Absorption of immigrants in European labour markets. The Netherlands, United Kingdom and Norway
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7.1 Introduction

While Western Europe has been one of the magnet fields for international migration flows in the post-war period, many European countries have switched from being an emigration to an immigration country. Until 1973 immigration flows were dominated by guest workers recruited to meet the unskilled labour shortages generated by the post-war glory of many Western European economies. Since the Oil Crisis of 1973, immigration flows from developing countries to West Europe have continued in the form of family reunification\(^1\). In the 1980s and 1990s, immigration of asylum seekers from politically unstable areas has increasingly gained importance.

Two successive oil crises induced high structural unemployment in Western European countries. In the recovery period, the employment structure has been increasingly dominated by more sophisticated jobs requiring high skill levels, education and training while the labour force in these countries has experienced skill upgrading. In this process, two main patterns are observable. On the one hand, a large volume of professional jobs in sectors like high-tech, ICT and services has emerged. These jobs can be characterised as internationally oriented jobs. Employees for these jobs are higher educated, internationally mobile and they are not very constrained by restrictive immigration policies. On the other hand, jobs in the service sector requiring a high degree of country-specific human capital and language proficiency have replaced low skilled manual jobs in industry. In an environment with high structural unemployment immigrants with a low skill level and less country-specific human capital have weaker positions in terms of finding or keeping a job.

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\(^1\) Increasing migration among developed countries as a result of economic globalisation is not seen as a problem. Therefore, it has not been a research topic for labour economists
Additionally, the long administrative procedure that new immigrants (especially refugees) must go through leads to a depreciation of the human capital accumulated in their home country. As a result, immigrants from developing countries are highly concentrated in low qualified jobs and are more often unemployed which is associated with a higher dependence on welfare benefits in their host countries. The percentage of immigrants from developing countries who use welfare arrangements is relatively high because the mobility of these immigrants is restricted by restrictive immigration policy\(^2\) and their personal background as a joint family member or a political refugee. Additionally, these immigrants often face employer discrimination which is strengthened by a poor image for these immigrants. These reasons all suggest that integration of immigrants in host country labour markets does not proceed smoothly, which creates social tension against immigration.

As a reaction, the immigration policy of the Western European countries has become increasingly restrictive. In particular, limitation attempts are directed to control immigrant flows from developing countries by new legislation or indirectly by tighter application of existing policy instruments. These restrictive immigration policies are based on an assumption that newly entering immigrants would have an adverse effect on wages and employment of natives and further deteriorate the labour market position of settled immigrants in these countries. The disadvantaged labour market position of ethnic minorities from developing countries is often used as the main cause of the rise of restrictive immigration policies in many European countries, which suffer high structural unemployment. Another argument for restrictive immigration policies is that immigration will lead to deterioration in the lower end of labour market. Thus, it is thought to especially hurt low skilled native workers. However, it is unclear what the reaction of the host country labour market is to the entering immigrant labour force in terms of its capability to absorb new immigrants and how immigrants adjust to the host country labour market.

This chapter discusses the empirical evidence from the Netherlands, UK and Norway presented in Chapters 4 through 6 in a comparative context. Section 7.2 emphasises limitations in the theoretical and empirical analysis. Section 7.3 recalls the empirical

\(^2\) Once these immigrants return to their home country, for instance in case they do not secure employment, they are not allowed to enter the host country again. It is hard to leave the home country whatever the next direction.
methodology applied and discusses main differences between the three countries and compares empirical evidence from each. Section 8.4 concludes.

7.2 The Impact of Immigration in a Global Context: What Can We Measure?

International migration is a component of globalisation as discussed in Chapter 3. Since World War II, the economies of countries have been more closely connected with each other due to decreasing border controls and developments in transport and communication systems. The international movement of production factors (capital and labour) and international trade have increased considerably. However, a dichotomy between developed and developing countries is clearly visible. The integration of national economies has improved between developed countries while most of developing countries are relatively non-integrated with the developed world and each other. Consequently, trade and migration from developing to developed countries are unilaterally restricted by the latter while in developed countries production factors have the advantage of free movement and international trade is more liberal than ever.

