other variables. Moreover,

⁵² Source for 1985-1996: Statistisches Bundesamt in Haug (2000) (in 1988 new population census); for 1997-1999: Eurostat (2000)

⁵³ Italian citizens in the former East Germany have also been included from 1992. However, their number has been very small. In 1994 (31 December), for instance, only 2019 Italians (0.35% of the total) lived in Brandenburg, Meckelenburg-Vorpommern, Sachsen, Sachsen-Anhalt and Thüringen (Haug, 2000).

I estimated a model (D) with first differences. The use of first differences made it possible to estimate coefficients for all variables simultaneously. The results of the time series regression analyses are presented in *Table 6.7*.

Table 6.7. Results of time series regression analyses to explain the natural logarithm of migration rates per 1000 of Italian nationals from Germany, 1985-1999

	Model A		Model B		Model C		Model D ⁱ	
	Coefficients (t-values)							
Constant	5.42**	(6.55)	2.45	(1.52)	8.14**	(2.83)	-0.03	(-0.91)
GDP _{WG} x 10 ⁻⁵	-2.90	(-0.63)	–		–		9.53*	(2.14)
GDP _{Italy} x 10 ⁻⁵	–		9.49	(1.09)	–		-2.79	(-0.26)
Unem _{Italy} – Unem _{WG}	-0.14**	(-2.91)	-0.01	(-0.38)	-0.12*	(-2.40)	-0.06*	(-1.88)
Proportion females	–		–		-8.60	(-1.12)	-1.10	(-0.14)
AR(1)	–		0.79**	(8.70)	–		–	
T	15		14		15		14	
Adjusted R ²	0.54		0.70		0.57		0.22	
Durbin-Watson stat.	1.19		2.56		1.03		1.46	

* significant $p < 0.05$ (one-sided test)

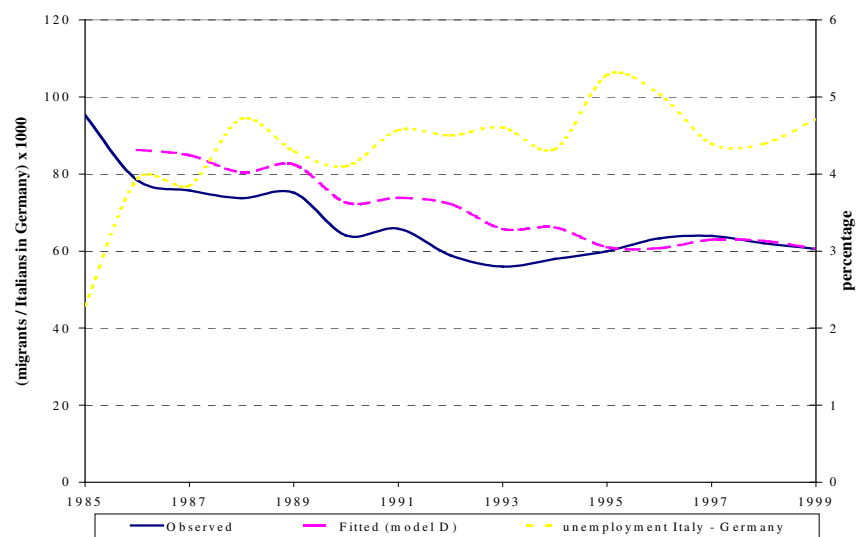
** significant $p < 0.01$ (one-sided test)

i All variables in this model are measured as first differences.

Most coefficients have the expected sign. The exceptions are GDP per capita in West Germany in model A and GDP per capita in Italy in model D. The coefficients of the unemployment difference between Italy and Germany are significant in three of the four models. Hence, we may state that the unemployment difference between the original sending and the original receiving country is a workable predictor of return migration within the EU/EFTA region. The results of the analyses support hypothesis 1.

The observed and fitted trend of Italian emigration from West Germany and the trend of unemployment in Italy minus West Germany are presented in *Figure 6.3*. The results of model D are used to obtain the fitted trend.

Figure 6.3. Observed and fitted migration of Italian nationals from West Germany and the difference in unemployment between Italy and West Germanyⁱ



i Actual migration in 1985 was used to obtain the fitted trend.

We may state that GDP per capita in the sending and receiving country is less important than unemployment differences to explain return migration within the EU/EFTA region. Nevertheless, the result of model D provides tentative support for hypothesis 3. Apparently, the proportion of females in the migrant population is not an adequate variable to measure the assimilation of migrants and their ties to their country of origin. Haug (2001) estimated determinants of return migration of first-generation migrants from Germany to Italy at the individual level. She found significant effects for the following variables which may be better social determinants than the proportion of females in the migrant population: age 60+ (positive effect), remittances (positive effect), knowledge of German (negative effect), the size of the household (negative effect), and the number of children in Italy (positive effect). In addition, Haug clearly demonstrated that Italians in Germany who are born in Germany tend to migrate to Italy to a much smaller extent than those who are not born in Germany. However, none of the aforementioned variables, except age 60+, were available at the macro level. Additional analyses with the variable age 60+ were also conducted. However, this variable had a negative coefficient in all models. This may be due to the probably high correlation between the proportion of the migrants who are 60+, which has a positive effect on return migration, and the duration of their sojourn in Germany, which has a negative effect on return migration.

