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TO LARGE
IMMIGRATION INFLUX

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LABOUR MARKET ADJUSTMENTS TO LARGE IMMIGRATION INFLUX

HOW DO OPEN ECONOMIES ADJUST TO LARGE IMMIGRATION FLOWS? SECTORAL SPECIALIZATION, HOUSEHOLD SERVICES, AND OTHER MECHANISMS

LIBERTAD GONZÁLEZ¹ AND FRANCESC ORTEGA²

Introduction

Several countries have received large-scale population inflows over the last few decades. Besides altering the social fabric of the host country, large immigration episodes present an interesting case study for analyzing how economies absorb sudden increases in labor supply. In particular, they generate useful data for testing economic theories that are widely used to interpret economic data and formulate policies with implications for the labor market.

Several recent large immigration episodes have received attention in the literature on this topic. Between 1990 and 2001, over a million people arrived in Israel from the former Soviet Union.³ More recently, Spain experienced a large, decade-long immigration wave starting in the late 1990s. Between 1998 and 2008, the foreign-born population in Spain increased by almost five million.⁴ As a result, the foreign-born share of the working-age population increased from four to 14 percent.

One of the main challenges in the immigration literature is to estimate the effect of immigration on the wages (and employment opportunities) of native workers with skills similar to those of immigrants. Perhaps

surprisingly, most studies in the United States and elsewhere have found negligible effects (for example, Card 2005). This “wage puzzle” has prompted researchers to go beyond the standard one-good, closed-economy model of the economy, and explore additional mechanisms that may mediate how immigrants are absorbed by the labor market of the host economy.

This paper focuses on one such channel, namely, adjustments to the industry composition of production in the context of economies that trade goods and services with each other. It particularly analyzes regions within a country that are highly interconnected by trade. Specifically, it focuses on the Rybczynski (1955) theorem. According to this celebrated result, under some conditions, an exogenous increase in the supply of a factor of production (such as unskilled labor) in a small, open economy will not affect the equilibrium factor prices (unskilled wages), but only the composition of production.⁵ Output and employment tend to expand in sectors that use that factor intensively. This can lead to an aggregate increase in the demand for the factor that has now become more abundant, while leaving its relative price unchanged, thus providing a solution to the wage puzzle.

The pioneering empirical exploration of this result is Hanson and Slaughter (2002), on the basis of an accounting decomposition. However, their approach is not well-suited to formally test the response to an immigration shock. We therefore follow the more recent approach developed by Lewis (2003), which uses spatial correlations methodology to provide a more formal econometric test of the Rybczynski hypothesis.⁶ Our second goal is to evaluate the merits of an additional mechanism that may also help account for the wage puzzle: cross-skill effects arising from an increase in the availability and affordability of domestic help and its effect on the labor supply of skilled native women.



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³ Friedberg (2001), Cohen-Goldner and Paserman (2011), and Paserman (2013) have studied the labor market effects of Israel's immigration episode.

⁴ The largest annual inflow in Spain was in 2008, with an increase in the foreign-born population of almost 800,000 relative to the previous year, amounting to 1.7 percent of the population (Spanish National Statistical Institute).

⁵ A small open economy is one that takes the prices of final goods as given, determined by world markets. The endogenous variables in this economy are local factor prices and the allocation of local resources across industries.

⁶ A number of other mechanisms have also been proposed to account for the insensitivity of wages to immigration shocks. They are discussed in detail in section *Alternative explanations*.

Our paper is related to several strands of literature. Primarily, it relates to the studies that evaluate the Rybczynski hypothesis empirically. Gandal, Hanson and Slaughter (2004) provide one of the first analyses, based on a between-within industry decomposition using data for Israel. More closely related to our work, Lewis (2003) is the first study to formally test the hypothesis. Our work is also closely connected to the studies that have examined the effects of immigration on the domestic help sector and its implications for the work decisions of skilled native females, as in Cortés and Tessada (2011) or Barone and Mocetti (2011). Finally, our study is also part of the growing body of immigration literature that analyzes the economic effects of Spain's recent immigration wave that includes Bentolila, Dolado and Jimeno (2008), Carrasco, Jimeno and Ortega (2008), as well as Amuedo-Dorantes and de la Rica (2013), among many others.

Methods and data

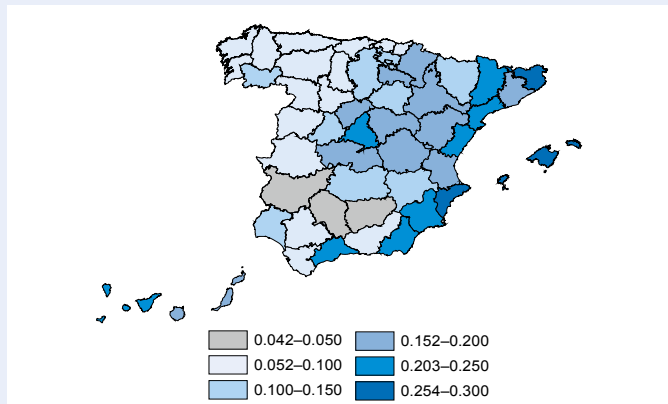
What are the labor market effects of immigration? This is a hard question to answer at the national level. In order to understand the causal effect of immigration, the actual evolution of the economy during the period of interest would have to be compared with an estimate of how it would have evolved in a hypothetical absence of immigrants. This “counterfactual” estimate is not easy to construct.

An alternative approach to the question, and the one that we follow, is to study the impact of immigration at the regional level. Between 1998 and 2008, some Spanish regions received very high immigration inflows as a percentage of the total population, while other regions were much less affected. The evolution of the economy in the “less affected” regions can be used as a starting point to estimate what would have happened in the “most affected” ones in the absence of immigration.⁷ The

⁷ Of course, the empirical analysis needs to take into account that the immigrant-receiving areas are potentially different from the less affected ones in other dimensions. This is attained by means of instrumental-variables estimation, where we exploit the regional patterns of settlement of immigrants by country of origin in the 1980's to build a predictor for the location of immigrants in the 2000's that is uncorrelated with current labor demand at the regional level. This type of instrument is common in immigration literature.

Figure

Foreign-born population as a fraction of the working-age population by provinces (Spain), 2008



Source: Farré, González and Ortega (2011).

comparison between the two groups of regions would give us an approximation of the causal effect of immigration. This approach is usually referred to as “spatial correlations” (Altonji and Card 1991).⁸ Our discussion draws heavily on two recently published research articles (González and Ortega 2011; Farré, González and Ortega 2011) that apply this methodology to Spanish data.

Some authors have criticized the spatial correlations approach as ineffective, arguing that, in practice, it is subject to significant measurement error given the usual sample sizes employed in the literature, biasing the estimated effect of immigration on wages towards zero (Aydemir and Borjas 2011). However, several recent studies employing this methodology have been able to uncover large and statistically significant effects of immigration on prices and quantities in some labor markets (Cortés 2008; Frattini 2010; Cortés and Pan 2013a; González and Ortega 2013).

Naturally, substantial variation in the size of immigration flows, relative to population, across Spanish regions must exist so that the spatial correlations approach can identify the effects of interest. Figure 1 plots the foreign-born share (among the working-age population) across Spanish regions in 2008.⁹ While some provinces barely received any immigration (foreign-born share below five percent), in others the immigrant population accounted for over 25 percent of the total.¹⁰ This is the variation that we exploit in our analysis in order to obtain our estimates of the effects of interest.

⁸ For a more detailed discussion of this methodology and a review of recent studies that adopt it, see de la Rica, Glitz and Ortega (2013).

⁹ Our regional units of analysis are the 52 Spanish provinces.

¹⁰ In all regions, the baseline scenario was of little immigration only ten years before (less than five percent in 1998).

Table 1

Effects of immigration on employment and wages			
Dependent variable	1	2	3
Change in the employment rate	0.0435	0.0884	0.0848
Change in the daily wage (in %)	-0.0599	0.0331	-0.0095

Note: The table summarizes the results of instrumental variables regressions estimated using Labor Force Survey data for employment and social security data for wages. The coefficients shown are those for the main explanatory variable: the percent change in the working-age population (by provinces and education level) between 2001 and 2006 (constructed from local registry data). The number of observations is 156 (52 provinces, times 3 educational categories). Each regression includes as control variables binary indicators for each education level and for each province (i.e. province and education fixed-effects). None of the coefficients shown are statistically significant at the 90% confidence level. The first column includes all 52 provinces, the second one excludes Ceuta and Melilla (located in North Africa), and the third one weighs each province by population.

Source: González and Ortega (2011).

Main findings

In this section we describe the estimated effects of immigration on the Spanish labor market. The first subsection (*Effect on employment and wages*) focuses on the effects of immigration on native employment and wages. The next section discusses the impact on the production structure of the different provinces. The section *Effect on composition of the workforce at the industry level* examines the extent to which immigration affected the skill composition of the workforce at the industry level.

Effect on employment and wages

Immigration led to a large increase in the size of the Spanish labor force. We begin by analyzing the effects on employment. In González and Ortega (2011), using Labor Force Survey data for 2000–2006, we found that the regions that received more immigration also experienced large increases in total employment, while unemployment and inactivity rates were hardly affected. Specifically, we found that about 85 percent of the immigrant inflows were absorbed via increases in employment, with only the remaining 15 percent absorbed via higher unemployment or non-participation.

