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Immigration and integration policy and labour market attainment among Scandinavian immigrants

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Abstract

Comparing immigrant labour market integration, the OECD ranked the Scandinavian countries Denmark, Norway and Sweden at the bottom. Integration depends on immigration and integration policy, and the countries' policies have traditionally here been very similar. However, in the early 2000s Denmark increasingly deviated, introducing stricter immigration and harsher integration policies. Using Norway and Sweden as benchmarks, we assess the wider impact of this comprehensive policy reversal tracking the evolution of national employment and earnings gaps between 1993 and 2006. We use large data sets with individual level register information allowing us to account for immigrant labour force composition and to examine sub-groups of immigrants. The results indicate that the Danish reforms increased employment among groups of non-Western immigrants while simultaneously decreasing relative earnings. However, employment trends in Norway and Sweden were almost as positive without similar earnings penalties, questioning the aptness of the Danish reforms.

Keywords: policy, immigrants, employment, wages
JEL codes: J31, J61, J68.

1. Introduction

In international comparisons the three Scandinavian countries Denmark, Norway and Sweden are often said to belong to a particular type of welfare state characterized by for instance generous social protection systems, extensive public services, high minimum wages, compressed wage structures, low income inequality and high employment rates. A particular combination of policies across many different areas sets them (as well as their Nordic neighbours Finland and Iceland) apart from other countries. But Denmark, Norway and Sweden are also countries where it is relatively difficult for immigrants to enter the labour market. An analysis from OECD showed the Scandinavian countries – together with the Netherlands - placed at the bottom of a scale measuring immigrant integration on labour market (OECD, 2007).

The woes of immigrants encompass both work and pay. Both employment and unemployment rates are for instance markedly worse among immigrants than among natives, and immigrants that do find work often end up in low paid jobs (Djuve and Kavli, 2007). As a consequence of their weak attachment to the labour market immigrants also have on average lower income and higher poverty rates and are, relative to the majority in the three countries, overrepresented among social assistance recipients (Galloway et al., 2009).

Immigrant success in the labour market depends on a number of factors related both to the immigrants themselves, to the country of origin as well as to the country of destination. Among the latter we find several potential explanations for the poor integration of immigrants in Scandinavia, e.g. small language areas, high minimum wages and structure of labour demand. Among them are also immigration and integration policies, two policy areas that long have attracted substantial attention. The policies in the Scandinavian countries have here traditionally been quite similar with substantial policy feedback between the countries. However, as described further below, in the 2000s Denmark has come to differ from Norway and in particular Sweden through stricter immigration and harsher integration policies. Sweden, in contrast, has pursued a policy of generous immigration and permissive integration policies, with Norway placed somewhere in between. Two examples of the Danish development are the reforms in 2002 when Denmark tightened immigration policy disallowing family reunification for spouses below 24 years of age, and also changed integration policy introducing a reduced social assistance benefit for people from abroad. The recent policy developments in the three countries may be characterised as Denmark emphasising the policy stick, Sweden the carrot and Norway a combination of the two.

The purpose of this paper is to examine the consequences of these Scandinavian policy developments. Although a few studies have looked at individual elements of the Danish policy reversal, no attempt has been made to assess the overall impact of the reforms. One of the declared aims of the Danish policy shift was to increase employment among immigrants, and to the extent the change in policy was successful we would expect immigrants, relative to the majority population, to have higher employment rates in the Danish than in the Norwegian and Swedish labour markets.

However, the integration policy reforms aimed to achieve this in part by lowering immigrants' reservation wages, so a potential effect of the policies may also be lower relative earnings among employed Danish immigrants. This would in particular seem to apply to immigrants who arrived in the 2000s.

Using register data from 1993 to 2006, a period spanning the Danish reforms, and focusing on immigrants and natives of working age (30-59) we analyse the development of relative employment and earnings in the three countries. Norway and Sweden here act as benchmarks for the Danish case, and Section 2 places the three countries in context by providing a brief description of the evolution of immigration and integration policies in Scandinavia. A presentation of the data and the methods used follows in Section 3, whereupon we in Section 4 analyse differences in employment patterns in the three countries. We then turn to earnings, and in Section 5 examine the distribution of immigrants' labour income relative to that of natives as well as the size of the income gap across the earnings distribution. Section 6 concludes.

2. Immigration and integration policies in Scandinavia

The post-war migration histories of Denmark, Norway and Sweden are in many respects very similar, for instance with regard to immigration policy and the causes of immigration. The post-war period started with a fairly low number of immigrants, predominately coming from neighbouring countries. However, as a consequence of an economic boom and resulting labour shortages in the 1950s and 1960s, the Scandinavian countries initiated recruitment of foreign workers. In Sweden these primarily came from Finland, Southern Europe (e.g. Italy, the former Yugoslavia and Greece) and Turkey, in Denmark mainly from the former Yugoslavia, Turkey, Pakistan and Morocco while immigrants to Norway came chiefly from Pakistan, Turkey and Morocco. When the full employment period came to an end in the late 1960s, the three countries tightened their recruitment policies and gradually introduced measures to reduce the influx of foreign residents.¹ Recruitment to Sweden was restricted in 1967 and a recruitment stop introduced in 1972, Denmark began to phase out recruitment in 1970 terminating it in 1973 while the process in Norway started in 1971 and ended in 1975 (Brochmann and Haugland, 2012).

However, many foreign workers settled permanently, and brought their families to Scandinavia (Berge et al., 2009; Djuve and Kavli, 2007). After the end of labour recruitment family reunification therefore became one of the two major channels of immigration (Dølvik and Friberg 2008). The second channel was through asylum. The number of refugees increased significantly in the three countries in the 1980s and, in particular, the 1990s (Berge et al., 2009). The refugees in all three cases primarily originated from the former Yugoslavia, Afghanistan, Iraq, and Somalia (Nordic Statistical Yearbook 2012).

¹ Citizens from the Nordic countries were largely exempt from these changes.

Although there were differences with regard to the precise timing of the changes in policy, up until the early 2000s the evolution of immigration policy in the three countries can nonetheless be described as roughly comparable. At this point, Denmark begins to move away from Norway and Sweden, tightening rules on family reunification and asylum (Berge et al., 2009). The most important regulatory changes were introduced in 2002 and included the introduction of the 24-year requirement (implying no family reunification for spouses aged less than 24 years) and the attachment requirement (implying that the combined attachment of the couple to Denmark must be greater than to any other country). The tightening of the rules has resulted in a drastic decrease in number of marriage migrants coming to Denmark (see Andersen, 2007; Schmidt et al., 2009) and a decrease in the number of refugees (Nordic Statistical Yearbook 2012). No similar restrictions on immigration were in contrast introduced in Norway and Sweden.

Nonetheless, a development common to all three countries was the influx of migrants from the new member states of the European Union following upon EU enlargement in 2004 (Dølvik and Friberg, 2008). At the time of enlargement, Denmark and Norway insisted on a transition period until mobility became completely unregulated, Sweden did not. The transitory requirements for residency included e.g. full-time employment and ended in 2009. Nonetheless, the strong Norwegian labour market has meant that Norway has received more than twice the number of EU migrants than the combined inflow into Denmark and Sweden (Berge et al., 2009). In all three countries a large number of immigrants arrived from Poland, but many also came from countries like Lithuania and Rumania (Nordic Statistical Yearbook, 2012).

Looking back over the whole post-war period Sweden has attracted substantially more immigrants than the other two countries, either because of differences in attractiveness due to tight labour markets (a crucial factor with regard to labour migration between the Nordic countries) or because of differences in immigration policy. Regardless of which, in 2009 18 per cent of the Swedish population had an immigrant background as compared to 10 per cent in Denmark and 11 per cent in Norway (Berge et al, 2009).²

Just as was the case with immigration policies, integration policies in the three countries also show many similarities up until the late 1990s but some clear differences afterwards. During 1980s and 1990s, following the end of the labour recruitment and the advent of family reunion and refugee immigration, it gradually became clear that the labour market position of immigrants had deteriorated dramatically. Low employment rates together with an overrepresentation of immigrants among social assistance recipients in all three countries led to debates regarding whether welfare rights had served as work disincentives, and to reforms of benefits systems and introduction of measures targeted at immigrants (Brochmann and Hagelund, 2010). These reforms were generally described as strengthening the so-called work principle in integration policy, according to which integration into the labour market is a central aim of policy. The reforms can be

² Individuals with immigrant background are immigrants and second generation decedents of immigrants.

placed under three broad headings; changes in benefits, in training programs and in other reforms potentially affecting the labour market position of immigrants.

Regarding benefits, as the only Scandinavian country Denmark introduced cuts in benefits targeted at immigrants (Brochmann and Hagelund, 2010; Djuve and Kavli, 2007). This was initiated in 1998 when the Integration Act established an obligatory Introduction Programme to be offered to all new non-EU immigrants during which participants were provided with an allowance substantially below the social assistance benefits previously provided. The programme was short lived, lasting only one year, but was followed in 2002 by the Start Help programme. This encompasses people who have resided abroad for at least 7 out of the most recent 8 years and is accompanied by an allowance set at a level 35% below the standard social assistance benefit (Pedersen, 2013). In addition to benefit reductions, it furthermore became obligatory for municipalities to sanction recipients of introduction allowances through temporary benefit reductions if the individuals failed to participate in a course or training programme without satisfactory cause. In contrast, although similar programmes existed in both Norway and Sweden (established in 2003 and in 1994, respectively) the level of the allowance did here not differ significantly from the level of social assistance. As in Denmark sanctions in case of non-participation are compulsory in Norway, while in Sweden sanctions are subject to municipal discretion.