6.3.3 Return migration from the EU/EFTA region: migration of Turks from Germany

Turkey and West Germany signed a recruitment agreement for labour in 1961. Later, Turkey also concluded agreements with Austria, Belgium and the Netherlands in 1964, with France in 1965 and with Sweden in 1967 (Koray, 1999). As mentioned in section 6.3.2, increasing unemployment in West Germany (and other Northern and Western European countries) induced many labour migrants to return to their country of origin after the economic recession of 1973. However, labour migrants from the Maghreb area and Turkey were more inclined to let their family come over while migrants from Southern Europe were more inclined to engage in return migration (Sprangers, 1995; Dustmann, 1996). Nevertheless, return migration of Turks was an important migration flow, also after the 1970s. Mehrländer (1983 in Abadan-Unat, 1993) conducted a survey among Turkish nationals in West Germany in 1980. This survey revealed that 60% of first-generation Turks and 34% of second-generation Turks had plans to return to their home country. Although intentions for return migration are definitively no guarantee for actual return migration, these figures indicate that return migration of Turks from Germany was of importance in the 1980s (and 1990s). Emigration of Turk nationals from West Germany fluctuated between more than 61,000 in 1985 and less than 36,000 in 1990 in the period 1985-1999 (Eurostat, 2002).

The number of Turkish migrants from West Germany (source: Eurostat (2002)) divided by the midyear Turkish population (source: Zentrum für Türkeistudien (2001a) and (2001b))⁵⁴ per thousand is the dependent variable in the analyses⁵⁵. See *Table 6.8* for the independent variables.

⁵⁴ Source for 1985-1997: Zentrum für Türkeistudien (2001a); for 1998 and 1999: Zentrum für Türkeistudien (2001b).

⁵⁵ Turkish citizens in the former East Germany have also been included since 1992. However, their number has been very small. In 1997 (31 December), for instance, only 11,717 Turks (0.56% of the total) lived in Brandenburg, Meckelenburg-Vorpommern, Sachsen, Sachsen-Anhalt and Thüringen (Zentrum für Türkeistudien, 2001b).

Table 6.8. Independent variables used in the analyses on Turkish migration from Germany

Variable	Measured as	Source
GDP per capita West Germany and Turkey	1990 US\$ converted at Geary Khamis PPPs	Groningen Growth and Development Centre (GGDC) (2002) ⁱ
Unemployment Turkey and West Germany	Total unemployment as percentage of the total labour force	For Germany (Eurostat, 2002); for Turkey: ILO (2002) ⁱⁱ
Share of females in the Turkish migrant stock in West Germany	Female Turkish population in WG divided by total Turkish population in WG (midyear)	Zentrum für Türkeistudien (2001a); for 1998 and 1999 Zentrum für Türkeistudien (2001b)

i The data for West Germany 1998 and 1999 are estimated as Germany x 1.155. The average value of GDP per capita West Germany / GDP per capita Germany was 1.155 in the period 1989-1997.

ii Extrapolation using equal increment for Turkey for 1985-1987.

The correlation between GDP per capita in Germany and GDP per capita in Turkey is .80 and very significant. The correlation coefficients between the two GDP variables and the difference in unemployment and the proportion of females in the migrant population are not higher than .80. Therefore, two models (A and C) have been estimated with one of the two GDP variables and the other two socio-economic variables. In addition, a model (B) has been estimated with GDP per capita in West Germany and the difference in unemployment between Turkey and West Germany, because the correlation between GDP per capita in West Germany and the proportion of females in the Turkish migrant population is quite high and very significant. *Table 6.9* shows the results of the regression analyses.

Table 6.9. Results of time series regression analyses to explain the natural logarithm of migration rates per 1000 of Turkish nationals from Germany, 1985-1999

	Model A		Model B		Model C	
	Coefficients (t-values)		Coefficients (t-values)		Coefficients (t-values)	
Constant	11.34**	(9.55)	8.55**	(7.05)	3.81*	(1.94)
GDP _{WG} x 10 ⁻⁵	-7.11	(-1.05)	-25.63**	(-4.41)	–	
GDP _{Turkey} x 10 ⁻⁵	–		–		3.07	(0.38)
Unem _{Turkey} – Unem _{WG}	-0.02	(-1.05)	-0.03	(-1.22)	-0.01	(-0.75)
Proportion females	-14.78**	(-3.47)	–		-2.08	(-0.53)
AR(1)	–		–		0.76**	(8.94)
T	15		15		14	
Adjusted R ²	0.77		0.56		0.87	
Durbin-Watson statistic	1.12		1.10		1.44	

* significant $p < 0.05$ (one-sided test)

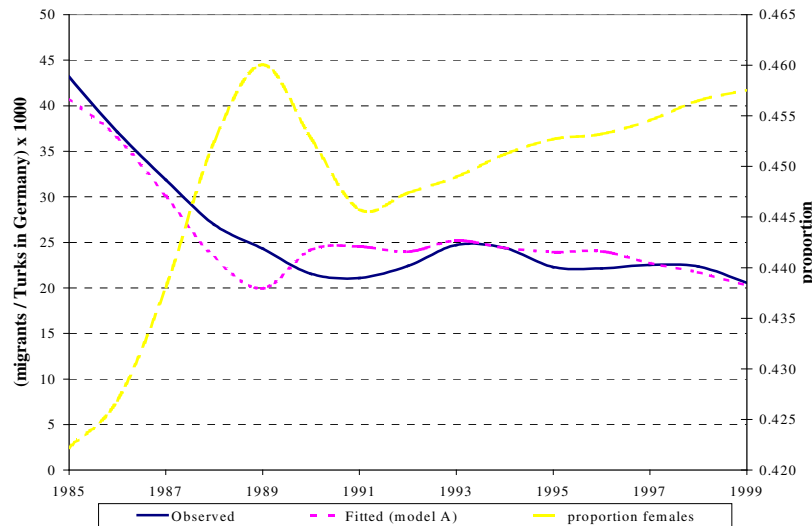
** significant $p < 0.01$ (one-sided test)