We also examine whether immigrants displaced native workers with similar skills. Our regional analysis reveals that this was not the case. We compare the evolution of the employment rate (defined as the number of employed people divided by the total working-age population) across provinces, separately for workers with different levels of educational attainment (low, medium and high). If immigration had harmed native

employment, we would expect the employment rate to have fallen (or increased less) in regions of higher immigration, and for the education groups with higher immigrant density. This does not seem to be the case, as shown by the positive (non-significant) coefficients in the first row of Table 1.

Native workers could also have been affected by immigration via wages. A standard one-good, closed-economy model implies that immigration will lower the wages of domestic workers with similar skills to those of the new

immigrants. To answer this question, we compared the evolution of wages by province and education level. We found that immigration had no significant effects on wages (second row of Table 1). That is, the evolution of wages over time (for each education category) is similar between regions of high and low immigration.

To summarize, despite substantially increasing the working-age population, we found no evidence of significant effects on the employment or wages of native workers in regions with more immigration and among workers with similar education levels to immigrants. While this goes against the predictions of the standard one-sector model, it may be entirely consistent with the adjustments in sectoral specialization prescribed by the Rybczynski theorem.

Effects on specialization

Immigration led to an increase in the supply of workers with low and medium education (for short, unskilled) in Spain.¹¹ The Rybczynski hypothesis implies that regions that experienced increases in unskilled immigration could have responded by increasing production and employment in those industries that employed unskilled workers more intensively. These regions would thus increase their production and exports (to other regions or countries) of these unskilled-labor-intensive goods.

We also evaluated this hypothesis empirically in González and Ortega (2011). Our results, summarized in the first panel of Table 2, suggest that the role of this channel of adjustment was fairly limited. Of the total in-

¹¹ The immigrant population had on average a level of educational attainment somewhat lower than the average (young) native worker.

Table 2

Effects of immigration on the regional structure of production and the composition of the workforce by industries			
Adjustment via sector composition	1	2	3
All sectors	-0.0183	0.2049	0.0668
Tradeable sectors only	0.0335	0.0511	0.0203
Adjustment via workforce composition			
All sectors	0.7481*	0.4518*	0.6035*

Note: The data sources, specification and estimation details are as in Table 1. The dependent variable in the first panel is the change in the employment of workers with a given education level between 2001 and 2006 in a province due to the change in the scale of certain sectors (between-industry adjustment). In the second panel, the dependent variable is the change in the employment of workers with a given education level due to all sectors in the province changing the composition of their workforce in favor of that education category (within-industry adjustment). The coefficients shown are those for the main explanatory variable: the percent change in the working-age population (by provinces and education level) between 2001 and 2006. An asterisk indicates that the coefficient is significant at the 99% confidence level.

Source: González and Ortega (2011).

crease in employment as a result of immigration, only a small fraction (between zero and 20 percent, depending on the specification) can be attributed to the type of between-industry adjustment described in the Rybczynski theorem. Production and employment did increase in regions that received higher immigration, but not disproportionately in industries that tended to employ workers of the “type” that was becoming more abundant.

Effect on composition of the workforce at the industry level

How did regional economies adapt to the increase in the number of immigrant workers with a low-medium level of education? If sectoral specialization was not affected much, then the typical sector must have adjusted its production techniques to the changing skills of the local workforce, as would be the case in the standard one-sector model. González and Ortega (2011) found that, indeed, this appears to have been the main channel of adjustment, as shown in the second panel of Table 2. That is, in the provinces of increased immigration, the typical sector increased its intensity of use of the kind of skills that were now locally more abundant. The results suggest that somewhere between 45 and 75 percent of the increase in the labor force at the regional level was absorbed through this channel.

To be more specific about this channel, in the period of interest the educational attainment of Spanish workers was increasing rapidly. Since immigrants were on average less educated than native workers in the same

age group, the overall educational upgrading of the workforce was slower in high immigration regions. This effect seems to have been especially pronounced in the sectors of hotels and restaurants, retail trade, construction and domestic service, where the average educational level fell significantly in regions of high immigration. What is puzzling is that we could not detect a negative effect on the unskilled wage, despite the increase in the relative supply of unskilled labor.

Alternative explanations

The previous findings reject the Rybczynski hypothesis. The wage puzzle therefore remains. How is it possible that sectors, and presumably firms within those sectors, were willing to use unskilled labor more intensively in production unless unskilled wages fell relative to the wages of more skilled workers? This section sketches a number of explanations, with particular emphasis on one that has played an important role in the Spanish experience, as well as in other countries, but has not been connected to the wage puzzle in the literature to date.

Other adjustment mechanisms

A number of mechanisms have been proposed to account for the insensitivity of wages to immigration shocks that do not rely on changes in sectoral specialization. Lewis (2013) provides an up-to-date review of several of these mechanisms. Chiefly among these, the author argues that when immigration alters the skill composition of the labor force in a local economy, firms adjust by reorganizing their production processes accordingly, switching to technologies that make a more intensive use of the more abundant skills.¹² Thus the resulting increase in the demand for unskilled labor can then match the increased supply without putting downward pressure on its price (unskilled wages).

Focusing on the consequences of immigration for the wages of native workers, Manacorda et al. (2012) and Ottaviano and Peri (2012) have argued that natives and

¹² Dustmann and Glitz (2014) provide additional evidence for this adjustment using German data.

immigrants with the same observable skills are nevertheless imperfect substitutes in production, which substantially attenuates the degree of face-to-face competition and, as a result, the effect of immigration on the wages of natives with similar education and experience. At a more micro level, Peri and Sparber (2010), as well as Amuedo-Dorantes and de la Rica (2013) in the case of Spain, have provided evidence that immigration strengthens worker specialization across occupations on the basis of their relative communication skills.

The domestic work sector and the labor supply of native women

Inspired by the work of Cortés and Tessada (2011), Farré et al. (2011) analyzed the effects of immigration on the domestic help sector in Spain. This is potentially relevant for two reasons. Firstly, a large share of recent immigrants in Spain were female, and almost 50 percent of them were employed in this sector (particularly, cleaning and personal care). Secondly, the increased availability and affordability of home help might allow skilled native women to increase their market labor supply. Thus, there might be a cross-skill effect, whereby unskilled immigration might lead to an increase in the supply of skilled labor, which would mitigate changes in the skilled-unskilled relative wage.

Using a methodology similar to that described in previous sections, Farré et al. (2011) found that immigration had a large impact on the domestic services sector in Spain (Table 3). For every 100 female immigrants in a province, we estimated that employment in the domestic service sector increased by about nine workers in the period 1999–2008. In addition, we found that the hourly wage in domestic services increased much less in regions of high immigration, compared to low-immigration ones. Not surprisingly, we found that the reduction in the cost of hiring a domestic worker in

Table 3

Effects of immigration on the domestic services sector		
	Coefficient	Number of observations
Employment	0.086*	520
Wages	-5.87*	126

Note: The table summarizes the results of instrumental variables regressions estimated using Labor Force Survey and Household Budget Survey data. The dependent variable is, in the first row, employment in the domestic services sector in a province and year (between 1999 and 2008) as a fraction of total employment, and, in the second row, the average hourly wage in a region (composed of several provinces) and year (between 1999 and 2005) for domestic service workers. The coefficients shown are those for the main explanatory variable: the fraction of immigrant women over the total number of working-age women in the region. Each regression includes as control variables binary indicators for each year and for each province (first row) or region (second row). An asterisk indicates that the coefficient is significant at the 99% confidence level.

Source: Farré et al. (2011).

Table 4

Effects of immigration on the employment of skilled native women		
	Employment	Hours of work
College graduates	-0.128	-1.08
College graduates with family responsibilities	0.222*	2.578
High school graduates	-0.256*	-5.039
High school graduates with family responsibilities	0.147**	2.888*

Note: Sources as in Table 3. The sample includes native working-age women with the education level specified in the row header, during the period 1999–2008. The number of observations is about 128,000 for the sample of college graduates, and about 360,000 in the sample of high school graduates. The dependent variable is, in the first column, a binary employment indicator, and, in the second, the number of hours worked a week (including zeros). The coefficients shown are those for the main explanatory variable: the fraction of immigrant women over the total number of working-age women in the region, and (in rows 2 and 4) its interaction with an indicator for women with small children or elderly relatives in the household. Each regression includes as control variables binary indicators for each year and for each province, as well as individual-level demographic controls (age, marital status, and number and ages of the children). One asterisk indicates that the coefficient is significant at the 95% confidence level; two asterisks indicate 99% significance.

Source: Farré et al. (2011).

high-immigration regions led, in turn, to a significant increase in the employment rates of university-educated native women with family responsibilities (young children or elderly dependents). Specifically, it appears that immigration allowed skilled native females to return to work earlier after childbirth, and to continue working (retire later) while caring for elderly dependents. The magnitude of this effect is important, as shown in Table 4. A ten percent increase in the fraction of immigrant women in the province leads to a rise in the employment rate of university-educated native women with family responsibilities of 2.2 percentage points. This implies that the employment rate of the affected native women increased by three percentage points overall between 1999 and 2008 as a result of immigration.