Large gaps in rewards of production factors generate the necessary basis for mobility of these factors from regions with low rewards to regions with high rewards, which implies in practice a movement of labour and goods towards developed countries and the reverse movement of capital. Since labour and goods from developing countries may not freely enter developed countries, the question whether trade and migration are complementary or substitute is less relevant to understand the impact of immigration but relevant for future policy design. Moreover, it is difficult to measure the impact of immigration on the economy of a receiving country since it is hard to estimate a comprehensive economic model, in which the markets of capital, labour and goods are integrated. Additionally, there are no statistical data to perform such an analysis. The data problem is even more serious for European countries than for traditional immigration countries. Another unexplored aspect is self-employment of immigrants, which may be an important channel of integration (Clark and Drinkwater, 2000) but as of yet inaccessible for quantitative study in several countries due to the lack of data.

Restrictive immigration policies generate the immigration of undocumented immigrants who are employed in informal jobs in West European countries. These immigrants are, by definition, invisible in official statistics since they are not contained in any public
registers. All of these restrictions imposed mainly by the lack and inaccessibility of appropriate data forced us to study the impact of legal immigrants on the wages of workers employed in wage and salary sectors. We chose to do so for the Netherlands, UK and Norway.

One may expect that the impact of immigration on the labour market will be on unemployment probabilities of native workers in the highly organised European labour markets where wages are downwardly rigid. However, the effect of immigration on unemployment has not been investigated because suitable data were not accessible for the Netherlands at the time this study was conducted. Unemployment especially affects immigrants compared with natives as evidenced by an unemployment rate among ethnic minority groups that is 3 to 4 times higher than that of native populations. This suggests a low degree of substitutability between natives and immigrants, concerning competition for the same job. Unemployment is the natural concomitant of increased supply if wages are fully rigid. In other words, unemployment may be an indication of rigid wages rather than an effect of supply increases due to immigration. This suggests that unemployment rates should have been included in our wage regressions. However, data on unemployment by skill level in local labour markets are not readily available. Moreover, even were these data available it would probably be more informative to study first the incidence of unemployment itself and its sensitivity to immigration.

The research on the impact of immigration has two main objectives: first, understanding which groups gain from immigration and which ones lose; second, the absorption capacity of host country economies is analysed by the elasticities of complementarity between native and immigrant labour in order to understand the disadvantaged position of immigrants which can not be explained entirely by supply side determinants.

The disadvantaged position of ethnic minorities can be attributed to factors on both the demand and supply sides. Discriminating behaviour of employers and a decrease in demand for a certain type of labour may disturb labour market participation of ethnic minorities on the demand side while a lack of relevant education/training for immigrants in the host country may play a crucial role in terms of the immigrant skill distribution on the supply side. The lack of education and experience can be overcome by relevant policies. For instance, providing education to those who need it could be a useful tool. However, the unexplained part of the disadvantage is often hard to identify and remove. This last aspect may be correlated with the absorption capacity of the
labour market and with discrimination. The size and intensity of discrimination may, in turn, be - at least partly - related to business cycles. It might be expected that in periods of high unemployment, native workers would have a bigger chance of being employed than workers from ethnic minority groups. When the economy stagnates, members of ethnic minority groups will be the first to lose their job. The estimated demand elasticities also cover possible employer discrimination since the reduced-form impact is measured.

7.3. The Impact of Immigration on Wages: Evidence from the Netherlands, UK and Norway

7.3.1 Estimation Strategies and Data Limitations

The previous chapters have studied the impact of immigration on wages of natives and immigrants in three countries: the Netherlands, UK and Norway. A theoretical framework is discussed in Chapter 3, which facilitates the empirical investigations. For empirical research, two main techniques are applied: firstly, reduced-form wage elasticities of various types of labour with respect to the potential supply of immigrant labour are estimated by Mincerian earnings functions; secondly, using Translog production functions, the partial elasticities of complementarity between labour inputs and corresponding demand elasticities are estimated, assuming that a supply shock occurs due to immigration.

The first technique is easy to perform and does not impose any restrictions on the model. A detailed decomposition of ethnic minority groups is possible with this approach, which can provide information about the effect of immigrants, even for those who are small in numbers. The second technique imposes a couple of restrictions on the model (i.e. linear homogeneity, equal cross-effects). Moreover, the empirical estimation of demand functions requires a pooling of some immigrant groups so that in every local labour market, there is a minimum of observations for every labour input. In some cases technology coefficients between immigrants and native labour are statistically not significant, implying non-separability between these labour inputs. These restrictions require the pooling of the most similar immigrant groups. As a result, the perfect comparability of two estimation strategies is lost. However, the two techniques may be seen as complementary, concerning the theoretical restrictions imposed by the second
technique and the choice of local labour market (i.e. defined as relatively small municipalities and as larger geographical areas in the first and second strategies, respectively).