All coefficients in the three models have the expected sign. The most important economic factor that influences Turkish return migration appears to be GDP per capita in West Germany. This result is in line with hypothesis 4. The amount of remittances that migrants are able to send to their family in Turkey may be important here in addition to the income of the migrants and their families in Germany. The social determinant ‘proportion of females in the migrant population’ also has a considerable impact upon return migration from Germany to Turkey (at least in model A). This can be seen as a tentative support for hypothesis 5 with respect to return migration from the EU/EFTA region. The analyses do not provide a corroboration of hypotheses 1 and 2. The adjusted R² is quite large, despite most of the socio-economic variables being not significant. This is due to the only significant variable in models A and B. However, in model C the quite large and very significant autoregression term plays an important role.

Three other models were also estimated: a model with GDP per capita in West Germany and the proportion of females in the Turkish migrant population in West Germany; a model with GDP per capita in Turkey and the proportion of females in the Turkish migrant population in West Germany; and a model with GDP per capita in Turkey and the unemployment differences between Turkey and West Germany. All the models needed an autoregression term of the first order to remove autocorrelation. All socio-economic variables in the three models had the expected sign. However, none of them was significant.

Figure 6.4. shows the observed and fitted trend of Turkish emigration from West Germany and the proportion of females in the Turkish migrant population in West Germany. I used the results of model A to obtain the fitted trend.

Figure 6.4. Observed and fitted migration of Turkish nationals from West Germany and the proportion of females in the Turkish migrant population in West Germany



Return migration of Turks from Germany is probably a representative case of return migration following earlier low-skilled labour migration from the EU/EFTA region. The most important type of migration to the EU/EFTA region that is not related to (earlier) labour migration is asylum migration. Return rates of asylum migrants are of course in the first place influenced by the political situation in their country of origin. The political situation in the former Yugoslavia and Algeria, for instance, has probably had a large impact on return migration to these countries.

6.4 Family migration

In this section I aim to estimate the influence of socio-economic determinants on family migration of Moroccans to the Netherlands in the period 1985-1999. This migration flow is an example of family migration to the EU/EFTA region. I use Moroccan migration figures here as Moroccan migration to Western Europe in the post-industrial era is almost completely family migration in nature. Migration from Turkey, for instance, can also be asylum migration.

6.4.1 Hypotheses

Family migration is most likely relatively larger when the differences in the economic circumstances (e.g. level of wages) between the country of destination and the country of origin are larger. Therefore, hypothesis 1 is formulated as follows that *the difference in GDP per capita between a receiving and a sending country has a positive effect on family*

migration between these two countries. Fluctuations in absolute GDP per capita are much larger in receiving countries than in sending countries, which have a much lower level of GDP per capita. Hence, GDP in a receiving country in the EU/EFTA region determines to a large extent the difference in GDP per capita between a receiving country and a sending country outside the Western world. For instance, the correlation between GDP per capita in the Netherlands and the difference in GDP per capita between the Netherlands and Morocco in the period 1985-1999 is 0.999. Therefore, in practice, I mostly estimate the effect of GDP in the receiving country.

Not only the level of income in receiving countries but also the certainty of sufficient income may determine the extent of family migration. The higher the certainty of a sufficient salary, the more dependants may come over to live on this salary. The certainty of sufficient income is probably lower in times of widespread unemployment. This phenomenon lies behind hypothesis 2: *unemployment in receiving countries has a negative impact upon the amount of family migration.*

Unemployment in sending countries is another factor that may be an important determinant of family migration. However, time series of unemployment in Morocco are not available.

6.4.2 Migration of Moroccans to the Netherlands

The history of Moroccan migration to the Netherlands started in the beginning of the 1960s. The border between Morocco and Algeria was closed because of the Algerian independence war. Therefore, seasonal labour migration of Rifians to Algeria came to an end. Subsequently, Western Europe became an alternative destination area for Moroccan labour migrants, all the more since Western European countries were dealing with a shortage of low-skilled labour (Obdeijn, 1993). After the economic recession of 1973 Western European countries introduced recruitment stops for foreign workers. The Netherlands (similar to Belgium) introduced this recruitment stop relatively late (not until August 1974) (Rettab, 1995). The regularisation of clandestines in 1975 caused a final peak in the immigration of Moroccan males of working age to the Netherlands. In this year the immigration of young Turkish and Moroccan males was even much higher than in the previous years (De Mas and Hafmans, 1985, in Lakeman, 1999). Family migration became the most important migration type between Morocco and the Netherlands since the second half of the 1970s. Family migration is not unconditional under Dutch law. Former migrants must have sufficient income and housing for family members who want to join them. As was said earlier (section 5.4, stylised fact 6), the Dutch authorities tightened the income requirement in 1993.