These results are consistent with those obtained in other recent studies using data from other immigration countries such as the USA (Cortés and Tessada 2011), Italy (Barone and Mocetti 2011), and Hong Kong (Cortés and Pan 2013b). They suggest that unskilled immigration may have lowered the wages of unskilled workers (in the domestic service sector), but they also led to an increase in the labor supply of skilled (female) workers, which may have moderated the wages of skilled workers at the same time.¹³

The finding of a strong cross-skill complementarity helps account for the puzzle described earlier, namely, the lack of response of relative (skilled-unskilled) wages to changes in the relative supply of skilled workers due to immigration. When an economy exhibits an inflow of unskilled workers, the relative supply of unskilled labor increases, putting downward pressure on the relative unskilled wage. However, our findings reveal that a large fraction of female unskilled immigrants were employed in the domestic help sector. The increased availability (and lower price) of domestic services allowed a number of native skilled women to make use of domestic service workers to help them carry out their family responsibilities. As a result, the supply of skilled (female) labor increased, partially offsetting the increase in the relative supply of unskilled labor driven by immigration and thus potentially mitigating the downward pressure on unskilled wages.

Conclusions

We have analyzed the channels through which the Spanish economy absorbed the large immigration wave that arrived between the late 1990s and the late 2000s. Our analysis delivered a number of findings that are largely in line with those documented for other countries. Specifically, we found that immigrants were absorbed by the regional economies without much of an effect on the aggregate employment rate or on wages. In this process, Rybczynski-type adjustments to sectoral specialization did not seem to play much of a role either. In contrast, cross-skill effects driven by an expansion of the domestic-service sector and an increased supply of skilled labor by native women appear to have been important. Other studies have also documented the major effects of immigration on the wages paid in some non-traded sectors like food preparation and personal services (Cortés 2008; Frattini 2010).

¹³ We did not analyze directly the effect of (low-skilled, female) immigration on the wages of skilled native (female) workers, but this would be a useful avenue for future research.

While openness to inter-regional or inter-national flows of goods and services did not appear to play a major role in the pattern of adjustment described here, some recent studies suggest that cross-country differences in trade openness may lead to differences in the economic effects of immigration across countries. Iranzo and Peri (2009) as well as di Giovanni, Levchenko and Ortega (2012) show that the effects of immigration on firm entry and exit, average productivity, and product variety depend importantly on the barriers to export for firms in the immigrant-receiving economy. In a nutshell, it seems plausible that the degree of openness to trade can significantly mitigate the effects of immigration on the domestic economy.

Going forward, what is needed in order to improve our understanding of the economic effects of immigration is a richer theory of the labor market that incorporates the channels that have been consistently supported by empirical evidence. The standard textbook model is a straightjacket that can lead to misleading policies.

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PUBLIC PENSIONS AND IMMIGRATION

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Introduction

All industrialized OECD countries face an increasing demographic strain. Both increased longevity and the retirement of the baby boomers are burdening unfunded or pay-as-you-go (PAYGO) pension systems with additional pension claims. The sustainability of pension systems is also threatened because low fertility rates shrink the contribution base. Hence, pension systems are in urgent need of substantial reforms. Unfortunately, parametric reforms are not a very promising strategy to counter the demographic challenge. Increasing contribution rates will impair the working-age population and have negative repercussions on labor markets, while decreasing pension benefits may ultimately lead to rising old-age poverty.

This calls for more general, that is, *structural* (or *demographic*) reforms, which take the contribution base as a starting point. A sufficiently expanding contribution base helps to cover existing and new pension claims. Broadly speaking, the contribution base is equal to the total wage income of the labor force. It may expand through two main channels. Quantitatively, there could be more contributors (e.g., by raising female labor-force participation) and/or people could be forced to pay contributions not only on wages, but also on other income sources (e.g., capital). Qualitatively, the contribution base expands when the workers' productivity and thus their wages increase.

Immigration influx may affect the contribution base in a similar way and has therefore been suggested as an antidote to the demographic challenge. Not only could immigrants fill the gaps in the labor force, but carefully selected immigrants might also help to raise average productivity in the economy. However, large immi-

gration influxes may cause their own problems, which could turn this seemingly simple solution to the aging problem into a problematic one. This paper will analyze the relationship between public pensions and immigration from both a theoretical and practical perspective in order to derive policy recommendations for today's aging societies. This includes, in particular, an evaluation of the question of whether large immigration influxes may be so beneficial in terms of relaxing demographic strain that they can overcompensate for other downsides (e.g., on the labor market or in other branches of the welfare state).

The welfare-theoretic perspective

Razin and Sadka (1999) propose a simple mechanism showing how immigration raises overall welfare in the host country via the PAYGO pension system. This happens because immigrants, even the unskilled ones, will pay the missing part of contributions that the system needs for sustainability. The additional claims against the pension system, that is, the obligation to pay pension benefits to the immigrants once they retire, can be shifted forward indefinitely (Sinn 2000, 2001). In an infinitely-lasting economy, immigrants' descendants will cover their parents' claims in the same way in every future period. Immigrants' contributions, however, will be transferred to native pensioners, although the latter have never acquired any corresponding claims to these payments. Hence, they constitute a positive fiscal externality of relevant size.² Since no other generation is affected by this gift, welfare in the host country increases unambiguously. This speaks clearly in favor of the idea of using immigration policy as a means to counter the demographic challenge. The larger the immigration influx, the higher the welfare in this simple framework.

Razin and Sadka's (1999) model spurred some criticism due to its simplifying assumptions. In particular, unskilled immigration may trigger undesired distributional effects, many of which are related to negative labor market repercussions. Capital owners may gain

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² Sinn (2001) estimates the externality to amount to €175.000 per immigrant in the German pension system.

more than those who rely on labor for income (Razin and Sadka 2000) due to falling wages or unemployment (Kemnitz 2003) among unskilled natives. The unskilled may further be hurt by a changing skill distribution due to endogenous skill upgrading (Casarico and Devillanova 2003; Jinno 2011). In the longer run, differences in fertility and skills between immigrants' and natives' descendants may also change the distribution of welfare gains and losses (Krieger 2004). Similarly, repeated unskilled immigration could lower savings, capital per capita and thus wages as part of the contribution base (Aslanyan, in press). All of these effects tend to be the more relevant, the larger the immigration influx.

Distributional effects may not only arise through the immigration-effects on the labor market, but also through the institutional design of the pension systems themselves. Real-world pension systems typically include a complex set of rules, which govern the degree of *intergenerational* and *intragenerational* redistribution. For instance, the link between one's own contributions and actual pension claims might be tighter (*Bismarckian* system) or looser (*Beveridgean* system), or the pension systems tend to fix contribution payments (*notional defined contribution* system) or benefits (*defined benefit* system). Further distributional effects may arise through pension- and/or immigration-related legal norms. For instance, the positive fiscal externality is mainly driven by the fact that immigrants have children themselves. Whether or not immigrants' children are allowed to reside in the host country (and become contributors to the pension system) depends on the host country's residency requirements or citizenship legislation. Krieger (2008) shows that temporary immigration may not be beneficial when children have to return home with their parents. On the other hand, returning temporary migrants often lose some or even all of their claims (Rowthorn 2008), so redistribution might benefit natives and their offspring at the expense of temporary migrants.

Accordingly, empirical studies provide an ambiguous picture of the fiscal impact of immigration on host-country pension systems. The higher the number of skilled immigrants who enter a country, find a suitable job and do not displace native workers, the more likely a positive fiscal effect due to their above-average contributions is to occur. Unskilled workers may also generate a positive, albeit smaller impact (in line with Razin and Sadka 1999) unless they make large demands on the welfare state in the form of transfer payments and public services (Rowthorn 2008). Immigration into unemployment, family reunification (with mostly unskilled

spouses entering the country) and providing asylum (where asylum-seekers are not allowed to work, but receive pensions once they reach retirement age) tend to expand pension claims without sufficiently raising contributions.

Rowthorn's (2008) review of the empirical literature shows that the estimates of the net fiscal contribution of past immigration normally lie within the range \pm one percent of GDP. This may or may not suffice to overcome the aging problem of a *specific* country. For instance, Storesletten (2000) argues for the US that a feasible immigration policy characterized by an increased inflow of working-age high- and medium-skilled immigrants may completely offset the effect of the retirement of baby-boomer cohorts. On the other hand, Schou (2006) shows in a similar setting that increased immigration will generally worsen the fiscal sustainability problem in Denmark. A mixture of labor market repercussions and institutional aspects (e.g., the redistributiveness of the pension system) is mainly what drives these estimates.

Even if the effect of immigration is positive, suggesting that immigration might be a promising means of resolving the aging problem of a country, a realistic level of immigration influx will not achieve a solution to the problem. The current mixture of skilled and unskilled immigration will only create a sufficiently large net fiscal impact if future immigration influx will be enormously large, probably too large to be accommodated by the host countries (Uebelmesser 2004a; Krieger 2005; Serrano, Eguía and Ferreiro 2011). That is, these studies suggest that immigration policies are – on average – insufficient to deal with the aging problem alone (and they probably need to be accompanied by parametric reforms). A highly skill-selective form of immigration might turn out to be more successful due to higher expected contributions (Bonin, Raffelhüschen and Walliser 2000), but attracting (only) high-skilled immigrants is a difficult challenge for any country, as will be shown below.