Immigrants have, at best, only been differentiated by ethnic origin. The number of observations is generally simply too small to differentiate by skill indicators such as education and experience, which are potentially heterogeneous in terms of where it was accumulated (i.e. home versus host country). Of course, the effects of immigrant supply on host country wages will generally differ by these qualities. Here, we could only use the average human capital of immigrants in predicting or interpreting wage effects on natives.

For comparative purposes, immigrant groups having similar labour market characteristics are pooled together when necessary. However, this does not eliminate some crucial problems. Data used are not harmonised across the three countries and dictate how far we can make analyses comparable. Immigrants are defined differently in the three countries. In Norway, immigrant population covers first and second generation immigrants (i.e. foreign-born persons and persons who were born in Norway but have two foreign-born parents). On the other hand, in the Netherlands and UK, a broader definition is used. Ethnic origin is taken as the country of birth. Anyone belongs to ethnic minorities if one of his/her parents was born abroad. Foreign-born people are not distinguishable in the data sets used. Since second and later generations are included in the analyses, the label 'ethnic minority' is preferred to immigrant for the Netherlands and UK where a broader definition is used while for the case of Norway the term immigrant is used.

Additionally, income is collected from different sources, and consequently covers not only wages for Norway but also other sorts of incomes like premiums, bonuses and benefits. For the Netherlands, only gross wages are available from administrative data while for the UK respondents themselves report net wages. For Norway, people employed more than four hours per week are identifiable while for the Netherlands and UK, only people working 12 hours or more enter the analyses. In addition to the definition problems, data sets for every country include different variables that enter the earnings functions although some personal and human capital variables are similar for all three countries.
For estimation of the demand functions all workers and mean weekly income in local labour markets are used to calculate factor cost shares. Only for the Netherlands, the alternative means of yearly gross wages in local labour markets are used when capital (given as yearly volume of investments in capital goods) is included in the analysis. Unfortunately, capital is available only for the Netherlands. Also the definition of local labour markets is largely dictated by the data sets and is hence different for each country. However, one element is common for the three countries: the local labour market is a geographical area rather than an industry. For estimation of the reduced-form elasticities the local labour market is defined as the county for the UK and Norway, and both a COROP area and municipality for the Netherlands. For the production functions, the local labour market is defined as the COROP area for the Netherlands, county for the UK, and police region for Norway. This choice relies on an assumption that the labour force is less mobile across counties than across industries. Ethnic minorities are highly concentrated in certain regions. That implies a lower mobility. Low skilled labour is generally supposed to be less mobile across regions. Admittedly, it is a well-known phenomenon that high skilled labour is much more mobile across regions. However, the concentration of industries in certain regions weakens mobility. This, together with some experimentation, brings us to the conclusion that labour market competition between ethnic minorities and native labour if at all present, may be stronger within regions rather than within industries.

7.3.2 Comparison of the Three Countries

We analysed the impact of immigration on wages in three different countries, the Netherlands, UK and Norway. The labour markets of the Netherlands and Norway are highly organised and the bottom of the wage structure is determined by minimum wage legislation and an advanced welfare system. However, these countries strongly differ, concerning the surface of the country, the density of population, and the structure of the economy. Norway is a large country with less than five million inhabitants with an average population density of 15 people per square kilometre. Oil industry plays a crucial role in the Norwegian economy. On the contrary, the Netherlands is a small country with a relatively high number of inhabitants (16 million) and one of the highest population densities (465 people per square kilometre). Increasing numbers of immigrants can affect income distribution through a rise in the prices of land and houses, driven by the scarcity of land and rationing in the public housing system. The
Dutch economy is mainly driven by transportation, internationally oriented trade owed to the large Rotterdam harbour and multinationals like Phillips, Shell, Unilever, Akzo, Heineken, and a rapidly expanded service sector. On the other hand, the UK’s labour market is characterised by a relatively wide wage distribution and is more flexible than other countries. The British economy has been historically dominated by traditional industry and recently switched to the service sector.