Here, I focus on the number of family migrants that a residing migrant attracts. Therefore, the dependent variable in this section is the migration of Moroccans to the Netherlands (source: Eurostat (2002)) divided by the already residing Moroccan population in

the Netherlands (sources: Statistics Netherlands (1990 and 2002) and De Valk *et al.* (2001))⁵⁶. The independent variables in this analysis are the difference in GDP per capita between the Netherlands and Morocco, and unemployment in the Netherlands. The ways of measurement and the sources of the two independent variables are similar to the real GDP per capita and unemployment variables in table 6.2.

Due to multicollinearity I used first differences. The correlation between the independent variables based on first differences is not very high. Therefore, just one model with both independent variables has been estimated. *Table 6.10* shows the results of the analysis.

Table 6.10. Results of time series regression analysis to explain first differences of the natural logarithmⁱ of Moroccan migration to the Netherlands divided by the Moroccan population in the Netherlands (per 1000) in the period 1985-1999 (T = 14)

	Coefficients	T-values
Constant	-0.03	-0.27
$(GDP_{Net} - GDP_{Mor}) \times 10^{-4}$	-4.80	-1.73
Unemployment _{Net}	-0.28**	-3.52
Adjusted R ²	0.45	
Durbin-Watson statistic	1.88	
**	significant $p < 0.01$ (one-sided test)	
i	Ln (Y_t / Y_{t-1})	

Unemployment in the Netherlands has a significant negative effect on Moroccan migration to the Netherlands. This can be seen as a support for hypothesis 2. However, the difference in GDP per capita between the Netherlands and Morocco (the subject of hypothesis 1) has an unexpected negative effect, but this effect is not significant.

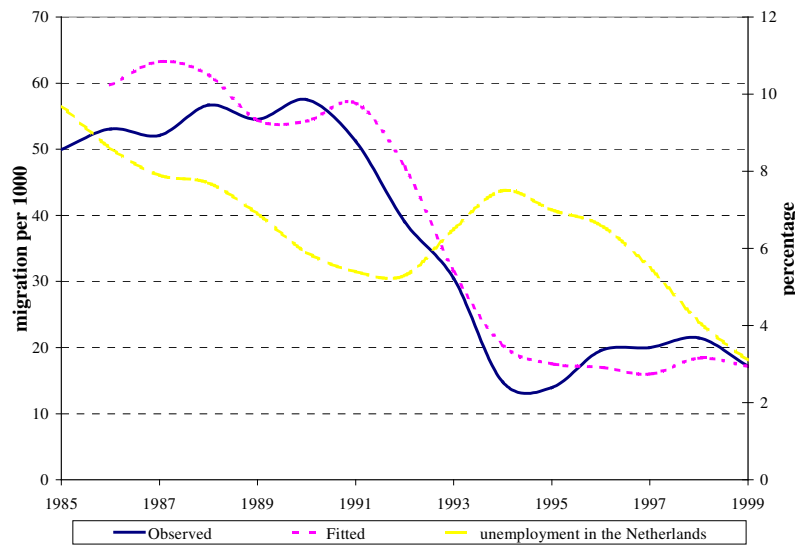
Unemployment in the receiving country appears to be an important determinant of family migration: the higher the unemployment rates in the receiving country, the less family members come over to join former migrants. Evidently, the certainty of sufficient family

⁵⁶ Source for 1996-1999: Statistics Netherlands (2002); for 1990 and 1995: De Valk *et al.* (2001). The data on the Moroccan population in the Netherlands include first- and second-generation Moroccans. A first-generation Moroccan is born in Morocco and at least one of his parents is born in Morocco. A second-generation ethnic Moroccan is born in the Netherlands and has at least one parent who is born in Morocco. For the remaining years (1985-1989 and 1991-1994) data have been interpolated using equal increment. The assumption has been made that the number of first- and second-generation ethnic Moroccans was equal to the number of Moroccan nationals in 1985 (source: Statistics Netherlands (1990), rounded to the nearest hundred). Naturalisation intentions of Moroccans were low before the 1990s. Many Moroccans who lived in the Netherlands had emotional objections against naturalisation (Heijs, 1995). In addition, Moroccan authorities could confiscate possessions after naturalisation (Bakker and Tap, 1987 in Heijs, 1995). The data for 1986-1989 and 1991-1994 have been estimated using equal increment.

income is more important than the amount of income or the difference in income between the receiving and the sending country, as the coefficient of the difference in GDP per capita between the Netherlands and Morocco is not significant. Moreover, this coefficient had an unexpected negative sign. The fact that the difference in GDP per capita between the Netherlands and Morocco is very large may explain the irrelevance of (the difference in) GDP per capita as the economic incentive to migrate was present during the entire period 1985-1999.

The fitted trend fairly corresponds to the observed trend of Moroccan migration to the Netherlands. *Figure 6.5* shows these trends and unemployment in the Netherlands.

Figure 6.5. Observed and fitted migration of Moroccan nationals (divided by the midyear ethnic Moroccan population in the Netherlands) to the Netherlands and unemployment in the Netherlandsⁱ



ⁱ Actual migration in 1985 was used to obtain the fitted trend.

Moroccan family migration to the Netherlands comprises two types of family migration: family reunification and family formation migration. The latter has become more important since the 1980s. Additional research should be conducted to answer the question of the extent to which the same factors influence these two types of family migration.

6.5 Ethnic migration in transition countries

Ethnic migration in Eastern Europe in the post-communist era can be divided into: ethnic migration from the former East Bloc to Western Europe; ethnic migration between countries of the former East Bloc; and ethnic migration between states of the former Soviet Union. Socio-economic factors may have different impacts on the various types of ethnic migration.