The political-economy perspective

As shown above, immigration has the potential to relax demographic strain, but is likely to induce distributional conflict between different groups in society. This may give rise to different voting behavior by groups in society and different voting equilibria. In fact, immigration has always been a highly disputed political issue in most developed countries.

The public-choice literature on public pensions and immigration usually relies on some version of a referendum as the political economic mechanism (Gaston and Rajaguru 2013). For instance, the median voter (in terms of skills or age) may face the trade-off between benefits from immigrants' contributions to the pension system and the costs resulting from depressed wages due to the immigration influx of workers who turn out to be substitutes to the median voter. This trade-off will shape the voting equilibrium that typically involves restricting immigrants' access to a country or a selective immigration policy (Krieger 2003; Lacomba and Lagos 2010; Scholten and Thum 1996). One important concern of the median voter will be her/his political power once she/he is no longer in the median-voter position after retirement. Today's (rational) median voters might then allow additional immigrants into the country, although they might depress their wages, if this helps to strengthen their political power today and sustain it tomorrow (Haupt and Peters 1998; Sand and Razin 2007; Razin, Sadka and Suwankiri 2010). It should be noted, however, that these models implicitly assume that immigrants and/or their children will be allowed to vote upon arrival, which is not necessarily the case under real-world legislation on residency and citizenship in many countries (see above). In general, the relevant literature on these issues differs mostly in terms of how the political process is modeled in terms of the sequencing of votes on issues and admission, leading to a large range of results (Gaston and Rajaguru 2013).

This approach tends, however, to ignore the institutional setting for pension policy and obscures how immigration will actually affect different groups in societies, given that institutions differ. For instance, immigration into pension systems that keep contribution rates fixed is most beneficial for pensioners, while fixing pension benefits affects workers positively (Haupt and Peters 1998; Krieger 2003). By assuming a defined-contribution rate pension system, Razin and Sadka's (1999) model is in line with the first case. However, most real-world pension systems are of the defined-benefit type, suggesting that immigration will lead to a different voting equilibrium than implied in their model.³

Empirically, one observes that both economic variables (including expected labor market repercussions) and

the welfare state have substantial effects on attitudes toward unskilled immigration (O'Rourke and Sinnott 2006; Facchini and Mayda 2009). Facchini and Mayda (2012) combine – across various countries – attitudes towards both skilled and unskilled immigration with different welfare state designs. Their findings are in line with expectations: on the one hand, high income earners in a country where natives are on average more highly skilled than immigrants dislike immigration when the welfare state forces them to support poor immigrants; on the other hand, individual skill is positively correlated with pro-immigration preferences. If immigrants have higher skills on average than natives, the signs reverse. That is, skill distributions of natives and immigrants as well as the type of the tax/transfer (contribution/transfer) system shape attitudes and thus voting equilibria. Again, it is the national institutional setting that also matters in answering the question of whether immigration may help to relax demographic strain.

War for talent? When aging societies compete for skilled immigrants

The previous discussion has indicated that selective immigration policies aiming at skilled immigrants have two (interrelated) advantages. Firstly, skilled immigrants generate the relatively highest (positive) net fiscal impact; and secondly, their immigration is more likely to be supported by a political majority (skilled natives, who might dislike skilled immigration, usually constitute only a minority of voters). Hence, a growing number of countries are considering adapting skill-selective immigration policies. Typically, however, skilled workers are relatively mobile internationally and their number is limited. Furthermore, they easily integrate into the local societies and labor markets. This may give rise to severe competition for this group of workers, sometimes labeled as the “war for talent”, especially when there are no legal restrictions to mobility.⁴

From a theoretical perspective, skilled workers constitute a mobile contribution base. Both the direct and psychological cost of migration, as well as the cultural differences dampen the individual willingness to migrate (these costs are typically lower for skilled than for unskilled workers), while better income prospects and low net contributions to the welfare system tend to foster

³ Lacomba and Lagos (2010) resolve this problem by arguing that defined-contribution rate systems are plausible at least for the future. Due to the aging of societies, contribution rates will certainly not fall in the future, while global tax competition and mobile workers set an upper limit to payroll taxation at the same time, which does not allow further increasing contribution rates either.

⁴ In the European Union, unrestricted mobility is even considered a fundamental right. In fact, the EU Council Regulations (EEC) No. 1408/71 and 574/72 make sure that pension claims can be transferred between EU member states without a loss.

individual migration. Assuming that skilled workers' wages between industrialized countries do not differ too substantially, that there are no legal restrictions to mobility, and that cultural differences, that is, the costs to integrate, tend to be low for high-skilled workers, there remain mainly differences in the tax/transfer system that affect individual migration decisions. According to Wildasin (1999), these differences are substantial. For instance, moving from the German into the French pension system results in an increase of the individual net public pension wealth of more than EUR 53,000 for a single aged 40. This is equivalent to 15 percent of her/his lifetime income.

This sets incentives for countries to unilaterally reduce net contributions of skilled workers. If additional skilled workers enter the country due to lower net contributions, lower per-capita contributions of the skilled may be overcompensated by an increased number of contributors. Since, however, all aging countries face similar incentives, a general retrenchment of pension systems will be the outcome of the strategic interaction of national governments (Homburg and Richter 1993; Breyer and Kolmar 2002; Uebelmesser 2004b). This retrenchment may be rather subtle in cases where, for instance, pension systems are made more Bismarckian (Cremer and Pestieau 2003; Kolmar 2007; Poutvaara 2007; Rossignol and Taugourdeau 2006). A close link between one's own contributions and pension claims is especially attractive to high-income earners as the return on contributions increases. Krieger and Traub (2011) indeed provide empirical evidence that pension systems have become more Bismarckian over time. Again, institutional aspects of the pension system seem to matter significantly.

Harmonizing or integrating pension systems at the supranational level will resolve the problem, but is not politically feasible and will involve distributional problems of its own. More importantly, however, harmful systems competition is a direct consequence of the *place-of-residence principle* that governs welfare-state access of immigrants. This principle implies that migrants, regardless of their nationality, become members of the pension system of their host country. The more attractive the pension system abroad, the more migration will occur. This problem disappears immediately when changing to a *dynastic origin-principle* (Sinn 1990) whereby migrants remain members of their home country's pension system under all circumstances. A potentially attractive pension system elsewhere no longer influences individual migration decisions.

While the supranational integration of pension systems is not necessary under this principle, the origin-principle nevertheless comes at a price because out-migration constitutes an important exit option for the young generation. According to Haupt and Peters (2003) the power of gerontocrats is constrained when young workers can leave the pension system at home. Under the origin-principle this is no longer possible. This is why Richter (2004) and Weichenrieder and Busch (2007) suggest the *principle of delayed integration*. Migrants are allowed to enter their host country's welfare systems only after a delay of some years. This avoids short-run migration incentives solely driven by welfare benefits, while it still allows migrants to leave a country in the long run.

Even if harmful direct systems competition for workers via the parameters of the pension system could be avoided, other related types of competition are far more difficult to prevent. For instance, in their attempt to make immigration policy more skill-selective, many countries have recently eased immigration regulations for students (Lange 2010). Attracting talented students from, for example, developing countries and providing them with the necessary professional, language and cultural skills at a university in the (aging) developed country has several advantages (Haupt, Krieger and Lange, in press). The local education facilitates the integration of foreign graduates into the domestic labor market and the *net public return per student* has been estimated to amount to USD 90,000 (for a male) in present value terms.⁵ According to Haupt, Krieger and Lange (2011) this might give rise to severe competition, or even a "war for talent" along the education quality and tuition dimension, which is not too different from systems competition related to pensions.

Conclusions

This contribution has asked whether or not immigration could be a useful means of dealing with the demographic challenge that most industrialized countries face. Although the theoretical literature provides arguments for the positive welfare impact of immigration, high hopes are out of place. For one, the immigration influx must be extremely large to stabilize the dependency ratio. It is not clear whether so many immigrants can actually be attracted, nor whether the problems

⁵ These numbers include the impact of higher education on tax revenues, social security contributions and social transfers. They also account for the direct and indirect public costs of higher education.

from large immigration influx in other branches of the welfare system, on the labor market or along other political and societal dimensions should be ignored. The attempt to attract only the highly skilled workers and most talented students, that is, potential net contributors to the pension system, might result in a harmful “war for talent” with other aging countries. In this respect, it would be more than problematic to focus on immigration as the main strategy for combatting the demographic challenge. Immigration should be only one of several building blocks for keeping pension systems sustainable in the face of a rapidly aging society.

When designing a national immigration policy, policy makers should take the domestic institutional setting into account. Existing labor market institutions, the rules of the pension system, and related legislation on citizenship etc. lead to a distinct impact of immigration. In addition, large immigration influx may also cause problematic labor market repercussions. Undesired distributional effects are likely to occur, but need to be taken into account in order to reap existing benefits from immigration. In general, it appears reasonable to proceed at a slow pace to make adaptations to existing institutions in order to avoid labor market shocks, as well as sudden negative income effects on the electorate. In other words, when expecting an increasingly rapid aging process in the future, a less and less restrictive immigration policy (next to other parametric reforms) should, starting today, be slowly phased in until its full effect occurs at the peak of the aging process.