Another reform to Danish social assistance was the introduction of a maximum, a ceiling, for the total amount social assistance benefits, housing subsidies and the so-called specific support recipient could after an initial 6-month period. When the ceiling is reached, housing and specific supports are reduced while the standard level of social assistance benefits remains. The first recipients were affected by this ceiling in January 2004. In addition, married couples on social assistance will experience a cut in benefits (by about 500 DKK for each spouse) after 6 months of benefit receipt. While neither the Start Help programme, the social assistance ceiling nor the marriage reduction were explicitly targeted at immigrants, a large majority of those affected are immigrants (Brochmann and Hagelund, 2011; Graversen and Tinggaard, 2005; Pedersen, 2013).³ As noted, no similar benefit reductions were introduced in Norway and Sweden.

In contrast, in the area of training programs the reforms in the three countries were rather similar. All three countries launched introduction programmes combining language courses and work oriented training, and also provided newly arrived immigrants with an Introduction Allowance.⁴ After completing the programs (which typically had an intended duration of 2-3 years full-time) immigrants who had not obtained a job became eligible for welfare and labour market programmes directed at the population in general.

Despite these analogies, there were potentially important differences in the regulation of the programs. These programmes were for instance mandatory for immigrants in Denmark and Norway,

³ The Start Help programme as well as the social assistance ceiling was abolished in 2012.

⁴ The newly arrived immigrants would otherwise have received social assistance.

while participation was voluntary in Sweden. Furthermore, although municipalities had the responsibility for the programmes in all three countries, national governments exerted less control over the programmes in Sweden than in Norway and, in particular, Denmark. In the latter two countries municipalities were obliged to set up introduction programmes, while this was voluntary in Sweden. Furthermore, integration law in Denmark regulated the contents of the programme in detail, whereas Swedish regulations included very few explicit guidelines for the content of the introduction programmes. Norway was located somewhere in between, containing fairly general specifications regarding content leaving substantial room for municipal variation (Berge et al., 2009; Brochmann and Hagelund, 2010; Djuve and Kavli, 2007). It may also be noted that the financial reimbursement for the integration programmes received by the municipalities varied, with Danish municipalities being fully compensated, Norwegian through a block grant and Swedish municipalities only being compensated to a relatively low degree (Djuve and Kavli, 2007).⁵

Based on comparisons such as this it has been said that Denmark has come to emphasise the duties of immigrants in the integration policies, Sweden their rights and Norway a combination of the two (e.g. Brochmann and Hagelund, 2011). Although the stated aim of the changes to Danish benefit cuts was to increase work incentives, the few evaluations have produced rather mixed results. The introduction of Start Help was on the one hand found to increase transitions into employment during the first two years following the reform, but also to increase the transition rate out of the labour force (Clausen et al., 2009; Huynh et al., 2007, 2010; Rosholm and Vejlin, 2009). The effects were furthermore heterogeneous: the effect on the transition rate in to employment is largest for those aged 30-50, for men and for those with most education. The effects on the transition out of the labour force are largest for those with most education and for women with children (Rosholm and Vejlin, 2009). With regard to the social assistance ceiling, although the reduction decreased the benefits available to the affected families no effect on job search and finding was found in first 9-10 months after the reform. One plausible explanation is that recipients often have few personal resources and have other problems than unemployment (Gravesern and Tinggaard, 2005).

These evaluations provide interesting information regarding some particular aspects of the turnaround of Danish immigration and integration policy. However, due to their focus on specific reforms, and furthermore only reforms to integration policy, they fail to examine the full implications of the sea change in Danish policy for the labour market integration of immigrants. The

⁵ Another set of policies that also may affect the labour market positions of immigrants relates to settlement. The Danish Integration Act of 1998 included a plan for the geographic distribution of immigrants, and the Introduction Allowance is tied to continued residence in the municipality of initial settlement. Similar rules are also in place in Norway. In contrast, Sweden has since 1994 largely left the decision on where in the country to settle up to the individuals. This has resulted in a high concentration of immigrants in a few municipalities, as newcomers often choose to move in with friends or relatives (Brochmann and Hagelund, 2011; Djuve and Kavli, 2007). It is difficult to form an expectation regarding the impact of these differences in settlement policies and they will therefore be left out of the subsequent discussion.

purpose of this paper is to provide such a broad assessment, using Denmark's Scandinavian "twins" Norway and Sweden as yardsticks. Although there are undeniable differences between the countries, we believe them nonetheless sufficiently similar to act as interesting comparisons.

The stricter immigration policies introduced in Denmark should generate a successive transformation of the immigrant labour force. The reductions in the number of immigrants allowed to enter should over time decrease the proportion of newly arrived immigrants. It is well known that new arrivals generally have worse employment rates than immigrants who have resided in a country longer, and we therefore expect the reforms to increase employment rates among Danish relative to Norwegian and Swedish immigrants. Likewise, the regulatory changes also decreased the number of refugees which also should increase the Danish employment rates. These changes to immigration policy would seem likely to be associated with only limited changes in earnings inequality, or with a decreased earnings gap as the labour market integration of immigrants improves.

As for the reforms in integration policy it could again be conjectured that the benefit reductions may have induced increased participation in employment among Danish immigrants, as seems to be suggested by some of the evaluations. The content of the programs appear generally very similar across the three countries and should be expected to strengthen the labour market position of immigrants. However, the central control of the content of the training programs as well as the full compensation received by the municipalities may in turn suggest that the Danish introduction programmes are of better quality than the Norwegian and Swedish, which coupled with mandatory participation suggests that they would strengthen the position of immigrants more than the corresponding programmes in Norway and Sweden. Taken together, it seems as if we as a result of the reforms to Danish integration policy could expect an increased employment among Danish immigrants relative to those in Norway and Sweden. To the extent that this occurs it could be the outcome of either increased search intensity among Danish immigrants, or a lowering of their reservation wages. The latter could in turn imply that immigrants end up in poorly paid and/or insecure jobs, i.e. a lowering of the relative earnings among employed immigrants or alternatively an increase in the earnings gap.

3. Data and method

The analyses of employment and earnings differentials have been based on large longitudinal administrative datasets covering roughly a 15-year period from the early 1990s to the late 2000s. More specifically, the data from Denmark covers 10% of native Danes and the total population of immigrants and descendants of immigrants spanning the years 1986 to 2006. The data from Norway and Sweden include the total population, with the Norwegian data beginning in 1993 and ending in 2007 while the Swedish data starts in 1985 and ends in 2007. Given these restrictions data availability our analysis starts in 1993 and ends in 2006.

In all three countries the data consists of information on annual income (including income from work as well as from other sources), on receipt of various kinds of transfers such as sick pay and unemployment compensation, as well as on demographic characteristics, education, place of residence, and sector of employment. The source of the lion's share of this information is the tax authorities and the data have also been collected for tax purposes.

Working with register data of this kind has some definite advantages. First, given the relatively small number of immigrants of working age large sample size is particularly important in the analysis of immigrant integration on the labour market. This also allows us to examine sub-groups of immigrants such as those coming from a particular country. Second, the register data contain information on various type of income from the tax authorities that obtain earnings data directly from employers and data on transfers directly from the responsible agencies. This thereby avoids problems frequently associated with self-reported income, for instance recall error.⁶

The data has permitted us to define immigrants based on country of birth, a definition that is advantageous in comparative analyses as it avoids the impact that differences in naturalization rules may have for a citizenship based definition. We have used the perhaps most natural, and common, definitions of immigrants, namely as persons born abroad. This implies that so-called second generation immigrants, i.e. children born in the country of destination to persons born abroad, are not included among immigrants. Although this is a group of substantial interest it is less relevant here as the policy reforms have been targeted at newly arrived immigrants.

As a first categorization, we have classified the countries of origin as either Western or non-Western countries. The first group has encompassed Western Europe, USA, Canada, Australia and New Zealand, while the second group has been made up of all other countries. However, in further analyses a more detailed selection of countries has been used. We have then conducted separate analyses of immigrants from Turkey, the Horn of Africa (i.e. Eritrea, Ethiopia, Somalia, and Sudan) and Poland. Our interest in these groups stems from the fact that they are relatively large in Denmark, Norway as well as Sweden but also that they to some extent represent different waves of migration.

The earnings measure used refers to individual annual earnings from paid work and income from self-employment. Income from capital or from transfers of any kind has in other words not been included. Negative earnings has been coded as missing, while earnings have been top coded at 10,000,000 (Danish/Norwegian/Swedish) Crowns.

While detailed income data is an obvious advantage associated with the use of register data, information on other aspects of employment is often more problematic, less precise and not necessarily comparable. To attain comparability we therefore use the Social Exclusion and Labour Market Attachment (SELMA) model, a model designed to emulate labour force surveys using register

⁶ One drawback with the data is that we for reasons of confidentiality are unable to pool the data from the three countries.

information on various kinds of income. The model uses information of income sources from public records to categorise the labour market position of individuals with respect to their distance from the “core labour force” consisting of those with sufficient employment able to support themselves through labour market income. Depending on the level of aggregation, the model can distinguish between different levels and types of labour market attachment, including continuous employment, intermittent employment, education, welfare dependency, and economic inactivity. This allows for the identification of a continuum of labour market positions starting from the core and extending out to the periphery of the labour market that is illustrated in Figure 1.