Norway is the youngest immigration country. Economic growth after World War II pulled immigrants mostly from Nordic countries and West Europe. Norway recruited ‘guest workers’ in the beginning of the 1970s until formal recruitment was stopped in 1975. After the end of cold war marked by the fall of the Berlin Wall in 1989, the immigration flow has been dominated by political refugees similar to other West European countries. The Netherlands has experienced an immigration surplus since the beginning of the 1960s. Immigrants that arrived from Indonesia in the 1950s were followed by guest workers from Mediterranean countries in the 1960s and in the beginning of the 1970s. The de-colonisation of Suriname in 1975 generated a number of immigrants especially in the beginning of the 1980s. The UK has traditionally been an emigration country until the second half of the 1990s. Immigrants from this period came mainly from (English speaking) Asian, African and Caribbean Commonwealth countries. Recently, the UK has become an immigration country due to large immigration flows form non-English speaking countries that consisted mostly of refugees. In contrast to other west European countries, the UK did not recruited large numbers of ‘guest workers’ in the 1960s.

Chapter 3 extensively discusses the close correlation between the wage impact of immigration and the degree of substitutability between immigrants and natives in production. In the absence of labour market discrimination, immigrants and natives with a similar skill level may be the closest substitute for each other. A potential problem for the comparability of skill levels is determining the value in a host country of skill or education obtained abroad. Numerous studies show that the transferability of skill obtained origin countries strongly differs, depending on the distance between sending and receiving countries. This distance is often expressed in terms of language, religion and geographical location. The role of language is extremely important since it is an implicit measurement of country-specific human capital accumulated in the receiving
country. For high skilled jobs, English acts a very close substitute for the language spoken in the host country. This is especially relevant for the Netherlands and Norway.

Not surprisingly, the labour market position of immigrants in the countries studied in the previous three chapters is closely connected to the country of origin. In the Netherlands, immigrants from (former) colonies often speak Dutch and are more highly skilled than immigrants from countries that supplied 'guest workers' as Turkey and Morocco where different languages are spoken. Turkish and Moroccan immigrants have the lowest skill level, jointly with immigrants from other developing countries. Immigrants from the EU countries have a comparable skill level and labour market position with native Dutch, as do immigrants from other OECD countries like the USA, Canada and Japan.

In Norway, immigrants from other Nordic countries like Sweden, Finland and Denmark have the obvious advantage of similarities between these countries in terms of language and other cultural elements. They have even slightly better labour market positions than the average Norwegian worker in terms of annual income, thanks to the higher education level of women from this group (although male Nordic immigrants have roughly the same skill level as Norwegian men). Immigrants from the EU countries are higher skilled than natives and have a relatively higher age and income. They are possibly employed in internationally oriented jobs that require a high skill level and English proficiency. Eastern European immigrants, especially males, are younger, lower skilled and earn lower income. A large portion of these immigrants came as refugees from the former Yugoslavia. Immigrants from developing countries are at the bottom of the Norwegian labour market in terms of skill and income.

In the UK, Whites are used as a category in statistics in place of native English, suggesting that white immigrants have similar labour market characteristics as native English. Indian workers have the best labour market position in terms of wages and skill level. They are followed by the category Mixed/Other (see Table 2 in Chapter 5). The shares of high and low skilled workers from these immigrant groups are higher than Whites while the percentage of medium skilled is considerably lower than Whites. This

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1 Political refugees in this category generally have a higher skill level. However, their labour market position is not much better, possibly due to human capital depreciation during the long legal procedure, and a low degree of transferability of education they obtained in their home country. Moreover, the average age of refugees is high (see Chapter 4). Unfortunately, data allows only the identification of country of origin, not the refugee status.
suggests the concentration of these immigrants is at the top and bottom of the skill distribution. The skill distribution of the Black category is closer to that of Whites although the unemployment rate of this group is three times higher and their weekly earnings is lower than Whites, possibly due to their young age structure. The category Pakistani/Bangladeshi has the most disadvantaged position the British labour market. This group has the lowest level of English fluency as well (Modood et al., 1997).

7.3.3 Evidence: What Have We Learned?

Having summarised the skill distribution of immigrants compared to natives in the Netherlands and Norway, and Whites in the UK, we can compare the empirical results of the impact of immigration in three countries studied in Chapters 4 to 6.