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GUEST-WORKER PROGRAMS

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Introduction²

The pattern of international migration has changed very drastically over the course of the 20th century. Although the changes have been in a number of dimensions, one striking feature, historically unprecedented, is the sharp drop in the interest of host countries in admitting low-skilled workers on a permanent basis. This is largely due to the emergence of a highly developed welfare state in the advanced countries, as well as the simultaneous strengthening of the political influence and economic rights of workers over the post-WWII period. In this new political, social, and economic climate, foreign low-skilled workers are less attractive as permanent immigrants. They are nevertheless still needed to meet shortages in various segments of the labor market, given the demographic trends in the advanced and rapidly growing emerging economies. An appealing modern solution to this problem is the formation of guest-worker programs.

On the basis of such programs, millions of guest-workers have been recruited for temporary employment in the advanced countries. The Bracero program (1942 to 1964), established to facilitate the temporary employment of Mexican workers in the US, is one of the early examples. In the mid-1950s, rapid growth of the continental European economies created labor shortages. Germany, Austria, Switzerland, France, Belgium, the Netherlands, Denmark and Sweden responded by establishing various forms of guest-worker schemes. In the initial stages, guest-workers were recruited from southern Europe. Recruitment subsequently expanded to Turkey and North Africa. The West German government, for example, negotiated guest-worker arrangements

with Italy (1955), Greece and Spain (1960), Turkey (1961), Morocco (1963), Portugal (1964), Tunisia (1965), and Yugoslavia (1968).

With the oil-price shock and the slowdown in economic activity that followed, recruitment of guest-workers in Western Europe came to an abrupt halt. At the same time the oil-producing countries in the Middle East, especially those with small indigenous populations and low labor-participation rates, expanded their temporary migration programs to the point where foreign workers now account for most and, in some exceptional cases, practically all of the private-sector work force. Rapid growth in the East Asian economies also generated labor shortages in the late 1980s and 1990s. In the case of South Korea, Taiwan, Hong Kong, Singapore, Brunei, Japan, Thailand and Malaysia, the shortages have been addressed by recruiting temporary foreign workers or trainees from other Asian economies to work in small scale manufacturing, construction, agriculture, food processing, and various other labor-intensive activities.

Temporary migration is a particularly attractive mode of international labor mobility for the advanced host countries. In comparison with permanent migration programs, it offers them much greater flexibility in managing the stock of foreign workers and maintaining a balance between the economy's supply and demand for labor.³ With limitations on the maximum duration of stay and discretionary work-permit renewals, along with controls on new inflows, the stock of foreign labor can be managed quite effectively, provided there are sufficient incentives for guest-workers to abide by the rules of the program.

More importantly, guest-worker programs enable the host countries to meet labor shortages while avoiding long-term commitments to foreign workers in relation to permanent settlement, political rights, and access to social programs. For the authorities in the Middle East and East Asia, the possibility that temporary migrants may stay permanently is a major concern. They worry that this can have an irreversible impact on the ethnic composition of the population and threaten the political and economic status of native inhabitants, as well as the country's cultural homogeneity. By imposing strict limitations on the duration of the stay of guest-workers

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² This paper draws on my earlier studies of guest-worker programs including some in collaboration with co-authors, but primarily on Djajić (2013), Djajić and Mesnard (2013), and Djajić and Vinogradova (2013).

³ Ethier (1985) provides a pioneering analysis of the welfare implications of guest-worker migration in a model of international trade. See also Schiff (2011), Winters et al. (2003), Djajić (2013), and Djajić, and Michael (2013) for theoretical treatment and Martin (2003), Abella (2006), and Ruhs (2005) for more descriptive analysis. An extensive discussion of the successes and failures of temporary migration programs in the past is provided by Ruhs (2002).

and applying rigorous enforcement measures, including deportations, the host countries try to minimize the prospect of a guest-worker staying permanently. For Western advanced countries, the concern over whether foreign low-skilled workers stay temporarily or permanently is more related to issues such as access to social programs, the fiscal impact of immigration, and the implications of different modes of migration for the demographic structure of the population. Cultural homogeneity and the ethnic composition of the population are not as much of a concern as they are in East Asia and the Middle East. Yet even in these relatively more permissive immigration regimes, the authorities are becoming increasingly vigilant when it comes to enforcing legislation pertaining to illegal immigration. This suggests that the guest-worker programs of the future will need to be designed with greater emphasis on ensuring that the temporary foreign workers return to their countries of origin when they are no longer needed.

Aims and design

The precise aims and designs of guest-worker programs vary across countries and over time. Some economies have multiple programs, each established to compensate for a shortage in a particular segment of the labor market. One objective that these temporary migration schemes have in common is to ensure that the participants choose not to remain in the economy as undocumented aliens. Among the economies that have relied extensively on guest-workers over the last few decades, some have been successful in maintaining circularity and keeping undocumented overstays at a minimum, while others have been less successful in doing so. The point that emerges from the recent theoretical research on guest-worker migration is that the degree of host-country success in meeting this objective depends both on its policies and the market opportunities facing potential migrants.

With respect to the issue of guest-workers overstaying, for analytic purposes it is useful to draw a distinction between two types of regimes. The one in which temporary foreign workers are paid the same wage as native workers (referred to below as regime S) and another that sets the compensation of guest workers substantially below that of similarly qualified natives (referred to as regime B). S-type regimes are the norm in Western countries, while examples of the B-type regime can be observed in the Middle-East as well as in East Asian economies, where employers' associations have had a strong influence over its design. A temporary migration

program then serves not only to address shortages of low and semi-skilled labor, but also to generate employers' rents. An important consequence is that B-type programs face a specific problem that S-type programs do not: namely workers running away from their contractual employers to take up higher-paying jobs in the underground economy. The fact that in a B-type regime documented foreign workers receive lower wages than those who are undocumented, also creates a strong incentive for potential migrants to enter the host country's labor market clandestinely, rather than through official labor recruitment channels (Djajić and Vinogradova 2014).

Another noteworthy feature of a B-type regime is a tendency for the authorities to rely on deportations as an important means of controlling the stock of illegal immigrants. Japan, Singapore, South Korea, Taiwan, Malaysia, Saudi Arabia, and the United Arab Emirates are well known for their strict enforcement of laws pertaining to the residency of foreign nationals. In addition to apprehension and deportation, an illegal alien sometimes faces a fine and even a jail sentence (Vinogradova 2011). By contrast, the immigration authorities in the S-type regimes are much more reluctant to resort to deportations as an instrument of immigration control. Deportations are very costly for taxpayers, with the average cost amounting to roughly USD 12,500 per person in the USA, GBP 11,000 in the UK, and NOK 50,000 in Norway (Djajić and Vinogradova 2013). In addition, deportations have a negative impact on the country's human-rights image.

Voluntary return

From the point of view of a host country, it is important to understand the conditions under which a temporary migration program is attractive to potential participants and at the same time consistent with voluntary return. Migration and return decisions of temporary foreign workers are influenced by a wide range of variables that characterize the environment they face at home and abroad. Starting with variables that reflect market conditions, the most important is the international wage differential. International differences in price levels and rates of return on accumulated savings are also important factors, as are the immigration policies of the host country. The latter include policies with respect to the visa and other fees that migrants face when they take part in the program, the maximum duration of the work permit, and internal enforcement measures designed to combat illegal immigration. In the type B regimes,

participants are sometimes also required to make a contract-completion deposit at the time of recruitment, may have a part of their wage withheld until the end of the contract period, and face a strict deportation policy if they choose to overstay. The problem for policymakers is to identify the combinations of policy instruments that result in a voluntary return to the source country at the time of contract completion, given the economic environment in the host country and in the country of origin of migrant workers (Djajić 2013).

B-type regime

While a temporary migration scheme helps to reduce shortages of labor and diminish the incentive for employers to hire undocumented foreign workers, it also contributes to an expansion in the supply of undocumented labor if workers choose to overstay after the expiration of their work permits. Djajić and Mesnard (2013) examine the links between a B-type guest-worker program and the supply of and demand for clandestine labor in the underground economy, with a focus on how the program rules and enforcement measures of the immigration authorities influence the behavior of guest-workers, illegal immigrants, and their employers. An increase in the flow of guest-workers admitted officially through the program is found to have an ambiguous effect on the stock of illegal aliens. If the degree of intersectoral mobility of native workers is sufficiently low, an increase in the inflow of documented guest-workers can generate a larger stock of undocumented labor. By contrast, allowing each of the guest-workers to remain in the host country legally for a longer period of time, decreases the stock of illegal aliens. Noting that the stock of documented guest-workers is simply the product of the allowed inflow and the duration of each worker's authorized stay, these findings suggest that countries requiring an increase in the stock of foreign labor can achieve the objective with a more favorable outcome in terms of illegal-immigration control, by increasing the duration of each guest-worker's stay, rather than by increasing the allowed inflow.

Djajić (2013) shows that in such regimes, deportation measures and salary-withholding schemes encourage voluntary return. The effectiveness of a stricter deportation policy relative to that of an increase in the salary-withholding rate in promoting voluntary return (VR) over the overstaying (OS) option is found to be greater, the shorter the duration of a documented stay allowed by the host country and the larger the wage premium in

the underground economy. In addition, a higher rate of compensation for guest-workers reduces the attractiveness of OS relative to VR. The same is true with respect to an increase in the size of the contract-completion deposit, the duration of the guest-worker contract, and the wage of the source country. Stricter controls that increase the probability of detecting and apprehending undocumented aliens work in the same direction. A larger wage premium in the underground economy obviously has the opposite effect.