- Figure 1 about here -

The SELMA model has recently been developed (Bäckman et al., 2011) and is a Nordic version of a model developed for Sweden. The starting point for the construction of the model is the definition of a benchmark income used to classify income levels, either within or across countries. In the original Swedish version, this was set to a level roughly equal to the annual labour earnings obtained from full-time continuous employment at the minimum wages established in the national collective bargaining agreements. It should be noted that this was a fairly low annual salary, one associated with employment in for instance the hotel and restaurant sector, yet approximately corresponded to the earnings necessary to sustain one person during a year. The Nordic version of the model defines a similar reference income, called the Nordic Base Amount (NBA), set at 25 percent of the median gross annual income in each country and year. The income limit for the Core Labour Force is then defined as annual earnings from work or self-employment of at least 3.5 NBA. At the other end of spectrum, but still with some attachment to the labour market, are those with incomes below 0.5 NBA belong to a category labelled Alternative Means of Maintenance. In between these two extremes we find categories such as students, unemployed, chronically ill etc., all classified through their combination of earnings and transfer income.

The employed are here defined as those belonging to either the core or the unstable labour force. As noted above, members of the Core Labour Force have annual earnings of at least 3.5 NBA. In comparison, those belonging to the Unstable Labour Force have earnings between 0.5 and 3.5 NBA, and no substantial income from public transfers such as sick pay, early retirement, unemployment compensation, or study allowance. Those with very low earnings and no transfer income or with non-negligible earnings in combination with significant transfer income are classified as non-employed.

In the analyses we focus on immigrants and natives of working age, more precisely of age 30 to 59. By excluding individuals below the age of 30 or above the age of 59 we minimize the number of individuals engaged in full-time education and retirees. Table 1 shows the mean values for

gender, children, age, education, years since immigration and municipal unemployment for immigrants and natives in Denmark, Norway and Sweden for the start and end point of our analyses, i.e. 1993 and 2006. As is evident from the table, there are equal proportions of men and women in all three groups and in all three countries, with the exception of non-Western immigrants in 1993 where there were noticeable more men than women. Another noticeable feature is the relative youth of non-Western immigrants in the three countries. The age distribution among natives and Western immigrants is similar in Denmark and Norway, while Western immigrants are somewhat older in Sweden. Children are, probably as a result of the age differences, also generally most common among non-Western migrants and, apart from Norway 2006, least frequent among Western immigrants. Furthermore, although differences in municipal unemployment rates between the three countries and the two periods are large, differences for the three groups are rather small.

- Table 1 about here -

We lack information about education for some of the immigrants in our data, which is important to take into account in the comparisons within and between the three countries. This is less of a problem in Norway, but in both Denmark and Sweden educational information is missing for around a quarter of the non-Western immigrants. The educational distribution in 1993 was fairly similar among the three native populations, although Denmark had comparatively few graduates from academic secondary school tracks. Among Western migrants Sweden stands out with around a third having compulsory education as their highest degree, whereas Norway and to some extent also Denmark had attracted a large number of graduates from tertiary education. Turning to non-Western immigrants, the proportions with compulsory and academic upper secondary degrees were very similar in the three countries. However, in relation to Denmark and Sweden, Norway had notably fewer immigrants with vocational degrees, but also many with tertiary. All in all, non-Western immigrants were slightly better educated in Norway than in Denmark and Sweden with a higher percentage having a vocational or tertiary degree. By 2006 there had been an extensive educational upgrading in the three native as well as in the Western immigrant populations, while developments among non-Western immigrants are difficult to assess due to an overall improvement in educational information in Denmark and Sweden.

We also lack information about the year of immigration for some of the immigrants in Denmark and Sweden, and consequently lack information about years since migration. In contrast Norway does not have any missing information on year of immigration. Among those for which information is available it is clear that immigration to Sweden from Western countries had started earlier than to the other two countries. A large number of immigrants to Sweden had thus been in the country at least 15 years, indicating that they came during the period of full employment. Comparing the arrival pattern of immigrants is however slightly difficult due to the differences in

information. Clear is however that non-Western immigration is of a more recent date in all three countries. Here too Sweden seems to have attracted immigrants earlier than the other two, and it is evident that the number of recent non-Western immigrants to Denmark is comparatively low.

We examine the raw differences in employment rates between immigrants and natives as well as differences in predicted employment rates based on annual probit regressions including the variables age, level of education, any children below age 18, years since migration and the local unemployment rate. Predicted employment rates are rarely examined in the comparative literature on immigrant integration, but are of obvious interest here as they inform us about the employment gap after accounting for compositional differences between the groups and the countries.

In the earnings analyses we have made use of quantile regression to analyse the relationship between various determinants of earnings across the earnings distribution and across the sample period. The variables included in the earnings analyses are identical to the employment regressions, with the addition of gender. As with the predicted employment probabilities this allows us to estimate predicted earnings gaps, but in this case we will be able to estimate gaps at different points of the earnings distribution. These are issues that have received little attention in the Scandinavian as well as the international research literature.⁷

4. Results

4.1 Employment patterns

Figure 2 shows the employment rates for natives, Western immigrants and non-Western immigrants for the period 1993 to 2006 and it is clear that there were great similarities in both the level and evolution of adult employment in the three countries. Among natives males employment rates hovered around 85 % throughout the whole period, while the rates among native women were slightly lower. In all countries, the rates were very stable with only very minor changes over time.

The similarities extend to employment rates among immigrants, both Western and non-Western. Thus, with the exception of Western immigrants in Norway after the early 2000s, employment among Western immigrants was generally lower than among natives. Finally, employment rates were the lowest among non-Western immigrants, initially around 50 % among men and 40 % among women. These rates then increased with around 10 percentage points in all three countries over the period of observation, an increase that is evident among both men and women. The employment gaps between non-Western immigrants and natives consequently decreased, among males from around 35-40 to around 20-25 percentage points and among women from approximately 40 to 25 percentage points.

⁷ Most studies on immigrants and earnings have focused on mean earnings. There are however some studies that have focused on the whole earning distribution, see in particular Hammarstedt and Shukur (2007) and Chiswick and Miller (2008).

- Figure 2 about here -

This would not seem to indicate any clear effects of the Danish reforms, at least not effects that set them off from the reforms in Norway and Sweden. While employment rose among both Danish Western and non-Western immigrants after the reforms, this increase was initiated prior to the reforms and similar increases also occurred among non-Western immigrants in Norway and Sweden.

The differences in the employment gap shown in Figure 2 may however be affected by differences in background characteristics and in the business cycle (see Table 1). Therefore, Figure 3 shows the predicted employment rates (based on annual probit models) for natives and immigrants for a reference group: individuals aged 30-39 who have at least one child, live in a municipality with a 5% unemployment rate and have compulsory school as highest completed education. In addition, among immigrants the analyses are limited to those who have stayed in the host country less than two years. This group has been constructed to match a presumed target group of the reforms; young recent immigrants from non-Western countries with families and a relatively low level of education. As mentioned in the introduction, we in particular expect differences between immigrants in Denmark and immigrants in Norway and Sweden arriving in the 2000s.

Among natives these predicted employment rates largely match the actual employment rates illustrated in Figure 2. The fall in the predicted rates in Denmark and Norway contrast with the stability in the actual rates and suggests that the group examined in Figure 3 is more vulnerable than the general population, for instance due to the relatively low level of education.

In all three countries employment rates for Western immigrants are lower than for natives. Seen over the whole period, the predicted employment rate for Western immigrants is fairly stable in Denmark and Norway while it falls in Sweden. The Swedish drop in the predicted rates starts in earnest in 1999, having rebounded after the start of the deep recession in the early 1990s. While we have no complete explanation for this decline it is presumably related to changes in the composition of Western immigrants, for example in country of origin and reasons for immigration, which we do not take into account in the analyses. Between the early 1990s and the mid-2000 there for instance was a large decrease in the number of immigrants from Finland and Southern Europe while the number of immigrants from Canada, Australia and the UK increased. The latter may have immigrated for different reasons than the earlier immigrants from Finland and Southern Europe.⁸ In contrast, the composition with respect to country of origin was relatively stable in Denmark and Norway.

⁸ One in this context particularly noteworthy factor contributing to the decline is the increased Danish emigration to Sweden following the Danish immigration reforms. These made mixed marriages more difficult, causing an increase in the number of Danes living in Southern Sweden and working in Denmark. These “love refugees” have no earnings in Sweden and are therefore counted as non-employed. Although this does not provide a complete explanation for the fall in employment the decline is noticeably lower if Danish immigrants are excluded from the Swedish analyses.