In section 6.5.2 determinants of emigration of *Aussiedler* from Romania, which is an example of ethnic migration from the former East Bloc to Western Europe, will be estimated. Emigration of ethnic Hungarians from Romania, a case study of ethnic migration between countries of the former East Bloc, is the subject of section 6.5.4. The last case study in this chapter (section 5.6.4) deals with Russian emigration from Latvia. This is an example of ethnic migration between successor states of the Soviet Union.

6.5.1 Hypotheses

The difference in GDP per capita between a sending and a receiving country is the only variable for which I pose hypotheses for all the three types of ethnic migration. Hypothesis 1 states that *the income difference between a receiving and a sending country has a positive effect on the volume of ethnic migration between these two countries.*

Unemployment was officially a non-existent phenomenon in Eastern European countries in the communist period. Therefore I decided to exclude unemployment hypotheses with respect to ethnic migration between countries of the former East Bloc. Furthermore, for the same reason, no hypothesis was formulated on unemployment in sending countries with respect to ethnic migration from the former East Bloc to Western Europe.

Unemployment in Western European receiving states of ethnic migration (i.e. Germany, Greece and Finland) may have an impact on the strictness of the admission and recognition policy with regard to ethnic minorities in Eastern Europe. Hence, the argument: *unemployment in a Western European country has a negative effect on ethnic migration from a (former) communist country to this Western European country* (hypothesis 2).

The threshold for Slavs to migrate to their country of origin in the former Soviet Union is very low. Therefore, no hypothesis on the effect of unemployment in the Slavic receiving country is formulated. However, hypothesis 3 on the unemployment difference between the sending and receiving country can be formulated as follows: *The unemployment difference between a sending (non-Slavic) and receiving (Slavic) country of the former Soviet Union has a positive effect on ethnic migration between these two countries.*

As mentioned above, many Slavs were induced to engage in return migration after the disintegration of the Soviet Union. The pressure to return may be higher in times of high unemployment. This forms the basis of hypothesis 4: *unemployment in a sending (non-Slavic) Soviet successor state has a positive effect on ethnic migration from this state.*

Table 6.11. Four ethnic migration hypotheses

-
1. The income difference between a receiving and a sending country has a positive effect on the amount of ethnic migration between these two countries
 2. Unemployment in a Western European country has a negative effect on ethnic migration from a (former) communist country to this Western European country
 3. The unemployment difference between a sending (non-Slavic) and receiving (Slavic) country of the former Soviet Union has a positive effect on ethnic migration between these two countries.
 4. Unemployment in a sending (non-Slavic) successor state of the Soviet Union has a positive effect on ethnic migration from this state.
-

6.5.2 Ethnic migration from the former East Bloc to Western Europe: Aussiedler from Romania

The presence of ethnic Germans in Romania (Transylvania) has a long history. The first German settlers (the Siebenbürger Sachsen), who were invited by the Hungarian king Geysa II to protect the borders against Mongol and Tartar incursions and to cultivate the land, arrived as early as the 12th century. The census of 1930 revealed that about 745,000 ethnic Germans lived in Romania (Gabanyi, 2000). After the Second World War many ethnic Germans fled from Romania to one of the German states or were deported to labour camps in the Soviet Union (Groenendijk, 1997). About 160,000 ethnic Germans migrated to Germany in the period 1950-1984. German outflow assumed vast proportions again after the fall of the Ceaușescu regime. An absolute peak year was 1990 when more than half of the German population in Romania emigrated (see also stylised fact 11). Hence, the census of 1992 revealed that only 120,000 Germans still lived in Romania.

The number of Romanian Aussiedler that migrated to Germany (sources: Mammey and Schiener (1998) and Bundesamt für die Anerkennung ausländischer Flüchtlinge (2002))⁵⁷ divided by the midyear ethnic German population in Romania (source: Romanian National Commission for Statistics (1992) in Mureșan and Rotariu (2000))⁵⁸ per thousand is the dependent variable in the analysis.

The independent variables that have been used in the analyses are the difference in GDP per capita between (West) Germany and Romania and unemployment in (West)

⁵⁷ Source for 1985-1996: Mammey and Schiener (1998); for 1997-1999: BAFL (2002).

⁵⁸ Only the number of ethnic Germans in Romania in the beginning of 1992 was available. Data for the other years have been estimated with the natural increase in Romania (source: Council of Europe (2001)) and emigration of ethnic Germans to Germany. The assumption has been made that the natural rate of population growth for ethnic Germans was the same as for the total Romanian population.

Germany. *Table 6.12* shows the ways of measurement and the sources of these two independent variables.

Table 6.12. Independent variables used in the analysis on Aussiedler from Romania

Variable	Measured as	Source
GDP per capita in (West) Germany and Romania	1990 US\$ converted at Geary Khamis PPPs	Groningen Growth and Development Centre (GGDC) (2002) ⁱ
Unemployment in (West) Germany	Total unemployment as percentage of the total labour force	1985-1990: (Eurostat, 2002); 1991-1999: Gärtner (2000)

i German data apply to West Germany for the years 1985-1989.

The correlation between the independent variables is -.33. Hence, only one model with both variables was estimated (see *Table 6.13*).