S-type regime

In the case of permissive temporary migration regimes, it is clear that if the international wage differential is very large and the duration of a guest-worker permit is relatively short, migrants have a strong incentive to remain in the host country illegally. This can be offset by stricter internal enforcement measures, which make it unattractive to become undocumented. The tendency for workers to remain in the host country after their work permit expires can also be reduced if the authorities choose migrants from source countries where the cost of living is relatively low and the expected rate of return on repatriated savings is relatively high. A low price level and a high return on accumulated assets are important pull factors that attract migrants back to their country of origin (Djajić 2010, 2013). A judicious choice of partner countries in a guest-worker program can therefore substitute, to some extent, for strict internal enforcement measures in dealing with illegal immigration. Recruiting migrants with a certain minimum initial stock of wealth also works in the same direction, especially if the rate of return on investments is higher at home than it is abroad. A migrant with larger asset holdings has a stronger incentive to go back home.

Djajić and Vinogradova (2013) more closely examine the question of the optimal timing of return of utility-maximizing guest-workers. They study the role of immigration policies and of the economic environment facing foreign workers in determining how long to overstay, should it not be optimal to return voluntarily to the country of origin at the end of the contract period. For parameter values that reflect typical economic and policy environments that guest-workers face in the host countries, an environment in which they would prefer to stay longer than allowed by the rules of the program, an adequate incentive structure is required in order to achieve strict compliance. The incentive structure may have components such as a salary-withholding scheme,

a fine for overstaying, and employer sanctions that reduce the market wage of undocumented labor.

Tougher employer sanctions can be shown to lower the incentive to remain in the host country beyond the expiration of the work permit and to encourage those who overstay to return relatively sooner to their country of origin. A higher salary-withholding rate and a larger fine for overstaying, both serve to discourage workers from overstaying. Should they nonetheless choose to stay in the host country beyond the expiration of the work permit, these policies induce overstayers to remain in the host country for a longer period of time (Djajić and Vinogradova 2013). This implies that increases in the salary-withholding rate, or in other forms of pecuniary penalties that fall short of being sufficient to guarantee strict compliance with the program rules, are counterproductive with respect to the goal of reducing the stock of undocumented aliens in the economy. They fail to reduce the flow of guest-workers transiting to undocumented status, yet they increase the duration of the undocumented stay of those who do become illegal aliens. This effectively creates a larger equilibrium stock of undocumented workers. Thus the salary-withholding rate and overstay penalty must be carefully designed in relation to the environment that guest-workers face at home and abroad to be effective in reducing the stock of undocumented workers.

Lowering the cost of migration by reducing visa fees and guest-worker levies that get passed on to the workers in the form of higher recruitment fees can be shown to make overstaying less attractive. Should some workers still choose to overstay, they will do so for a shorter period of time. Retirement benefits at home also reduce the incentive to overstay, as does a lower price level and a higher expected rate of return on investments at home. Thus recruitment of guest-workers from countries that offer their citizens more generous retirement benefits, that have a relatively low price level, and where returnees can enjoy high yields on repatriated savings, can help host countries lower the number of guest-workers who overstay and reduce the optimal duration of the overstay phase for those who fail to comply with the program rules.

A much simpler way of assuring that guest-workers return home at the end of their contract is by guaranteeing the possibility of repeat migration for program participants (Gibson and McKenzie 2014). There is very little incentive to overstay when such an offer is on the table. This, however, strips the program of the capacity to

reduce the stock of temporary migrants and gives it the features of a permanent migration scheme.

Concluding remarks

Strict compliance with the rules of a temporary migration program can be effectively achieved with an appropriate combination of policy measures and a judicious choice of countries and workers invited to participate in the program. Policies, however, have their associated costs and external effects. An important item on the agenda for future research is to examine the cost effectiveness of each measure, using economic, humanitarian, and political criteria, making it possible to determine the optimal level of each policy instrument required to achieve the host country's objectives.

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IMMIGRATION AND JOB DISAMENITIES

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Introduction

A popular argument in favor of immigration is that immigrants accept jobs that natives would never take. There is a growing body of literature analyzing immigrant-native differences in occupational risk across several developed economies and recent empirical evidence indicates that immigrants are more likely to hold jobs involving worse working conditions. Orrenius and Zavodny (2013) refer to these jobs as the “three D jobs”: jobs that are dirty, dangerous, and difficult. Recent research indicates that these jobs have long-lasting negative effects on health outcomes and cognitive abilities. There are several reasons why immigrants, who arrive relatively healthy and young compared to the hosting population, but who have a lower socio-economic status, human capital and wealth, may be more likely to hold these jobs than natives. However, quite surprisingly, there has been little theoretical and empirical investigation of the relationship between immigration and natives’ job risk.

Economists have long been interested in understanding the effects of immigration on the labor market. Most of the studies found evidence of little or no negative effects of immigration on native wages and employment. The debate, however, becomes more controversial when one focuses on individuals who are more likely to suffer from immigrant competition in the labor market: low-skilled workers, ethnic minorities, and previous cohorts of immigrants. Yet we know very little about how immigration affects other important labor market characteristics such as the occupational risk, physical intensity, and the type of schedule associated with a given job.

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This paper attempts to summarize the evidence on immigrant-native differences in terms of their likelihood of working in riskier jobs and to present recent results on the effects of immigration on natives’ job risk with a particular focus on non-standard schedules and the physical intensity of given jobs.

The remainder of the article is organized as follows: the first section discusses the importance of non-pecuniary working conditions in determining workers’ health and well-being. The following section provides a short summary of the literature analyzing why immigrants may hold riskier jobs and discussing the evidence on immigrant-native differences in occupational risks. The last section analyzes the effects of immigration on the working conditions and health of the native population. In particular, I concentrate on the physical burden associated with a given occupation and the likelihood of working non-standard schedules (evening, night, or Sunday shifts), which have been the focus of my own work in this area.

The importance of non-pecuniary working conditions

Recent studies have documented how working conditions can have long-lasting effects on workers’ physical health (Ravesteijn, Kipperluis and Doorslaer 2013; Fletcher and Sindelar 2009; Case and Deaton 2005) and cognitive abilities (Mazzonna and Peracchi 2014). Workers employed in physically demanding jobs are at a significantly higher risk of injuries and face a steeper aging profile. Similarly, working irregular shifts or nightly schedules increases the risk of negative health outcomes and negatively affects the well-being of individuals and families (Costa 1996; Presser 2000; Strazdins et al. 2006; Davis et al. 2008; Vyas et al. 2012; Enchautegui 2013). Non-standard schedules reduce time spent with family and friends, affecting the consumption of relational goods, with important consequences for marital stability, children’s well-being and, more generally, for individual well-being. There is evidence that working non-standard hours increases the risk of obesity, ischemic heart disease and breast cancer. More generally, working conditions significantly affect the likelihood of reporting feelings of chronic fatigue, anxiety and depression.

It is worth noting that job-disamenities are not distributed evenly among workers. As reported by Enchautegui (2013), “60 percent of workers with non-standard schedules have earnings below the median of the typical American worker, and 40 percent have earnings that are lower than those of 75 percent of all workers”. One may argue that individuals choose these jobs because of the compensating wage differential associated with worse working conditions, however, there is very little empirical evidence of risk premiums. Overall, research indicates that immigrants earn risk premiums that are similar to natives, but some groups (e.g., Mexicans in the US) earn smaller or no risk premiums (Hersch and Viscusi 2010). The wage premium for irregular shifts is relatively small. In the United States, only a small fraction of workers reported working non-standard hours because of the compensating wage differential (McMenamin 2007). This evidence suggests that, for most of the workers, non-standard schedules are the result of limited labor market opportunities.

For all of these reasons, growing attention is being paid to increasing workers’ awareness of the risks associated with particular working conditions and improving the job quality of immigrants has become an important policy issue (Enchautegui 2008).

Immigrant-native differences in job disamenities

Why immigrants may be more likely to hold riskier jobs

Media reports contributed to popularizing the idea that immigrant workers do jobs that native workers would never accept. But in addition to the anecdotal evidence, there are different reasons for why we might expect immigrants to hold riskier jobs. Coming from countries that are, on average, characterized by worse working conditions, immigrants may have a different perception of job risks than natives. Differences in risk knowledge and perception may also be explained by differences in socio-economic status and language proficiency (Dávila, Mora and González 2011). Due to language barriers, the cost of providing safety training to immigrant workers may be higher (Hersch and Viscusi 2010). Furthermore, immigrants who took the risk of migrating may have a lower risk aversion than natives (Berger and Gabriel 1991). This may explain the self-selection of immigrants in riskier jobs, but also the higher safety related costs, as these workers may be more likely to take excessive risks.

In addition, as most immigrants in the developed world arrive with lower human capital and less financial assets than natives, they have higher incentives than natives to accept worse working conditions in return for higher life-time earnings (Grossman 1972). These incentives are reinforced by the fact that immigrants are usually young and relatively healthy (“healthy immigrant effect”, see Antecol and Bedard 2006; Giuntella and Mazzonna 2014) and might therefore be willing to trade-off some of their health capital for better wages under worse economic conditions. Newly-arrived immigrants may face language barriers, and therefore may have a comparative advantage in working in more manual-intensive jobs, than in occupations requiring communication and social interaction skills. Furthermore, as the exit rates from these jobs are higher (Martin et al. 2012), there may be more opportunities and lower search costs for recent immigrants. Immigrants can therefore be expected to self-select in occupations involving higher physical intensity and worse schedules.