- Figure 3 about here -

A comparison of the predicted employment rates for non-Western immigrants shows that the rates for recent non-Western immigrants increase during the period in all three countries, in Sweden albeit after an initial drop. In Norway and Sweden (after 1995) this increase is the result of a relatively steady upward trend over most of the period. In contrast, in Denmark the predicted rate remains stable up until 2001 where after it increases abruptly. The Danish increase is furthermore quite substantial as the predicted employment rate among recent non-Western immigrants roughly doubles. The outcome of these different upward trends is that the Danish employment rates at the end of the period exceed the Norwegian and Swedish by around 10-15 percentage points among both men and women.

This raise in predicted employment for recent non-Western immigrants in Denmark in the 2000s of course coincides with the Danish policy reforms. Nonetheless, there may also be differences in the composition of non-Western immigrants with respect to country of origin which may influence the results in Figure 3. We have therefore – as a sensitivity test – calculated predicted employment rates for recent immigrants from Turkey, the Horn of Africa and Poland for the three years 1993, 2001, and 2006.⁹ The results are shown in Figure 4 and as in Figure 3 analyses pertain to individuals aged 30-39 with at least one child and no more than compulsory education living in a municipality with a 5% unemployment rate, and if immigrants have stayed in the host country for less than two years.

- Figure 4 about here -

In Denmark the predicted employment rate increases from 1993 to 2006 irrespective of country of origin. For recent immigrants from Poland and the Horn of Africa the increase in the predicted rate is in particular large between 2001 and 2006, while immigrants from Turkey see a more continuous rise. These results are thus in accordance with the development of predicted employment for all non-Western immigrants. In Sweden and Norway the results are more varied. As in Denmark, employment increases noticeably among Polish immigrants. However, despite some improvements the trends among immigrants from Turkey and the Horn of Africa are less positive. Thus one interpretation of these results is that the policy reforms in Denmark in the 2000s have increased the employment rates of quite diverse groups of recent non-Western immigrants – a category with great difficulties obtaining employment in the Scandinavian labour markets.

⁹ The Horn of Africa was a predefined non-divisible category in the Swedish data and consists of Djibouti, Eritrea, Ethiopia, Somalia, and Sudan. We have also calculated the predicted employment rates for non-Western immigrants where we have excluded immigrants from Eastern Europe. The results were fairly similar to those shown in Figure 2, where Eastern European immigrants are included, and are therefore not shown.

Nonetheless, while predicted employment among the three non-Western immigrant groups examined in Figure 4 develops positively it seems that the rising Danish rates are limited to a smaller section of the immigrant labour force, recall that overall employment among non-Western immigrants in Figure 3 changed very little following the reforms. The fact that we control for unemployment does on the other hand suggest that the improvement was not related to the business cycle, instead it seems that the policy changes is the most likely explanation for the rise.

Here the comparison with Norway and Sweden becomes particularly interesting as these two countries introduced similar changes to their integration policy - but without the benefit reductions associated with the Danish integration reforms and without changing immigration policy. Although this need not be the only explanation it is noteworthy that predicted employment in both Norway and Sweden rises after the changes in the integration programs in 2003 and 1994 respectively. This interpretation is supported by Danish and Finnish evaluations showing a clear employment increase from the combination of measures such as subsidised employment with measures to increase human capital such as language training, and a clear but markedly smaller effect of the benefit reductions (Clausen et al 2009, Huynh et al 2010, Rosholm and Vejlin 2009, Sarvimäki and Hämäläinen 2010).¹⁰ It therefore seems plausible that the programs had similar positive effects in all Nordic countries but that the greater rise in employment in Denmark is related to the reduction in benefits that was part of the start help program, a reduction that was not part of the other two countries otherwise very similar programs.

4.2 Distribution of annual earnings

The employment definition we have used in Section 4.1 implies that the development of the employment rate is affected by the numbers of hours worked, but also hourly earnings. However, if the reforms in Denmark have affected labour supply they may also have caused a reduction in immigrants' hourly earnings as their incentives to take on poorly paying jobs have increased after 2001. In this section, we analyse annual earnings with a special focus on how well the immigrant are doing compared to natives in different parts of the earnings distribution.

Table 2 shows the average annual earnings in 1993 and in 2006 for individuals with positive yearly earnings. Non-Western immigrants have the lowest average earnings in the three countries, a gap that is slightly greater in Denmark than in Norway and Sweden. In Denmark and Sweden earnings of Western immigrants place in-between natives and non-Western immigrants, while in Norway Western immigrants have higher earnings than natives. Notable is also that mean earnings growth among non-Western immigrants in all three countries is roughly on par with that among natives.

¹⁰ Finland had reformed integration policy in 1999 along the same lines as Norway and Sweden.

- Table 3 about here -

We use quantile regression to analyse the extent to which the native-immigrant earnings gap varies across the earnings distribution and carry out separate estimation for each year from 1993 to 2006. In the analyses we distinguish between recently arrived immigrants with less than five years of residency and immigrants who have arrived earlier. The unadjusted and adjusted results for 2006 are shown in Figures 5 and 6, while the adjusted results for 1993 and 2001 are shown in Figures A1 and A2 in the Appendix.

Table 2 showed mean earnings among non-Western immigrants to be markedly lower than the earnings of natives in all three countries. As is evident from Figure 5, the size of the earnings gap varies substantially across the earnings distribution, and according to date of arrival. In 2006 recent non-Western immigrants earn around 85 to 90% less than natives at the 5th and 10th percentiles in all three countries. The earnings gap for non-Western immigrants who arrived earlier is less, in particular in Sweden although it here still is around 60%. However, the earnings gap diminishes as we move up along the earnings distribution. Evaluated at the median, the unadjusted earnings gap between natives and recent non-Western immigrants is smaller in Denmark and Norway than in Sweden, around 50 versus 60%. At the top decile, the gap has diminished even further and is now approximately 35% in all three countries. On the other hand, the unadjusted earnings gap between natives and non-Western immigrants who have stayed in the host country for at least five years is slightly smaller in Sweden and Norway than in Denmark. The difference amounts to around 5 percentage points at all points of the distribution.

- Figure 5 about here -

Figure 6 show the earnings gap in 2006 when controlling for gender, age, children, education, industry and local unemployment rate. Taking these factors into account tends to reduce the earnings gap between natives and non-Western immigrants, especially in the top of the earnings distribution. The earnings gap between recent non-Western immigrants and natives is slightly smaller in Denmark than in Sweden. The earnings gap between recent non-Western immigrants and natives is also smaller in Denmark than in Norway above the median, while the opposite is the case at the bottom of the earnings distribution. On the other hand, the adjusted gap in earnings between natives and non-Western immigrants who have stayed in the host country for at least five years is around 5 to 10 percentage points smaller in Norway and Sweden than in Denmark.

- Figure 6 about here -

As was shown in Table 3, in Denmark and Sweden Western migrants earn more than non-Western immigrants but less than natives. However, in Norway mean earnings among Western immigrants was actually higher than among natives. Figure 5 shows this to be the case only in the top quartile of the earnings distribution, at the lower end there is still a negative earnings gap albeit relatively small. The gaps in Denmark and Sweden are thus larger, in particular among recent arrivals. In all countries the earnings gap diminishes with increased residency, including the positive gap among recent high earners. These gaps decline even further when we in Figure 6 introduce the control variables.

Figures 5 and 6 only show the earnings gaps in Scandinavia in 2006. The evolution of the adjusted earnings gap between natives and recent non-Western immigrants over our period is illustrated in Figure 7 showing the gap in 1993, 2001 and 2006. We expected the earnings gap to have remained fairly stable in Norway and Sweden, whereas the gap in Denmark was expected to change in one way or another. On the one hand, lowered reservation wages may have increased employment (see above) thereby lowering the earnings gap. Alternatively, falling reservation wages may lead to a corresponding fall in actual wages in turn producing an increased gap. As seen in Figure 7, the earnings gap is indeed quite stable in Sweden at basically all points of the distribution. In Norway the earnings gap decreases slightly over time in the lower half of the distribution, while it in 2006 increase above the median.

In contrast, between 1993 and 2001 the earnings gap in Denmark decreases at all points of the distribution. This development continues in 2006, but only at the top. In the lower half of the distribution there is instead a rather remarkable increase in the earnings gap between 2001 and 2006, almost 15 percentage points at the 25% percentile and even greater among really low earners. This of course suggests that the Danish reforms have made some immigrants take up very low-paid work. In contrast, no similar change is evident in the relative position of non-Western immigrants in Norway and Sweden: although they in both countries clearly are a disadvantaged group the earnings gap remains fairly stable throughout the period.

- Figure 7 about here -

5. Conclusions

The Scandinavian countries Denmark, Norway and Sweden have recently departed from their long tradition of similar immigration and integration policies. A changing mixture between rights and duties describe all three countries, yet observers have noted a difference in the emphasis placed on sticks and carrots. Denmark has thus restricted immigration and tightened integration policies, developments not seen in Norway and Sweden. Still, the Danish reforms cannot simply be characterized as sticks as some also have involved the creation of various training programs. The impact of the Danish reforms could be expected to be rather variegated. On the one hand, it would

seem reasonable to expect the reforms to lead to higher employment rates among immigrant. On the other, it could also be presumed that there would be concomitant increase in the earnings gap as more immigrants take up low paying jobs.