Table 6.13. Results of time series regression analysis to explain the natural logarithm of migration of ethnic Germans from Romania to Germany divided by the ethnic German population in Romania (per 1000) in the period 1985-1999 (T = 14)

	Coefficients	T-values
Constant	12.99**	2.94
$(\text{GDP}_{\text{Ger}} - \text{GDP}_{\text{Rom}}) \times 10^{-4}$	-2.29	-0.80
$\text{Unemployment}_{\text{Ger}}$	-0.72*	-2.48
AR(1)	0.71*	1.82
Adjusted R ²	0.75	
Durbin-Watson statistic	1.88	

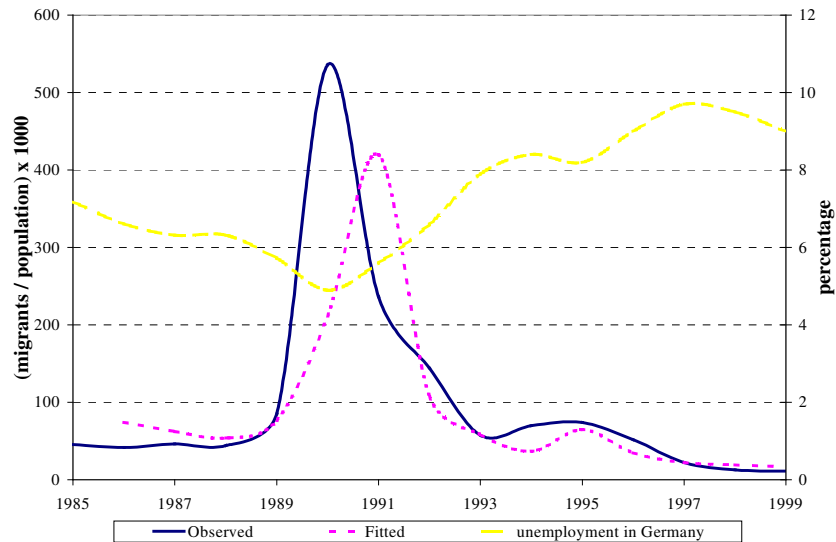
* significant $p < 0.05$ (one-sided test)

** significant $p < 0.01$ (one-sided test)

The effect of the difference in GDP per capita between Germany and Romania is not significant. In addition, contrary to what I expected, the effect is negative. The analysis does not provide support for hypothesis 1. The outcome of the analysis suggests that the income gap between the two countries is so large that it has no influence on the incentive for ethnic migration from Romania to Germany. Unemployment in Germany has a negative significant effect. This affirms hypothesis 2. Societal dissatisfaction in Germany, which in turn is influenced by the unemployment level, seems to determine the strictness of entrance criteria for *Aussiedler*.

Figure 6.6 plots the observed and fitted trend of *Aussiedler* from Romania. Furthermore, this figure plots unemployment in (West) Germany. The very large emigration of ethnic Germans from Romania in 1990 and the use of an autoregression term of the first order cause large differences between observed and fitted migration in 1990 and 1991.

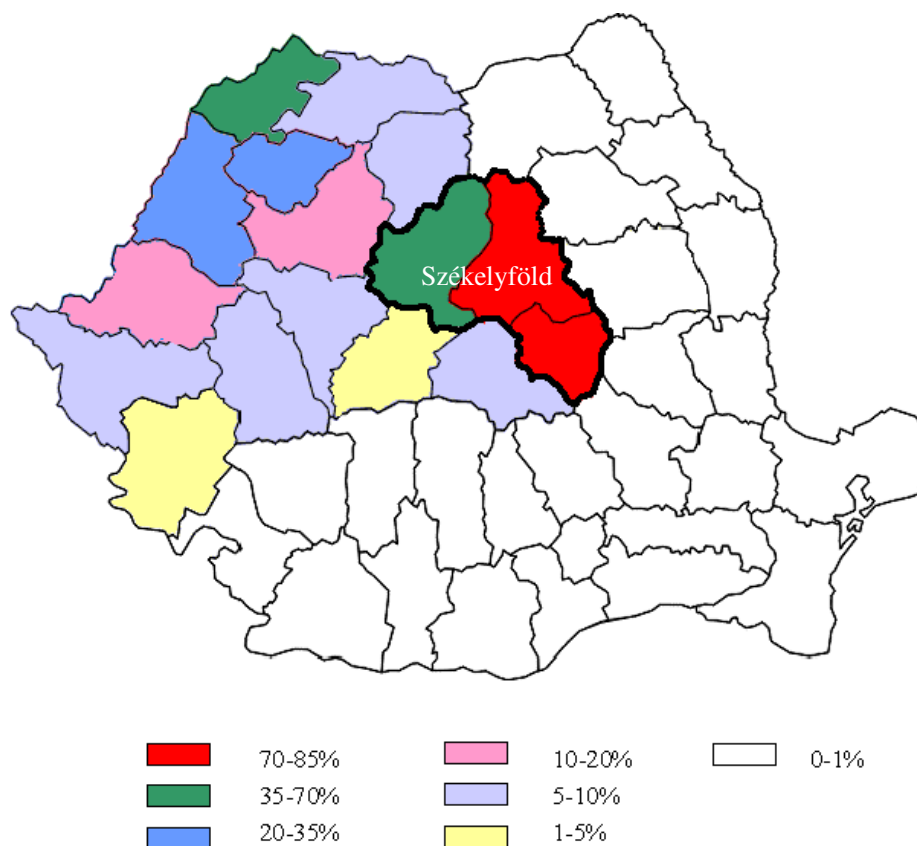
Figure 6.6. Observed and fitted migration of ethnic Germans from Romania (divided by the midyear ethnic German population in Romania) and unemployment in (West) Germany