Immigrant-native differences in job disamenities: empirical evidence

Despite all these arguments and the anecdotal evidence on immigrants injured or killed in dangerous jobs, Berger and Gabriel (1991) and Hamermesh (1997) found little evidence that immigrants work in riskier jobs than natives. However, more recent studies have found that immigrants are, in fact, more likely to work in riskier jobs (Loh and Richardson 2004; Orrenius and Zavodny 2009, 2012; Giuntella 2012; Giuntella and Mazzonna 2014). These findings are observed across various developed countries: Canada, Germany, Italy, Spain and the United States. The differences in the results with respect to earlier research are explained by differences in the way of measuring risk, but also by the different samples analyzed. In particular, Orrenius and Zavodny (2009) argue that the increase in immigrants’ job risk in the US may be explained by a decline in the average human capital among immigrants, and by the fact that immigrants were crowded out into riskier jobs because of the increase in the immigrant population over time.

Non-standard schedules and the physical burdens of jobs

Most previous studies have focused on occupational risk analyzing the different likelihood of natives and immigrants working in jobs with high injury and fatality rates. Here, I present some results from my recent work on the topic, which focused on immigrant-native differences in the likelihood of working non-standard

schedules and in the average physical burden associated with a job.

Panel A of Table 1 reports immigrant-native differences in the likelihood of working non-standard schedules for Germany (source: German Socio-Economic Panel (SOEP)), Italy (source: Italian Labor Force Survey), and the US (source: American Time Use Survey). Immigrants in each country are more likely than natives to work night shifts, and more generally to work non-standard hours (evening, night, or Sunday shifts). The difference in the incidence of non-standard hours remains significant after conditioning for standard socio-demographic controls (age, gender, education, household characteristics, sector and occupation), year fixed effects and local area fixed-effects, ranging between 14 (Italy) and 20 (US) percent of the mean.

Panel B analyzes the physical intensity associated with a job using data from the German Socio-Economic Panel. Immigrants are more than twice as likely as Germans to work in blue-collar jobs and on average have held jobs characterized by higher physical intensity. As mentioned earlier on, these jobs are known to have significant effects on health and, indeed, we observe that ageing occurs more rapidly among immigrants working

in these occupations than among white-collar workers. While immigrants have a lower likelihood of reporting poor health status and doctor-assessed disability than their native counterparts, the health of immigrants rapidly converges to the health of the natives among workers employed in occupations characterized by high physical intensity. These patterns are reflected in Figure 1 and 2, which illustrate this process of unhealthy assimilation (Antecol and Bedard 2006). Immigrants, both men and women, are found to be healthier upon arrival, with a lower incidence of doctor-assessed disability than that observed among natives. However, over time, the average incidence of doctor-assessed disability grows significantly faster among immigrant men than among natives. Interestingly, we do not observe convergence among women. Figure 2 shows the unhealthy convergence is driven by those individuals working in high physically demanding occupations.

Effects of immigration on natives’ job quality

While we are starting to find out more about how job amenities differ across groups, very few papers have investigated the causal effects of immigration on the job quality of natives (e.g., working schedules, physical bur-

Table 1

Likelihood of working non-standard-hours and physical job intensity			
Panel A: Non-standard hours			
	Germany (SOEP 1984-2010)	Italy, LFS, 2006-2008	US (ATUS, 2003-2011)
Immigrant-native difference	0.0612*** 0.006	0.036*** -0.003	0.022*** (0.004)
Standard socio-demographic controls	YES	YES	YES
Local area fixed effects	YES	YES	YES
Year fixed effects	YES	YES	YES
Observations	50,122	720,513	45,857
Panel B: Job physical burden			
	Germany (SOEP 1984-2010)		
Dependent variable	Blue collar	Physical burden	High physical burden
Immigrant-native difference	0.299*** 0.003	1.969*** 0.017	0.205*** 0.002
Standard socio-demographic controls	YES	YES	YES
Local area fixed effects	YES	YES	YES
Year fixed effects	YES	YES	YES
Observations	199,167	197,003	197,003
Statistical significance: ***, p<0.01, **, p<0.05 and *, p<0.1.			
Sources: Giuntella and Mazzonna 2014; Giuntella 2012.			

den, and risk of injury). If immigrants, for the reasons discussed in the previous sections, are more likely to hold riskier jobs, then the question is what happens to natives, and in particular to natives who were previously working in these occupations. Are they crowded out of these jobs? And if so, what are the welfare implications of this reallocation of working conditions in the labor market?

Hamermesh (1997) was the first to provide a theoretical framework to analyze the effects of immigration on job disamenities. Finding no evidence of significant differences between immigrants and natives in the set of job amenities, he concluded that “the preconditions for the absence of direct labor-market competition between immigrants and natives do not exist” and challenged the anecdotal view that “immigrants take the jobs that, otherwise identical, natives would never take”. However, as discussed earlier on, recent evidence reached an opposite conclusion, motivating further analysis of the effects of immigration on native working conditions, health, and individual well-being.

Below, I summarize the main findings from recent research into the effects of immigration on non-standard schedules, job physical burden, and the health of natives. To identify the causal effect of immigration on these outcomes, we exploit variation over time in the share of immigrants living in a local labor market and adopt an instrumental variable approach. In practice, we exploit the fact that immigrants tend to locate in areas with a higher density of immigrants from their own country and we distribute the annual national inflow of immigrants from a given source country using the distribution of immigrants from a given country of origin across local labor markets in a base year (Card 2001). By doing so, we reduce the risk of endogeneity due to the fact that annual immigration

inflows across local labor markets may be driven by time-varying local labor market characteristics associated with our outcomes of interest.

Immigration and non-standard schedules

Panel A in Table 2 summarizes the finding from previous work analyzing the effects of immigration on non-standard schedules in Italy. Repeated cross-sections from the Italian Labor Force Survey (2006–2009) are merged with official records of immigrants across Italian provinces.

Figure 1

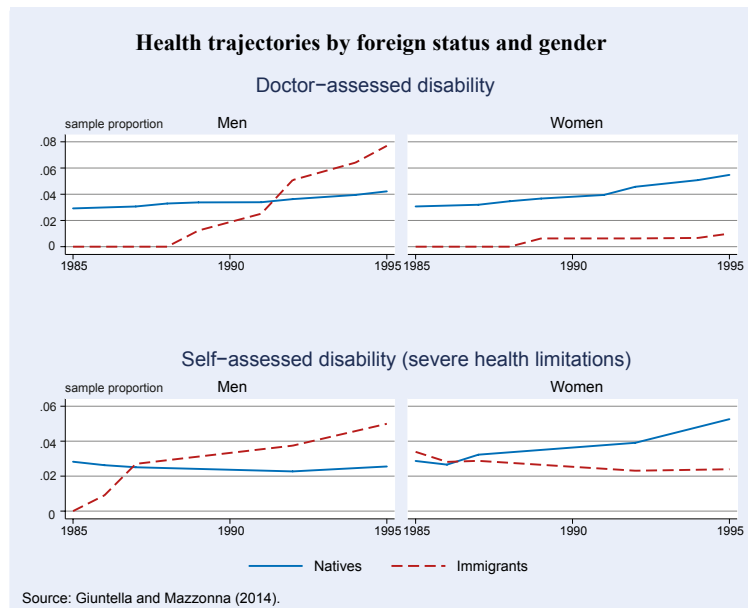
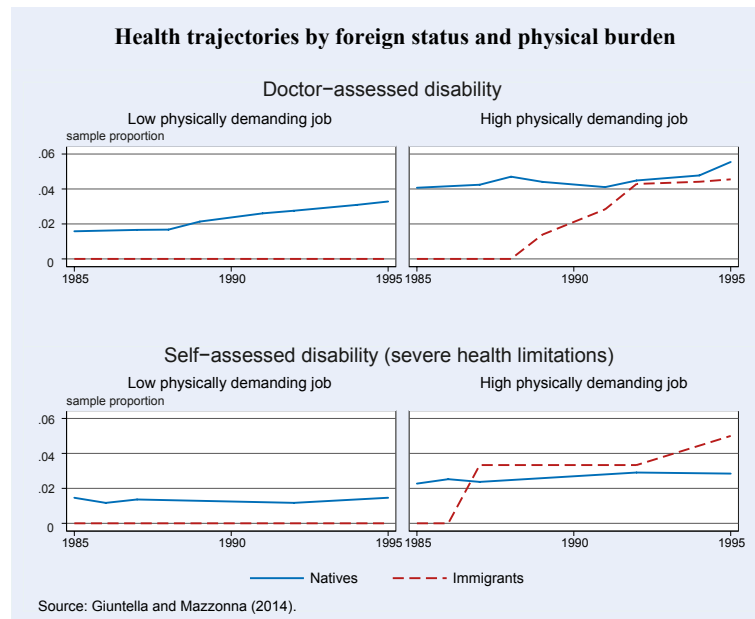


Figure 2



The dependent variable is a dummy variable equal to one for Italian citizens who report having worked non-standard hours at least once over the survey reference week. Results, obtained using the Card (2001) instrument, show an increase in the share of foreigners in the local labor market affects the work-schedule of natives. In particular doubling the share of immigrants residing in a province – a 1.3 standard deviation increase – is associated with a reduction in natives’ likelihood of working non-standard hours that ranges between two and four percentage points depending on the different specifications of the model. Since on average 28 percent of natives reported working non-standard hour shifts, the coefficient implies a reduction of 7 to 15 percent in the share of natives working non-standard hours. These results are driven by workers in blue collar jobs and non-financial services, while there is no evidence of significant effects in the public and financial sectors.