The most striking finding is that the effect of immigrants on native wages is very small: the highest positive wage elasticity of native workers found is 0.205 (the wage elasticity of high skilled Norwegian women with respect to immigrants from Eastern Europe) while the highest negative wage elasticity of native workers found is -0.125 (the wage elasticity of low skilled Norwegian women with respect to Eastern European immigrants). These elasticities suggest that the entry of one more immigrant for every ten natives leads to a change in the wages of natives by 2.05 and -1.25 percent. This effect is extremely small in comparison to the US where it is up to -22.5 percent for female high school dropouts in the period 1980-1990 (Borjas, 1999: p. 69) and Germany for which a very large effect (-41) has been estimated by De New and Zimmerman (1994).

Tables 7.1 and 7.2 display the wage effect of immigrant groups. A positive sign (+) indicates a complementarity relationship between immigrant groups and the labour category considered while a negative sign (-) indicates a substitution relationship. The signs in bold show the relationship based on a coefficient that is statistically significant. Consequently, we discuss only the relationships with these bold signs. For every country, wage effects are presented for four/five separate immigrant categories and alternatively, immigrants are pooled into two larger groups. These pooled immigrant groups are defined on the basis of their skill levels in addition to their language and cultural distance to the host country. Obviously, skill levels and cultural/language distance are highly correlated. The first category includes higher skilled immigrants who have a comparable skill distribution with natives. Immigrants in the Netherlands
Table 7.1 The impact of immigrants on wages of natives in the Netherlands, UK and Norway: Signs of reduced-form elasticities based on the empirical results presented in Chapters 4 through 6

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<tr>
<th>Quantity of</th>
<th>Change in the wage of</th>
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<td>LOW SKILLED</td>
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<td>Netherlands (CBS data)</td>
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<td>Western</td>
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<td>Turkish</td>
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<td>Moroccan</td>
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<td>Surinamese</td>
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<td>Antilleans</td>
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<td>Western</td>
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<td>Non-Wester n</td>
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<td>UK IM</td>
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<td>BPB</td>
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<td>Black</td>
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<td>Indian</td>
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<td>Pakis/Bang</td>
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<td>Mixed/Other</td>
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<td>Norway (1989), 1996</td>
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<td>Nordic/EU Other Immigr.</td>
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<td>Nordic</td>
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<td>East-Europe</td>
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<td>World</td>
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(-) refers to substitution relationship (or adverse wage effect). (+) refers to complementary relationship (or positive wage effect). Signs in boldface mean the underlying coefficient is statistically significant.

EU refers to immigrants from the EU countries; BPB is the pool of Black and Pakistani/Bangladeshi; and, IM is the pool of Indian and Mixed/Other. For Norway, figures in parentheses refer to the elasticities in 1989 and World includes all immigrants from developing countries.

from Western (or EU) countries belong to this category, as do Indian and Mixed/Other in the UK, and immigrants from Nordic countries in Norway. The second category consists of lower skilled immigrants who often have disadvantaged labour market positions in the host countries and whose cultural and language distance to the host countries may be relatively large. Immigrants from (former) Dutch colonies and from Turkey, Morocco and other developing countries in the Netherlands, immigrants from

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4 This assumption does not always hold. For example, Black immigrants from Commonwealth countries share similar cultural values and speak English fluently, but still have a disadvantaged position in the UK.

5 Except immigrants from Indonesia who are included in the first category.
Pakistan/Bangladesh and Black immigrants in the UK, and immigrants from Eastern Europe and developing countries in Norway belong to the second category.

When the outcomes of the reduced-form estimations are considered as in Table 7.1, it is notable that no clear correlation is visible between native skill categories and immigrant groups with comparable skill levels in the Netherlands and the UK.

Concerning the first category containing immigrants with higher skill endowments, this group has a positive effect on the wages of low and medium skilled Norwegian workers and a negative effect on the wages of high skilled Norwegians, which confirms the theoretical prediction. On the other hand, higher skilled immigrants generate higher wages for White workers in the UK and lower wages for Dutch workers except men (when broken out by skill and gender categories). Lower skilled immigrants, who are pooled in the second category, affect the wages of medium and high skilled natives in the Netherlands and Norway positively. Their effect is negative on the wages of Whites from all skill and gender categories in the UK. This last outcome does not support the theoretical prediction concerning the relative skill distribution of immigrants and natives.