6.5.3 Ethnic migration between countries of the former East Bloc: migration of ethnic Hungarians from Romania

By far most of the ethnic Hungarians in Romania have lived in Transylvania (see also *Figure 6.7*). Hungarians settled in Transylvania at the end of the 9th century. There is no consensus about whether they arrived before or after the Romanians. Hence, both Hungarians and Romanians consider Transylvania as part of their historical homeland (see footnote 48). Transylvania has been part of Romania since 1920. About 1.6 million ethnic Hungarians lived in Transylvania in 1992. The Hungarian population in Romania can be divided into two groups: Magyars and Szekels (Cushing, 1992). The latter, who live in the southeastern part of Transylvania, developed their own social structure and often consider themselves as separate from the other Hungarians.

Figure 6.7. Ethnic Hungarians in Romania 2002 (percentage of the total population)



Source: DAHR (2003).

The number of migrants from Romania to Hungary (source: United Nations (2001))⁵⁹ divided by the midyear ethnic Hungarian population in Romania (source: National Commission for Statistics (1992) in Mureşan and Rotariu (2000))⁶⁰ per thousand is the dependent variable in the analysis. The only independent variable in the analysis is the difference in GDP per capita between Hungary and Romania. No unemployment variables were used in the analysis as unemployment was zero until 1990. The way of measurement and source of the only independent variable is similar to the real GDP per capita variable in table 6.2. Table 6.14 presents the results of the time series regression analysis.

⁵⁹ The immigration table of Hungary. The immigration figure for 1998 is preliminary.

⁶⁰ Only the number of ethnic Hungarians in Romania in the beginning of 1992 was available. Data for the other years have been estimated by using the natural increase in Romania (source: Council of Europe (2001)) and emigration of ethnic Hungarians to Hungary. The assumption has been made that the natural rate of population growth for ethnic Hungarians was the same as for the total Romanian population.

Table 6.14. Results of time series regression analysis to explain the natural logarithm of migration from Romania to Hungary divided by the ethnic Hungarian population in Romania in the period 1985-1999 (T = 14)

	Coefficients	T-values
Constant	0.54	0.20
$(GDP_{\text{Hun}} - GDP_{\text{Rom}}) \times 10^{-4}$	3.57	0.39
AR(1)	0.61 **	3.24
Adjusted R ²	0.45	
Durbin-Watson statistic	1.54	

** significant $p < 0.01$ (one-sided test)

The difference between GDP per capita in Hungary and Romania, which has been quite large and increasing (GGDC, 2002), is not an important determinant of ethnic migration from Romania to Hungary. Similar to the outcome of the analysis of ethnic migration from Romania to Germany, the outcome of this analysis does not support hypothesis 1.

6.5.4 Ethnic migration between states of the former Soviet Union: the repatriation of ethnic Russians from Latvia

Latvia is the country with the highest share of non-nationals in the total population in Europe in the post-industrial era⁶¹. In 1935 10.3% of the Latvian population consisted of Russians, Belarussians and Ukrainians. This share had increased to 42% on the eve of the fall of communism in Europe (1989) (Central Statistical Bureau of Latvia, 2001). Many Slavs returned to Russia, Belarus and Ukraine after the disintegration of the Soviet Union (see section 5.7, stylised fact 13).

The number of migrants from Latvia to the Russian Federation (sources: United Nations (2001) and the Council of Europe (2000 and 2001))⁶² divided by the midyear Russian population in Latvia (source: Central Statistical Bureau of Latvia (2001))⁶³ per thousand is the dependent variable in the analysis. The independent variables that have been used in the analyses are the difference in GDP per capita between the Russian Federation and Latvia; the

⁶¹ Only the micro-states of Andorra and Monaco have a higher share of non-nationals.

⁶² The immigration tables of the Russian Federation. Source for 1991-1998: United Nations (2001); for 1999 and 2000: Council of Europe (2000 and 2001).

⁶³ Only the number of Russians in Latvia in the beginning of 2000 was available. The data 1991-1999 have been estimated with the natural increase of Russians in Latvia (source: Central Statistical Bureau of Latvia (2001)) and emigration from Latvia to the Russian Federation. The natural increase of Russians in Latvia has been estimated as 'natural increase of the total population of Latvia' x ('natural increase of Russians in Latvia in 1995' / 'natural increase of the total population of Latvia in 1995') for the years before 1995.

unemployment difference between Latvia and the Russian Federation; and unemployment in Latvia. See *Table 6.15* for the operationalisation and the sources of these independent variables.

Table 6.15. Independent variables used in the analyses on migration from Latvia to the Russian Federation

Variable	Measured as	Source
GDP per capita in the Russian Federation and Latvia	1990 international dollars	Maddison (2001) ⁱ
Unemployment in the Russian Federation and Latvia	Total unemployment as percentage of the total labour force	Blanchflower (2000); for Latvia 1998 and 1999; Semjanova (2000); for Russia 1999; Davis and Foreman-Peck (2001)

i The data for 1999 have been estimated as the data for 1998 times the quotient of GDP per capita expressed in constant national currencies (source: IMF (2000)) in 1999 and 1998.

The correlations between the difference in GDP per capita and the unemployment variables are low. I estimated two models (A and B, see *Table 6.16*), as I did not include two variables which both comprise unemployment in Latvia in the same model.