With regard to employment we on the one hand find that actual employment rates show only limited indications of an impact of the Danish reforms, while predicted rates instead suggest that there may have been a fairly substantial increase in employment. Subsequent to the reforms we thus see a doubling of the predicted employment rate for the selected group, recent young immigrants from non-Western countries with children and a low level of education. This rise is also evident, to varying degrees, in three rather different groups; immigrants from the Horn of Africa, from Poland, and from Turkey. These apparently contradictory outcomes may be reconciled by noting that the predicted results pertain to specific groups of non-Western immigrants, a group that apparently too small to make to affect overall employment rates.

Interesting in this context is also the rise in the employment rates in Norway and Sweden. While it appears likely that the Danish surge in predicted employment is related to the various reform packages enacted starting in 2001, coming as it does after the reforms, the same could be said of the increase in predicted employment in Norway and Sweden after their reforms to integration policy in 2003 and 1994. The reforms in Norway and Sweden were in many ways similar to the Danish reforms to integration policy in 2001, but without the benefit reductions. It therefore appears plausible that they also would impact positively on employment.

Turning to earnings, we again see rather remarkable changes following upon the Danish reforms. The earnings disadvantage experienced by recent non-Western immigrants in Denmark thus increases quite dramatically between 2001 and 2006 in the lower end of the distribution. This increase in the earnings gap in Denmark suggests that the increase in employment primarily was caused by immigrants finding employment in poorly paid jobs. In contrast, the rise in employment in Norway and Sweden was not accompanied by a similar decline in the relative earnings position of low-earning immigrants.

These analyses do not attempt to distinguish between the effects of the separate components of the reform packages, but should instead be seen as an attempt to capture the combined effects of the different policy choices that have been made. As it stands, the results on the one hand suggest something of a trade-off. An increased emphasis a strict immigration and integration policy may thus have the effect of increasing employment - but only in poorly paid jobs. To the extent that this trade-off is real, the long-term employment prospects of immigrants become crucial. Strict policies would seem more acceptable in a situation with substantial opportunities for mobility into better paying jobs, and less so with a considerable risk of prolonged in-work poverty. On the other hand, the positive employment trends observed in Norway and Sweden without a similar deterioration in relative earnings also suggest that this perceived trade-off may be illusory.

Immigration and integration policies of the Danish type may in other words not be the only way to achieve increased immigrant integration on the labour market.

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Tables

Table 1. Descriptive statistics for natives, Western immigrants and non-Western immigrants by country and year, percent and N

	Denmark			Norway			Sweden		
	Natives	Western imm.	Non-Western imm.	Natives	Western imm.	Non-Western inn.	Natives	Western imm.	Non-Western imm.
1993									
Women	50	50	45	49	49	44	49	52	47
Children (0-17 years)	45	41	60	51	50	63	46	39	56
Age:									
30-39 years	35	32	53	38	35	58	34	29	49
40-49 years	37	39	31	37	38	30	38	37	32
50-59 years	28	29	16	25	26	12	28	34	19
Education:									
Compulsory	35	17	25	30	18	31	28	34	26
Upper secondary – academic	3	5	7	11	9	10	12	8	8
Upper secondary – vocational	38	29	20	33	18	11	33	33	25
Tertiary	23	30	20	26	53	44	26	19	19
Missing education	1	19	27	0	2	4	0	6	22
Years since migration (YSM):									
0-1 years	-	7	8	-	9	14	-	1	11
2-4 years	-	7	14	-	9	16	-	3	16
5-9 years	-	12	28	-	17	30	-	4	20
10-14 years	-	12	12	-	15	15	-	6	13
15+ years	-	19	16	-	50	25	-	46	27
Missing YSM	-	42	21	-	0	0	-	39	13
Municipal unemployment rate	12.4	12.4	13.3	5.5	5,4	5.6	8.2	8.2	8.3
N	203,421	46,310	63,620	1,561,978	52,915	43,979	2,605,297	219,029	202,842
2006									
Women	50	46	51	49	45	50	49	50	52
Children (0-17 years)	46	43	58	49	52	62	47	37	54
Age:									
30-39 years	32	35	43	34	37	47	33	25	40
40-49 years	35	33	37	34	34	36	33	34	36
50-59 years	33	32	20	32	28	17	33	41	24
Education:									
Compulsory	23	10	26	21	10	27	18	25	30
Upper secondary – academic	5	7	10	11	6	8	13	7	4
Upper secondary – vocational	40	26	25	32	14	10	32	29	26
Tertiary	32	39	23	37	68	53	36	34	33
Missing education	1	18	15	0	2	2	0	6	6
Years since migration (YSM):									
0-1 years	-	10	5	-	11	12	-	5	8
2-4 years	-	9	7	-	12	14	-	6	9
5-9 years	-	16	19	-	22	20	-	7	14
10-14 years	-	15	22	-	14	15	-	4	21
15+ years	-	38	41	-	42	38	-	52	43
Missing YSM	-	12	6	-	0	0	-	25	5
Municipal unemployment rate	4.5	4.6	4.8	2.6	2.7	2.8	3.6	3.6	3.8
N	209,555	51,339	145,561	1,759,163	56,912	135,592	3,047,974	195,575	419,380

Table 2. Mean earnings and mean log earnings in national currency for natives, Western immigrants and non-Western immigrants with positive yearly earnings by country and year. Standard deviations in parenthesis.

	Denmark			Norway			Sweden		
	Natives	Western immigrants	Non-Western immigrants	Natives	Western immigrants	Non-Western immigrants	Natives	Western immigrants	Non-Western immigrants
1993									
Earnings	207,106 (144,809)	195,648 (163,928)	134,781 (112,148)	197,701 (135,730)	224,711 (220,450)	137,846 (126,313)	164,856 (106,666)	148,411 (100,051)	117,401 (96,911)
Log earnings	11.98 (0.94)	11.80 (1.13)	11.32 (1.30)	11.90 (1.02)	11.91 (1.14)	11.26 (1.42)	11.74 (0.96)	11.57 (1.11)	11.15 (1.36)
N	174,924	34,7153	32,187	1,389,106	35,067	29,469	2,658,301	188,276	125,683
2006									
Earnings	326,264 (243,185)	297,695 (256,093)	214,611 (160,347)	363,993 (263,063)	388,636 (334,383)	250,004 (194,378)	276,959 (193,191)	263,335 (213,493)	199,560 (155,398)
Log earnings	12.44 (0.96)	12.19 (1.19)	11.82 (1.38)	12.54 (0.93)	12.54 (0.98)	12.00 (1.21)	12.27 (0.94)	12.14 (1.10)	11.77 (1.23)
N	187,607	41,896	94,013	1,579,827	50,256	97,245	2,745,911	146,424	275,969

Figures

Figure 1. The SELMA model

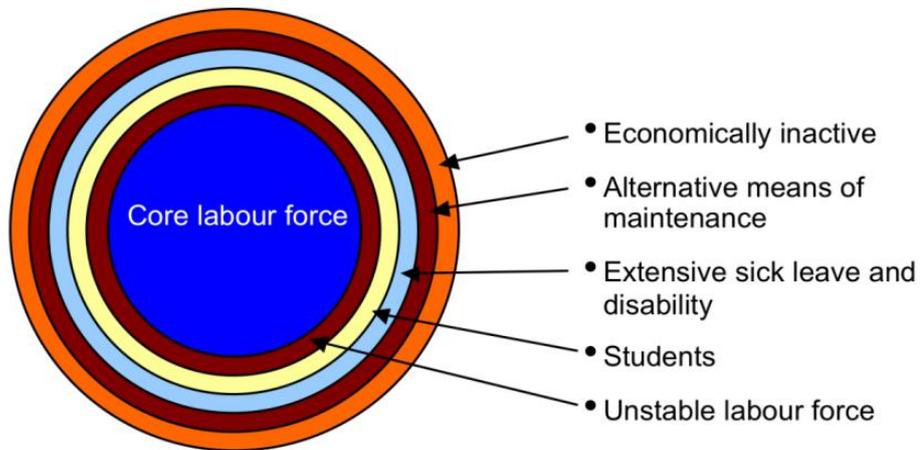


Figure 2. Employment rates 1993-2006 (%) among 30 to 59 year-old natives (N), Western immigrants (WI) and Non-Western immigrants (NWI) by country of destination and sex