More surprising outcomes are observable when we look at the four/five separate immigrant groups per country. The opposite effects of two pairs of low skilled immigrants are remarkable in the Netherlands. Turks who are relatively low skilled, seem to be substitutable for Dutch workers while Moroccans with a similar skill distribution and labour market position to Turks are complementary to Dutch workers. Another comparable pair of immigrant groups in the Netherlands is the Surinamese and Antilleans. The first group is often substitutable for lower skilled Dutch while Antilleans are complementary to Dutch workers. The same contradictory outcome is applicable for immigrants from Eastern Europe and developing countries; two lower skilled immigrant groups in the UK, Black and Pakistani/Bangladeshi have similar relationships with to Whites in production.

Table 7.2 gives the relationship between immigrant groups in the labour markets of three countries. The most striking outcome is the positive effect of relatively high skilled immigrants on the wages of some lower skilled immigrant groups. In the Netherlands, the wages of immigrants from Eastern Europe, Morocco and the Dutch

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6 Note that only the impact on low skilled Dutch is statistically significant.
Antilles are positively correlated with the concentration of *Western* immigrants. In the UK, Indian workers generate higher wages for the Pakistani/Bangladeshi and Black groups.

Additionally, labour market competition is observable between some of the immigrant groups although these effects are not significant, possibly due to small number of observations. The wages of higher skilled immigrants (EU and Indonesia) are affected by many other immigrant groups in the Netherlands, as are the wages of Indians by other lower skilled groups in the UK. In Norway and the Netherlands, the wages of lower skilled groups are adversely affected by other immigrant groups (i.e. the wages of Turks, Surinamese, and wages of immigrants from developing countries).

Table 7.2. The impact of immigration on wages of immigrants/ethnic minorities in the Netherlands, UK and Norway: signs of reduced-form elasticities based on the empirical results presented in Chapters 4 through 6

<table>
<thead>
<tr>
<th>Quantity of</th>
<th>Change in the wage of</th>
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<td><strong>Netherlands (CBS data)</strong></td>
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<td>Turkish</td>
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<td>Moroccan</td>
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<td>Surinamese</td>
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<td>Antilleans</td>
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<td><strong>UK</strong></td>
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<td>Black</td>
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<td>Indian</td>
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<td>Pakis/Bang</td>
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<td>Mixed/Other</td>
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<td><strong>Norway (1989) 1996</strong></td>
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<td>Nordic</td>
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Table 7.3 summarises the elasticities of complementarity for three countries obtained by the estimation of labour demand functions. Unexpectedly, immigrants from EU countries and India, who are relatively higher skilled, serve not only as substitutes for low skilled natives, but are also possibly substitutable for high skilled natives in the UK and Netherlands, which is closer to the theoretical prediction suggesting that workers with similar skill level are substitutes for each other. In the UK, the impact of two
immigrant groups on the wages of Whites is identical while low and high skilled immigrant groups in Norway have an opposite effect only on the wages of medium skilled and male natives when skill and gender categories are considered respectively. Lower skilled immigrant groups have a negative own-elasticity in the Netherlands (TMW and COL) and UK (BPB) but a positive own elasticity in Norway. This positive own-elasticity for lower skilled immigrants, given as Rest Immig in Table 7.3, is possibly due to their low participation in employment, which has been caused by their relative short stay in Norway and high dependence on welfare payments.

Table 7.3. The impact of immigrants on wages in the Netherlands, UK and Norway: Signs of the elasticities of complementarit y based on the empirical results presented in Chapters 4 through 6

<table>
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<th>Quantity of</th>
<th>The Change in the wage of</th>
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<td><strong>Norway</strong></td>
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<td>Nord/EU</td>
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<td>Nordic/EU</td>
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<td>Rest Immig.</td>
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</table>

Signs in parentheses ( ) indicate the substitution/complementarity relationship obtained when capital included in production functions.
* These signs must be - (-) (not in bold) when native labour force is decomposed by gender. * must be + when native labour is decomposed by gender.
(-) refers to substitution relationship (or adverse wage effect). (+) refers to complementary relationship (or positive wage effect). EU = immigrants from EU countries; TMW = immigrants from Turkey, Morocco and other developing countries; COL = immigrants from (former) colonies (Indonesia, Suriname, Dutch Antilles and Aruba); IM = a pool of Indian and Mixed/Other BPB = a pool of Black and Pakistani/Bangladeshi; Nordic/EU = Immigrants from Nordic and EU countries; Rest Immig = immigrants from the rest of the world.