Table 6.16. Results of time series regression analyses to explain the natural logarithm of migration from Latvia to the Russian Federation divided by the Russian population in Latvia (per 1000) in the period 1991-1999 (T = 9)

	Model A		Model B	
	Coefficients (t-values)			
Constant	3.45**	(9.41)	3.09**	(10.37)
$(\text{GDP}_{\text{Russian Federation}} - \text{GDP}_{\text{Latvia}}) \times 10^{-4}$	8.26**	(4.39)	8.26**	(4.13)
$\text{Unem}_{\text{Latvia}}$	-0.02	(-0.89)	-	
$\text{Unem}_{\text{Latvia}} - \text{Unem}_{\text{Russian Federation}}$	-		0.02	(0.43)
Adjusted R ²	0.71		0.68	
Durbin-Watson statistic	1.42		1.11	

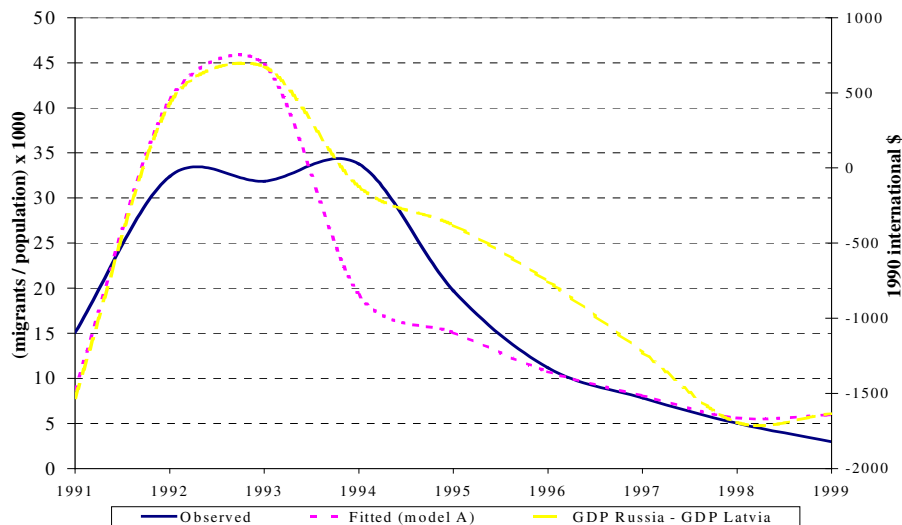
** significant $p < 0.01$ (one-sided test)

The analyses support hypothesis 1; the coefficient of the difference in GDP per capita between the Russian Federation and Latvia has an expected positive sign and is significant. The coefficient of unemployment in Latvia has an unexpected negative sign. Thus, the outcomes of model A do not corroborate the contention that unemployment in non-Slavic sending countries has a positive impact on the pressure on Slavs to return (hypothesis 4). The outcomes of model B do not support hypothesis 3 as the expected positive effect of the

unemployment difference between Latvia and the Russian Federation (see model B) is not significant.

Figure 6.8 illustrates the observed and fitted trend of Russian migration from Latvia to the Russian Federation and the difference in GDP per capita between the Russian Federation and Latvia. I used the outcomes of model A to obtain the fitted trend.

Figure 6.8. Observed and fitted migration from Latvia to the Russian Federation (divided by the midyear Russian population in Latvia) and the difference in GDP per capita between the Russian Federation and Latvia



6.6 Conclusion

In this chapter I sought to identify differences in the influence of socio-economic determinants of the most important migration types in Europe, except asylum migration, in the post-industrial era. Several migration flows which could be seen as “standard” examples of the distinguished migration types were selected. Time series regression analysis was conducted on these migration flows to estimate the effects of socio-economic determinants on the different migration types. All these analyses provided at least one significant socio-economic variable. Only the analysis of ethnic migration between countries of the former East Bloc did not provide a significant variable. Different socio-economic variables had quite different impacts on the different migration types. Nevertheless, we may draw one general conclusion from these quite diffuse results. Unemployment in the receiving country appeared to be the most important economic determinant of migration types which are sensitive to immigration policies, while differences in GDP per capita or differences in unemployment

appeared to be important economic determinants of migration types which are insensitive to immigration policies (see also *Table 6.17*).

Table 6.17. The effects of differences in GDP per capita, unemployment differences and unemployment in the receiving country on international migration types in the post-industrial era

		GDP per capita RC – SC	Unemployment SC – RC ⁱ	Unemployment RC
Insensitive to policies	High-skilled labour migration	+	○	▪
	Return migration within the EU/EFTA	▪	–	▪
	Return migration from the EU/EFTA	▪	○	▪
	Ethnic migration between states of the former Soviet Union	+	○	▪
Sensitive to policies	Low-skilled labour migration	○	○	–
	Family migration	○	▪	–
	Ethnic migration from Eastern to Western Europe	○	▪	–
	Ethnic migration between states of the former East Bloc	○	▪	▪
+	positive significant effect			
–	negative significant effect			
○	insignificant effect			
▪	not estimated			
RC	receiving country			
SC	sending country			
i	the initial receiving and sending country for return migration			

I also estimated effects of some other socio-economic variables. I found significant effects for the following: education in the sending and receiving country on low-skilled labour migration; GDP per capita in the initial sending country on return migration within and from the EU/EFTA region; and the proportion of females in the migrant population on return migration from the EU/EFTA region.