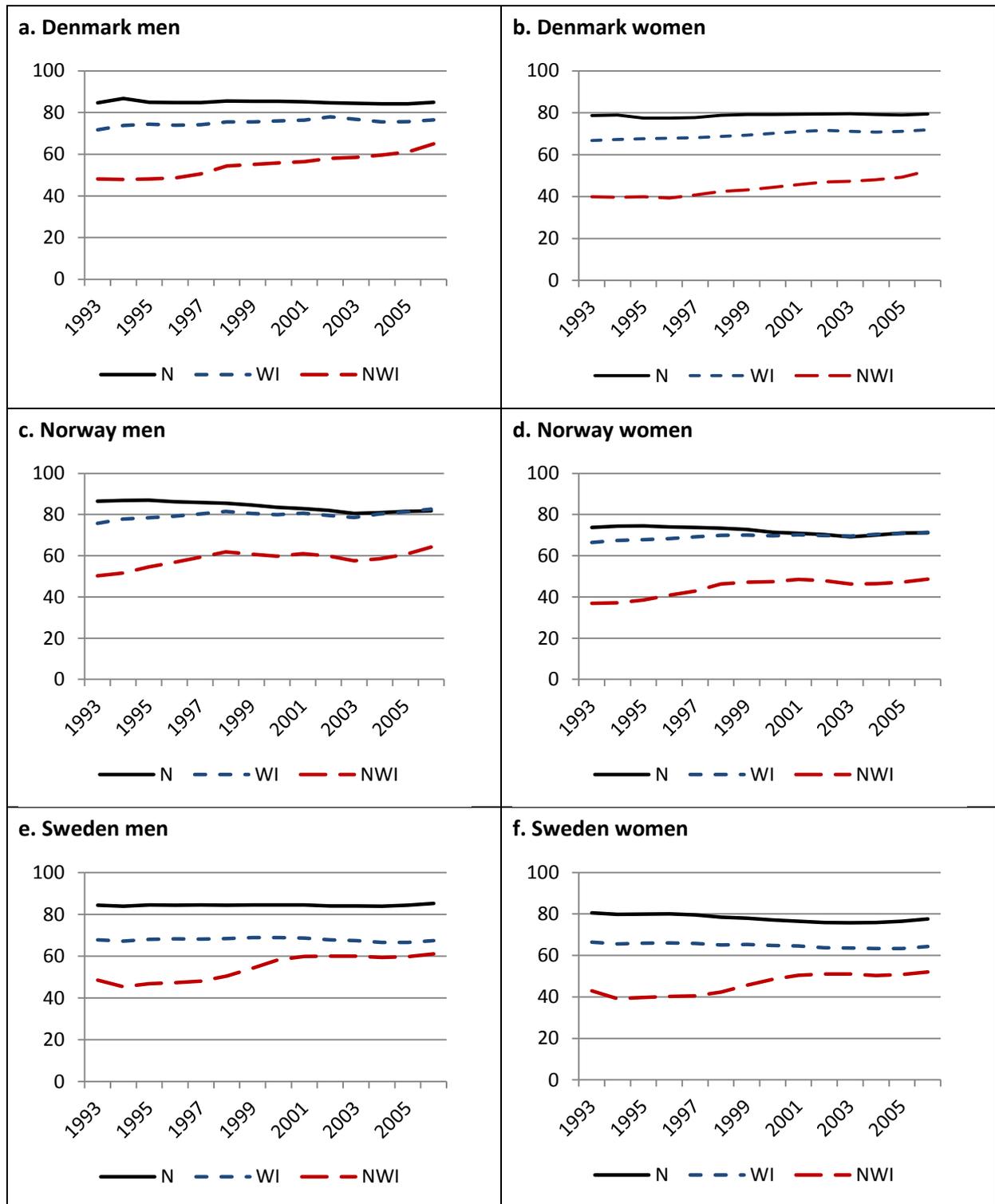
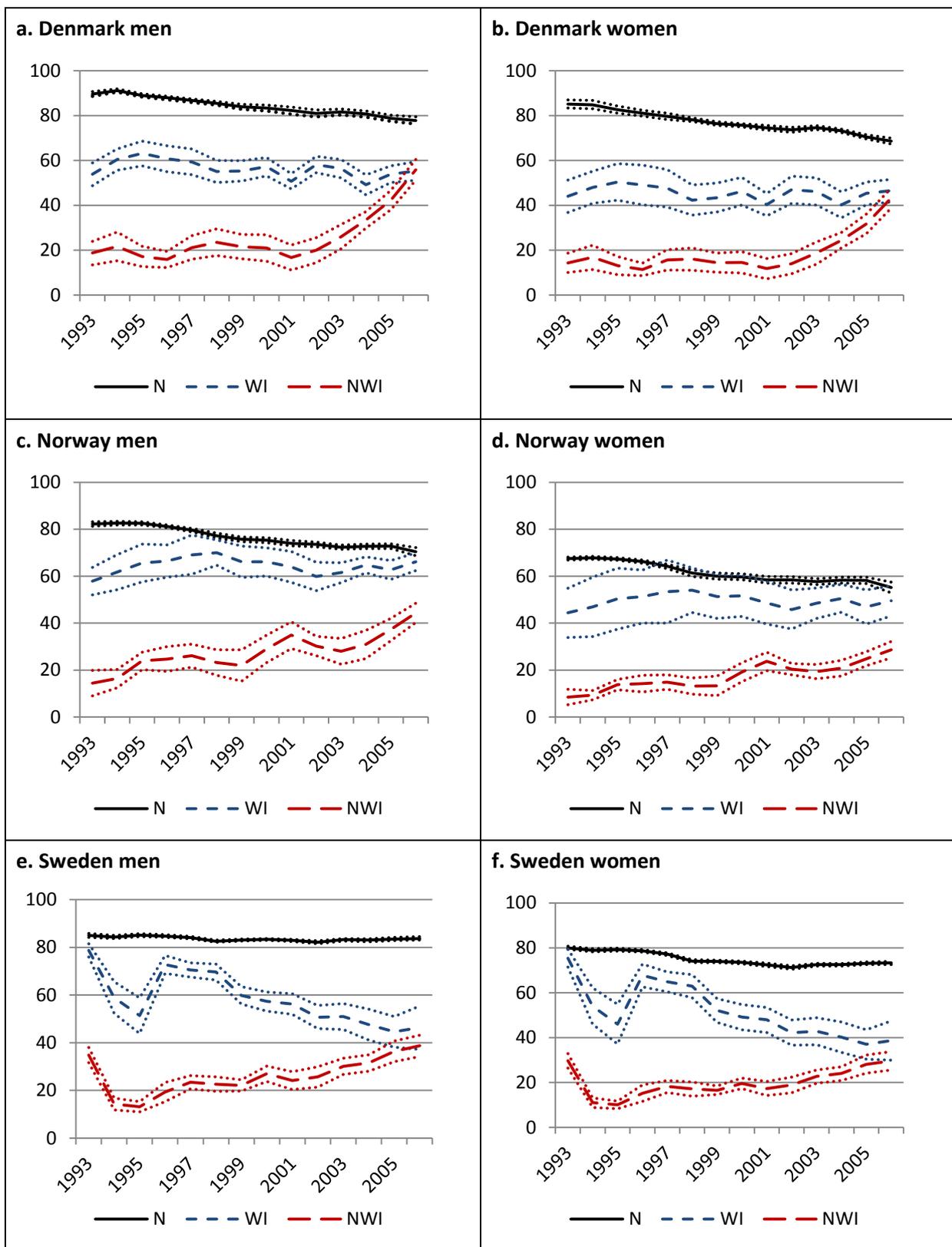
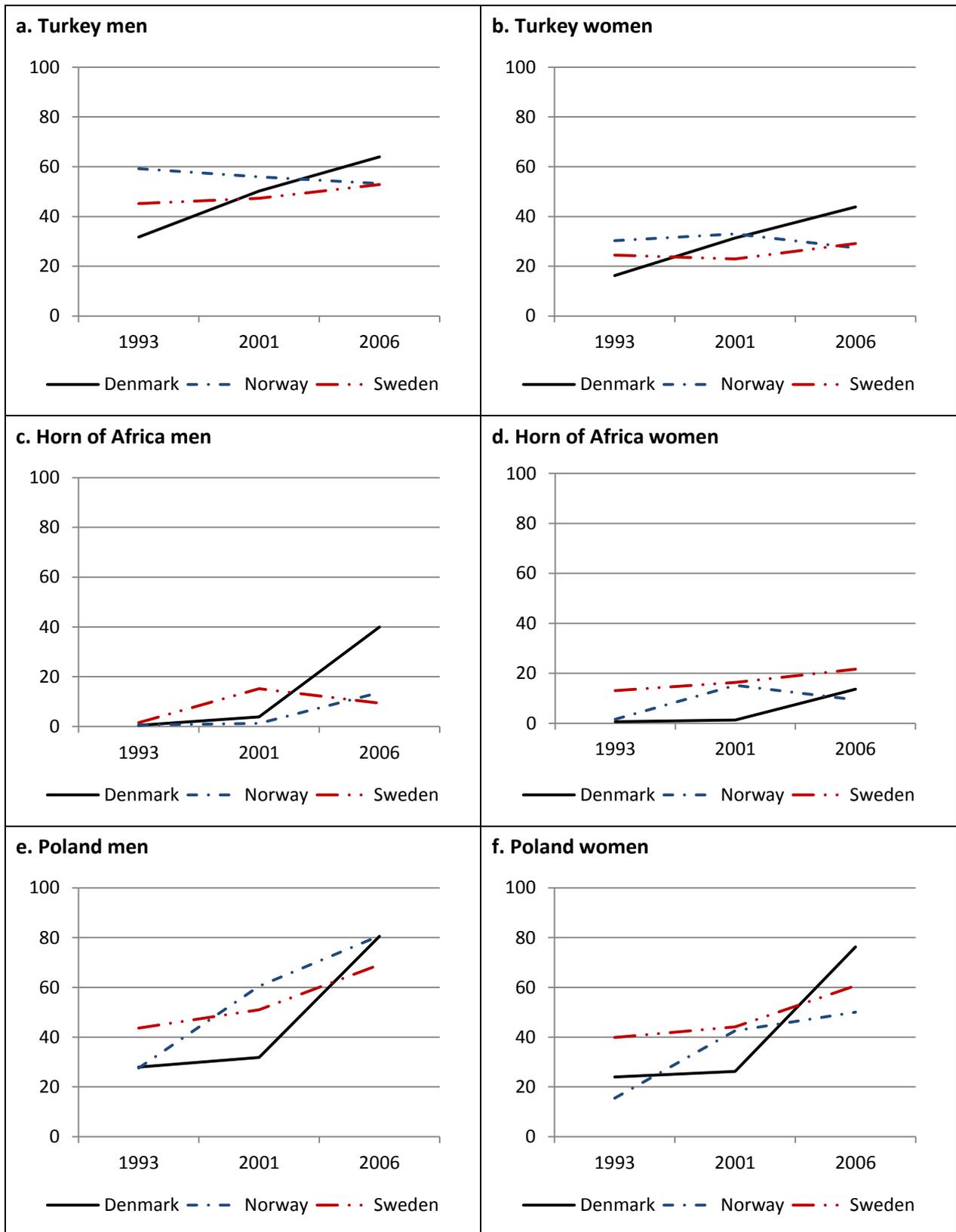