For the Netherlands, some elasticities change when capital is included in the production function. However, the complementarity relationship between TMW, and low and medium skilled Dutch workers are robust to adding capital to the production function. The relationship between immigrants from (former) colonies (COL) and native Dutch by skill levels are perfectly inverse when capital is included in the production function,
as are the relationships between medium and high skilled Dutch and EU, and high skilled Dutch and TMW. Alternatively, when gender decomposition is used, EU and TMW are substitutes for Dutch women and complementary to Dutch men while the opposite holds for COL. In this case, including capital does not lead to a different outcome. Additionally, the negative own-elasticity for TMW and COL and the complementarity between TMW and COL remain stable.

As capital is included in the production function, TMW and COL are found to be substitutes for capital while EU is complementary to capital.

### 7.3.4 Comparison with Existing Literature

In the UK, an alternative decomposition of White labour force by skill level on basis of manual or non-manual\(^7\) indicates that IM is substitutable for non-manual low and medium skilled Whites as well as manual low skilled Whites while BPB is substitutable only for non-manual medium skilled Whites. These immigrant groups are complementary to the rest of the White sub-samples. In Norway, the estimation of demand function would generate possibly less reliable elasticities of complementarity due to a small number of observations and a low variation of immigrant percentages across regions, as discussed in Chapter 6.

The estimated wage elasticities are very small in contrast to the predictions of the competitive model. They are smaller than those estimated for the US. The literature for the US provides some general evidence for a negative wage effect of immigration but no employment effect (Friedberg and Hunt, 1995; Borjas, 1999). However, our results are in contrast to the two studies for Germany reporting surprisingly high wage elasticities, in comparison to existing related literature\(^8\) for the US where the wage effect is expected to be larger than in European countries with relatively rigid wages. De New and Zimmermann (1994) find a very large adverse effect of foreign labour on the wages of German workers, comparing native wages and immigrant concentration in industries between 1984 and 1989. Hatzius (1994) estimates even larger negative wage

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\(^7\) Here, there is a total of six White sub-samples: three for manual and three for non-manual decomposed by three skill levels, while the definition of the same ethnic minority groups are maintained.

\(^8\) De New and Zimmermann (1994) estimate a wage elasticity of -4.1 for their whole sample of native German workers. The wage elasticity is -5.9 for blue-collar workers while it is 3.5 for low-experienced white-collar workers. Hatzius (1994) reports an even larger wage elasticity, -7.04 for the period of 1984 to 1991. Altonji and Card (1991) find a wage elasticity of -1.2 for less skilled natives.
effects when correlating changes in native wages and immigrant percentages across regional labour markets between 1984 and 1991. However, these high wage effects are rejected by Pischke and Velling (1997) who study the changes in employment and wages as a result of immigration flow in Germany between 1985 and 1989. They find no indication that immigration has a negative effect on the wages. All these studies use German Socio-Economic Panel (GSOEP), applying IV estimations to correct for immigrant self-selection.

In fact, one may expect that immigration will induce higher unemployment, rather than a decline in wages, in European labour markets where the power of unions in determining wages is relatively large and wages are assumed to be rigid. However, empirical evidence is again ambiguous. Winkelmann and Zimmermann (1993) find detrimental effects of migration on the unemployment level in Germany in the period of economic recession in the late 1970s and early 1980s. Using data from the boom period in the later half of the 1980s Pischke and Velling (1997) and Hatzius (1994) shows that immigration does not necessarily lead to higher unemployment, despite the high structural unemployment level in Western Europe.

Small effects of immigration reported by econometric studies in the last two decades are often given two main explanations. The first argument suggests that immigrants tend to move to regions or cities where demand shocks have led to higher wages, where expected labour market outcomes are favourable. This endogeneity problem (or self-selection problem) is treated in many studies as mentioned by using instruments that are sufficiently correlated with immigrant densities in local labour market but not directly correlated with wages and employment level of natives. The second argument refers to possible responses of the native labour force and firms, which may offset the adverse impact of immigration (see Borjas, 1999, p.73-82). However, a fundamental disagreement remains about both the conceptual problem and relevance of native and firm response in explaining the extent of immigration effects. Borjas, Freeman and Katz (1997) suggest an unambiguous potential relation between immigration and native migration decisions while Card (2001) and Kritz and Gurak (2001) fail to find any

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9 Smith, Stilz and Zimmermann (1994) show theoretically that immigration can lead to higher employment and output when low and high skilled workers are complementary and low skilled wages are determined by a union that particularly cares about high skilled workers.