Figure 3. Predicted employment rates 1993-2006 (%) among natives (N), Western immigrants (WI) and Non-Western immigrants (NWI) by country of destination and sex



Note: Predictions based on annual probit models including the variables; missing year of immigration, sex, children 0-17, age 40-49, age 50-59, 5 educational dummies (incl. missing), and 10 industry dummies in addition to region of origin and year of immigration. Predictions pertain to individuals aged 30 to 39, with a compulsory degree, at least one child aged 0 to 17 and living in a municipality with a 5 % unemployment rate. Immigrants have furthermore lived in destination country less than two years. Dashed lines indicate 95% confidence bands.

Figure 4. Predicted employment rates 1993-2006 (%) among 30 to 59 year-old immigrants in Denmark, Norway and Sweden by country of origin and sex



Note: Predictions based on annual probit models including the variables; missing year of immigration, sex, children 0-17, age 40-49, age 50-59, 5 educational dummies (incl. missing), and 10 industry dummies in addition to region of origin and year of immigration. Predictions pertain to individuals aged 30 to 39, with a compulsory degree, at least one child aged 0 to 17 and living in a municipality with a 5% unemployment rate. Immigrants have furthermore lived in destination country less than two years.

Figure 5. Unadjusted earnings gap (%) in 2006 between natives and recent as well as earlier Western (WI) and non-Western (NWI) immigrants at selected earnings percentiles by country of destination

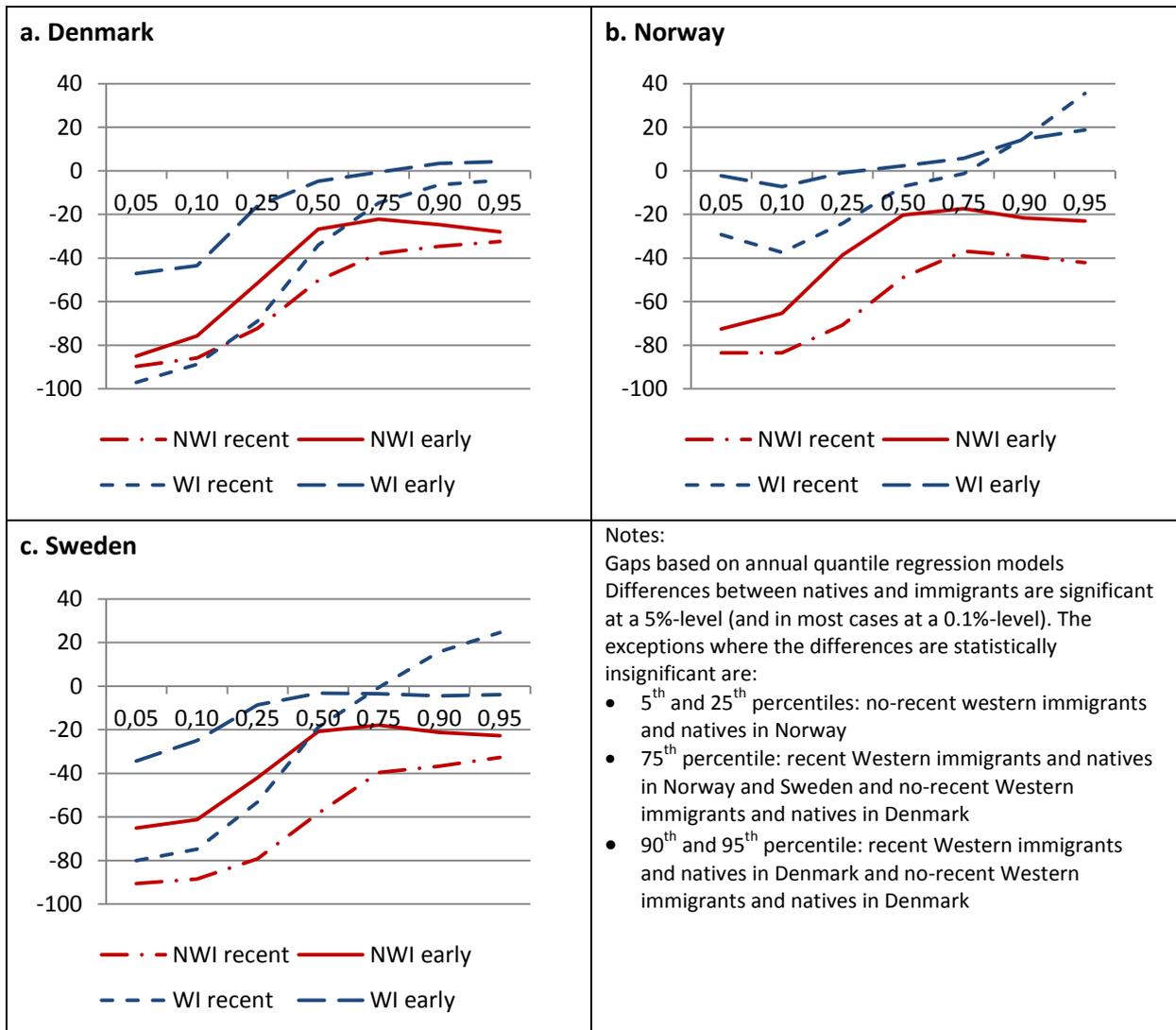


Figure 6. Adjusted earnings gap (%) in 2006 between natives and recent as well as earlier Western (WI) and non-Western (NWI) immigrants at selected earnings percentiles by country of destination

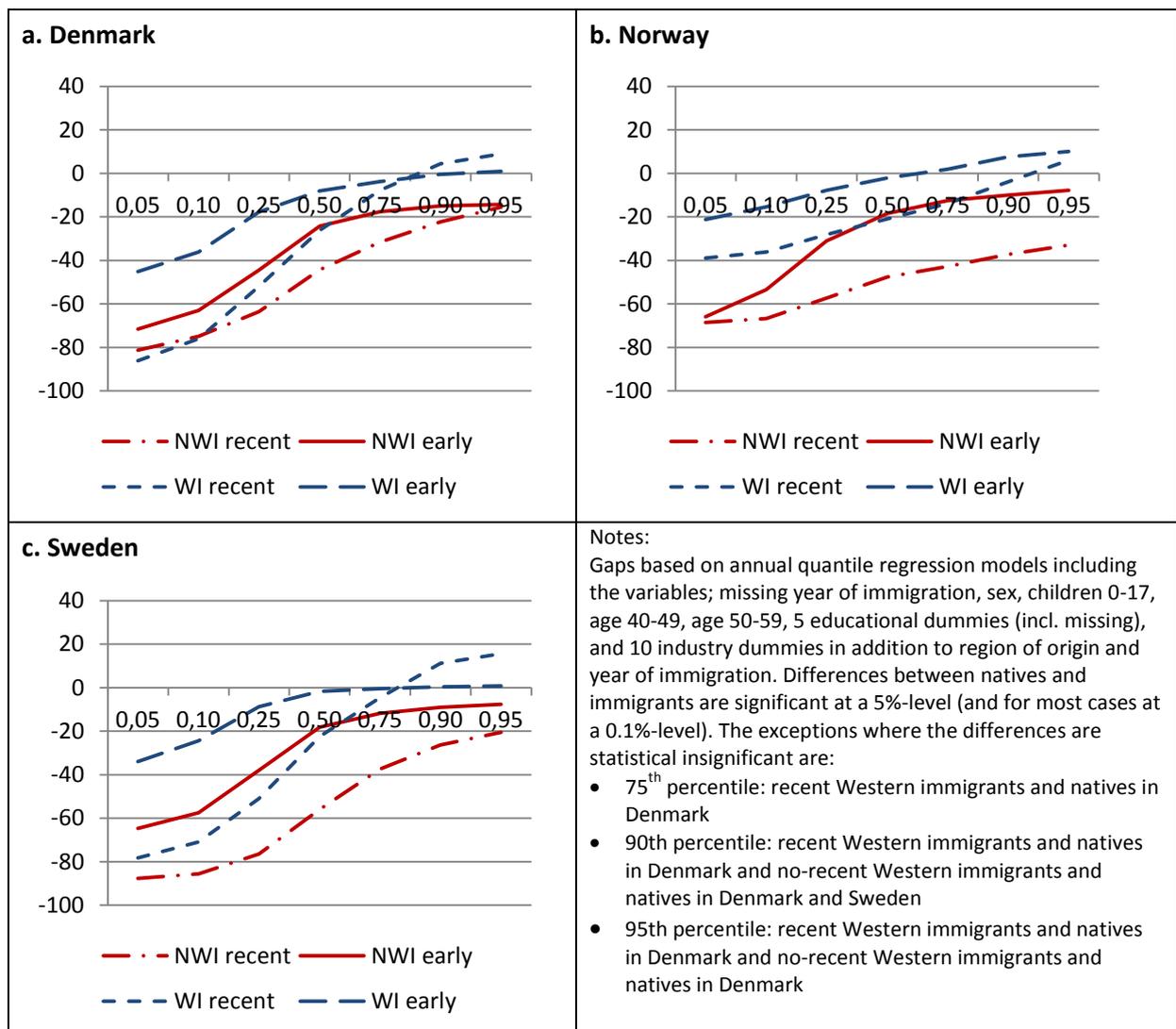
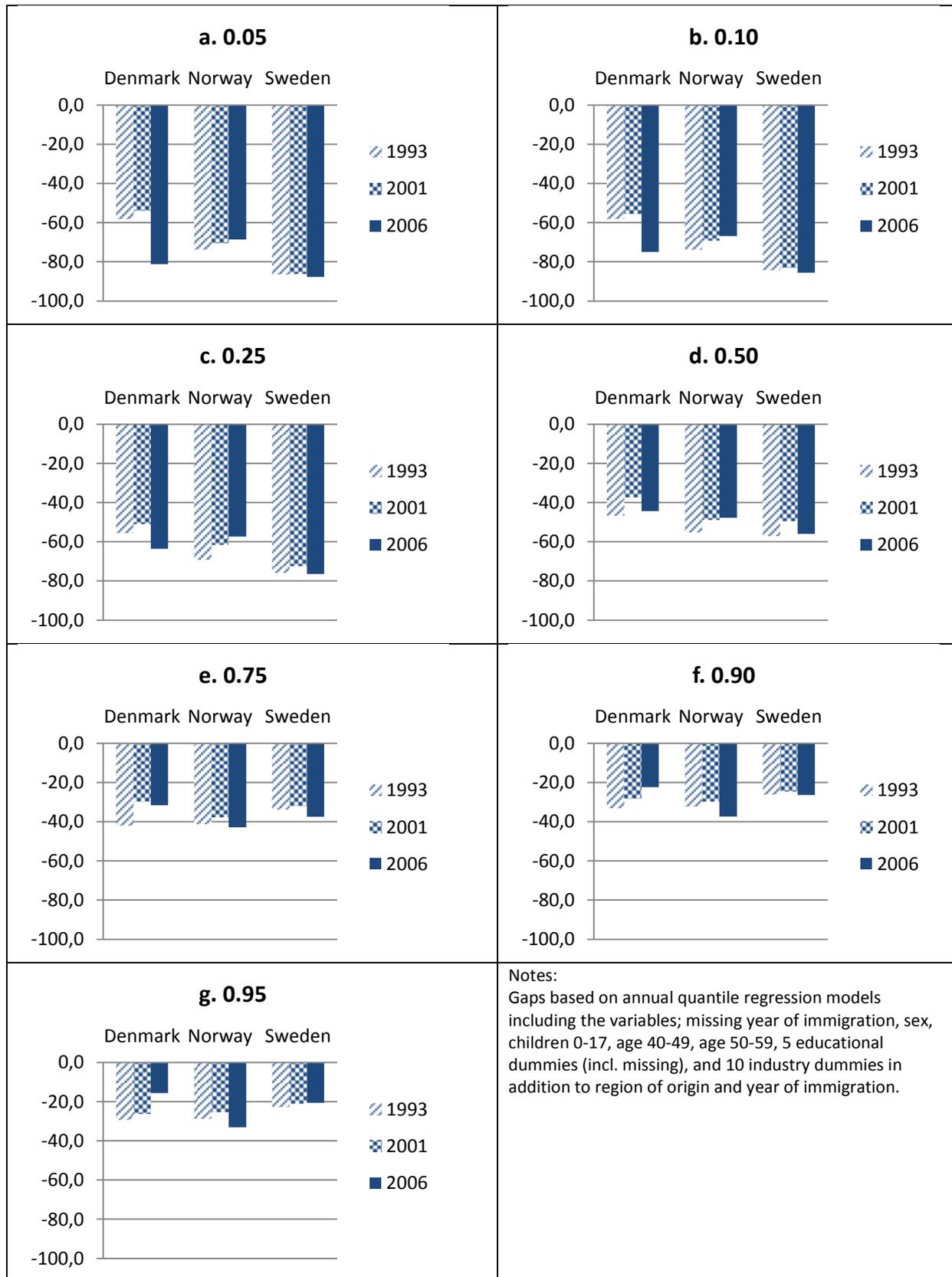


Figure 7. Adjusted earnings gap (%) between natives and recent non-Western immigrants in Denmark, Norway and Sweden in 1993, 2001 and 2006 by selected percentiles



Appendix

Figure A1. Adjusted earnings gap (%) in 1993 between natives and recent as well as earlier Western (WI) and non-Western (NWI) immigrants at selected earnings percentiles by country of destination

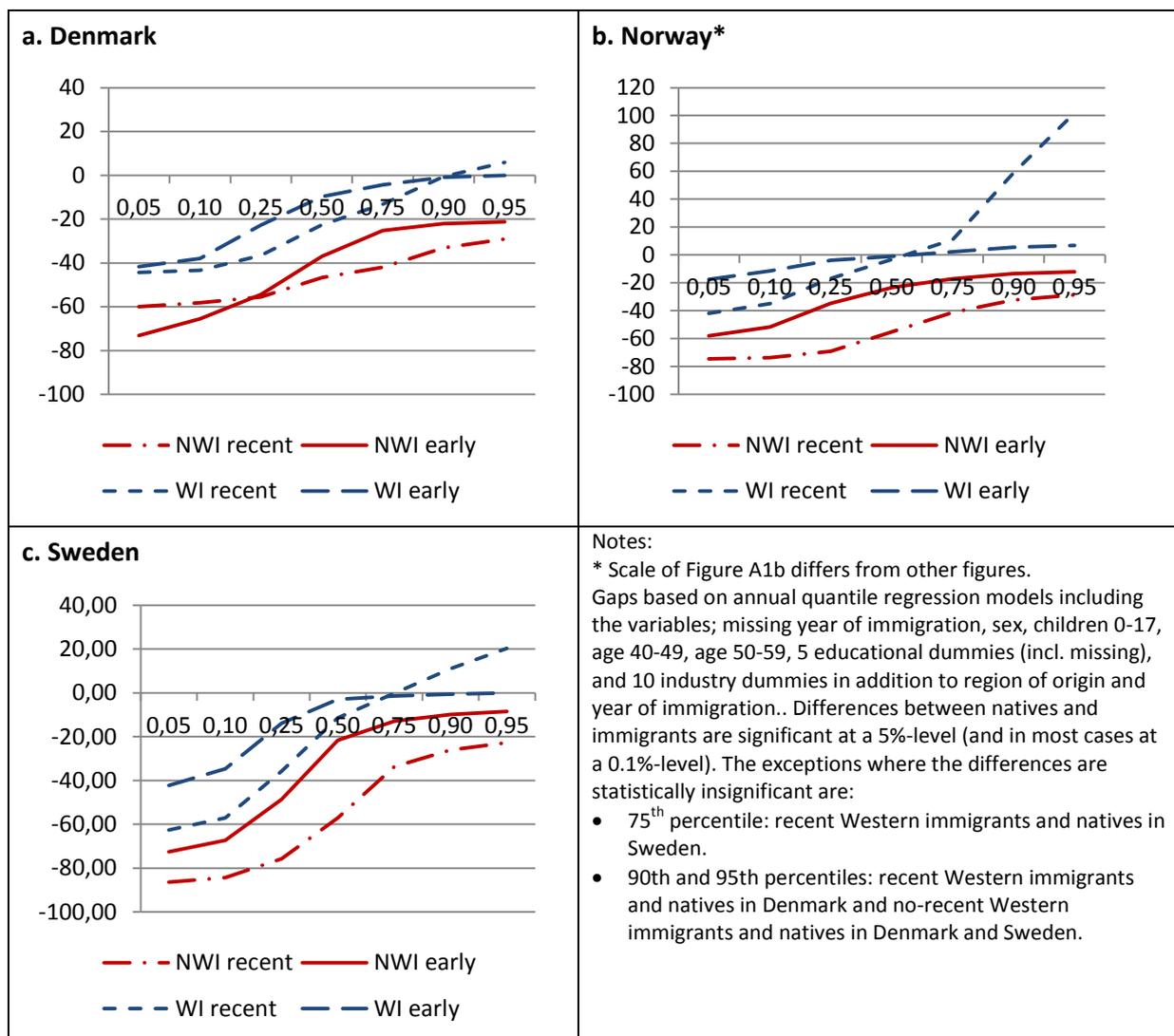


Figure A2. Adjusted earnings gap (%) in 2001 between natives and recent as well as earlier Western (WI) and non-Western (NWI) immigrants at selected earnings percentiles by country of destination