10 In our analyses, we were mostly unable to use instruments simply due to a lack of data. However, in those few cases where instruments were used the conclusions were not affected.
Evidence for significant relation between immigration and migratory behaviour of natives in the US. Pischke and Velling (1997) also find no evidence for a response of natives to increasing migration in local labour markets in Germany.

Possible biases in cross-section analyses can be eliminated by analysing natural experiments. In immigration literature, two natural experiment studies are known, conducted by Card (1990) and Hunt (1992). A natural experiment is a supply shock to the labour market that is exogenous with respect to time and location. Card studies the impact of the Mariel boatlift on the Miami labour market in 1980, associated with entering of about 125,000 Cubans in Miami while Hunt analyses the effect of the repatriation of about 900,000 French after the independence of Algeria in 1962. Card finds a small adverse wage effect, but no employment effect on the Miami labour market while Hunt estimates a wage elasticity of -0.8 and an unemployment elasticity of -0.2 in the French labour market. Both studies suggest that the impact of immigration on employment and wages is very small, and mostly it is the recently entering immigrants that are adversely affected. Their wages and employment level are lower compared to the existing labour force. This conclusion sheds light on the disadvantaged labour market position of lower skilled immigrants who supposedly have a large impact on the wages of low skilled natives.

7.4 Conclusions

The empirical research on the impact of immigration in the Netherlands, UK and Norway shows that immigrants have a very small effect on wages. This estimated effect is both negative and positive, varying considerably according to the decomposition of labour force but never large compared to estimates from studies conducted in the USA, Canada and Germany. The disaggregation of native labour force by gender generally generates a smaller but a much more stable wage effect. The effect of immigration on the wages of other immigrants found here is much larger, although it is still very small compared to the US.

No strong indication is found for a negative correlation between the wages of low skilled natives and low skilled immigrant groups or between the wages of high skilled natives and relatively high skilled immigrant groups. The country of origin seems to be more important to explain the impact of immigrants on wages in local labour markets. Heterogeneous impact of different immigrant groups on native wages does not seem to
be related to their relative skill levels. For instance, two closely comparable immigrant
groups (in terms of their skill distribution), Turks and Moroccans, have an opposite
effect on the wages of native Dutch workers from various skill levels in the
Netherlands. When these groups are pooled, the opposite effects eliminate each other
from which the largest effect slightly dominates. This may suggest that the
substitutability of immigrants and natives from same skill levels have limited
explanatory power. Country-specific human capital, proficiency in the host country’s
language, and the image of an immigrant group may play a more important role in the
substitutability of natives and immigrants.

The small wage effect of immigrants suggests that the impact of immigration might be
absorbed through channels other than labour market adjustment. A possible adjustment
mechanism may be employment effects. In other words, immigrants and natives may
compete for the same jobs and immigration flows may lead to higher unemployment
among natives. However, this suggestion becomes less relevant because unemployment
mostly hits immigrants themselves in Western European countries, not the natives.

Another explanation for the small effect may be that the impact of immigration can vary
from period to period, and can be on different groups in various periods. Unfortunately,
we are not able to capture this since only recent cross-sectional data is available, thus no
appropriate panel or time series data can be used.

Cross-country differences may be (partly) explained by the time that immigrants spend
in host-country labour markets. The largest effect on the wages of natives is found for
Norway where immigration is a relatively recent phenomenon. Finally, an impression
exists that labour immigrants are allowed to compensate labour shortages in specific
sectors/industries to control for potential wage level increases in these sectors in the
European countries. This is recently demonstrated for ICT, Health and Academic
sectors. On the other hand, immigrants who already arrived un-demanded, are in danger
to be resisted by tight institutions of Western European countries. They are not able to
depress the wages of natives. Our results confirm those of Borjas (1999, p.63) who
concludes by referring to academic surveys:

"This kind of consensus [referring to small adverse impact on the labour market
outcomes of natives] is rare indeed in social science, particularly when many
workers keep insisting that immigrants harm their economic opportunities and
when the common-sense intuition behind the economic laws of supply and demand
suggests that an increase in the number of workers should reduce the wage."