Using the SOEP, one can exploit the longitudinal dimension of the data and include individual fixed-effects in

the analysis. An increase in the immigration rate significantly reduces the number of working hours, the likelihood of working overtime, and the likelihood of working nightly shifts (column 2).

The effect on nightly shifts is not precisely estimated as this information is available only in a few waves of the survey substantially reducing the identification power when including individual fixed effects. However, the estimate is significant when using quasi-fixed effects (coef. -0.015**; std.err. 0.006), which control for individual average age, education, marital status, employment status and household size. Using quasi-fixed effects, Giuntella and Mazzonna (2014) find a negative effect of immigration on the likelihood of working evening shifts, working on Sundays, and on the perceived risk of work accidents.

Interestingly, descriptive evidence is similar when analyzing recent data from the United States. In this case, given the cross-sectional nature of the data and the

Table 2

Effects of immigration on non-standard hours and on health of residents

Panel A: Effects of immigration on non-standard hours				
Dependent variable:	Italy (LFS 2006-2009)		Germany (SOEP)1996-2010	
	Men 15-64		Men 25-59	
	Non-standard hours	Night shift	Non-standard hours	Night shift
Immigration rate	-0.021*** (0.007)	-0.013** 0.003	-0.021 (0.015)	-0.015 0.011
Standard socio-demographic controls	YES	YES	YES	YES
Individual fixed effects	NO	NO	YES	YES
Local area fixed effects	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES
Observations	406,111	406,111	14,562	14,562
Panel B: Effects of immigration on the health of residents				
Dependent variable	Germany (SOEP, 1996-2010) , Men 25-59			
	<i>Doctor-assessed disability</i>			
	Overall	Blue collars	White collars	
Immigration rate	0.01* (0.005)	-0.017* (0.01)	-0.03 (0.006)	
Standard socio-demographic controls	YES	YES	YES	
Individual fixed effects	YES	YES	YES	
Local area fixed effects	YES	YES	YES	
Year fixed effects	YES	YES	YES	
Observations	69,654	23,499	25,999	
Statistical significance: ***, p<0.01, **, p<0.05 and *, p<0.1.				

Sources: Giuntella and Mazzonna 2014; Giuntella 2012.

limited information available on compensating wage differentials, health outcomes, and job satisfaction, we cannot conclude that the overall improvement in working schedules represents a general welfare improvement for the natives. Nevertheless, these results suggest that policy makers should not neglect the impact of immigration on natives' schedules when evaluating immigration policies.

Immigration, health, and the role of working conditions: evidence from Germany

The German Socio-Economic Panel contains detailed information on job characteristics and individual health outcomes that allow us to explore the link between immigration, working conditions, and health more directly. Figure 3 depicts a strong negative association between immigration and the average physical burden of a man's job at the local labor market level. In Figure 4, we observe only a slightly negative relationship between the share of men reporting a doctor-assessed disability higher than 30 percent and the male immigration rate (the coefficient on immigration is very small, but significant at the five percent level). These associations are consistent with the conjecture that immigration, by increasing the supply of workers willing to trade-off health for increased lifetime earnings, may induce a reallocation of tasks in the resident population and, in turn, have positive spill-overs on their physical health status.

Panel B in Table 2 illustrates the main results of Giuntella and Mazzonna (2014), who adopt the Card (2001) instrument and an individual fixed-effects model to analyze the impact of immigration on the health of natives, and explore the role of working conditions in explaining the reduce-form effect of immigration on health outcomes. They find that a higher immigration

rate increases the likelihood of the native population reporting better health outcomes. In particular, a one standard deviation increase in the immigration rate reduces the likelihood of reporting doctor-assessed disability by approximately 16 percent, with respect to the mean of the dependent variable. While the results are driven by blue-collar workers, there is no evidence that immigration has significant effects on the allocation of blue- and white-collar jobs in the population. However, there is evidence that immigration reduces

Figure 3

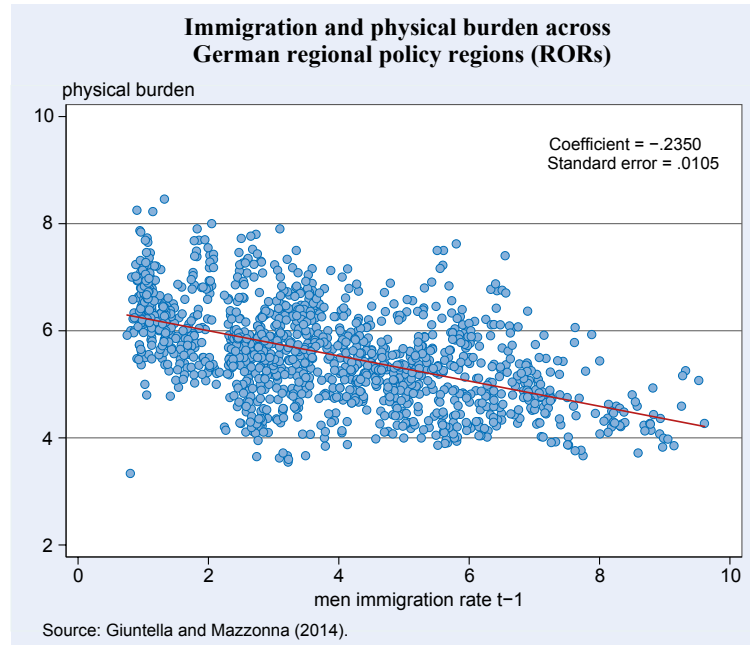
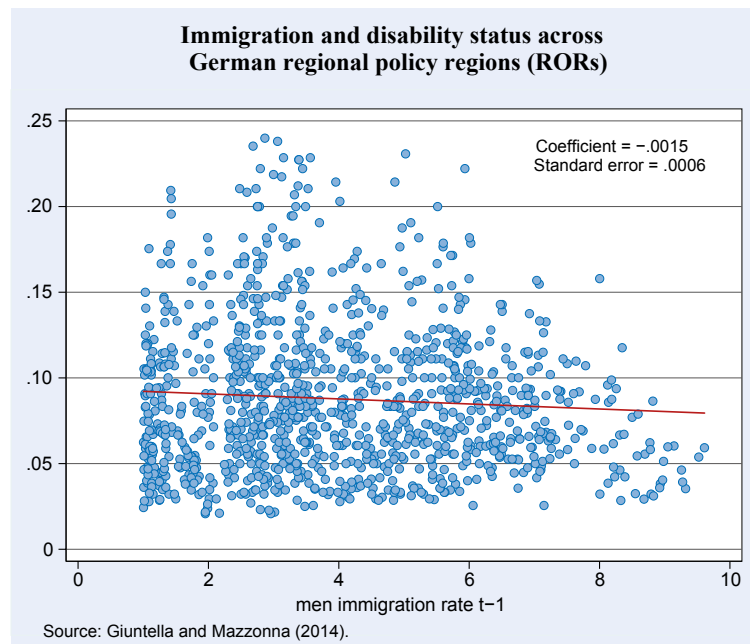


Figure 4



the degree of physical intensity, the number of hours worked, and the likelihood of working at night among blue-collar workers. At the same time, consistent with several studies analyzing the effects of immigration in Germany, immigration has no detrimental effects on wages and employment. Giuntella and Mazzonna (2014) argue that the effects of immigration on these observable working conditions can explain approximately 25 percent of the reduced form effect of immigration on health. Furthermore, the authors find that immigration is associated with a significant reduction in the share of individuals reporting that they are concerned about their health status. Interestingly, using the SOEP data and following a similar approach, Akay, Constant and Giuliatti (2014) show evidence of a positive effect of immigration on life-satisfaction.

Conclusion

The evidence discussed in this article suggests that immigrants are more likely than natives to hold riskier jobs. In particular, immigrants are more likely to work non-standard hours and to work in more physically demanding jobs with respect to their native counterparts. These results suggest that immigration may improve the working conditions of native workers by reducing the average number of hours worked, the physical intensity of blue-collar jobs, and the likelihood of working nightly shifts. These findings are consistent with the Grossman (1972) health capital model. Differences in the initial endowments and composition of capital (health, human, and financial endowments) between immigrant and their native counterparts can explain the reallocation of tasks in the population. Overall, the improvement observed in these working conditions may have significant effects on the health of the native population. The complementarity of tasks in the production function accounts both for the lack of detrimental effects on employment and wages, and the reallocation of natives and previous immigrants in jobs involving better working conditions. These labor market effects help to explain the positive association between immigration and health outcomes. Overall, the evidence presented suggests that policy-makers should not neglect the effects of immigration on non-pecuniary working conditions.

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LOCAL LABOUR MARKETS AND CULTURAL DIVERSITY¹

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Introduction

Recent years have seen a tendency towards larger migration flows between many countries. Due to this development the population in the most developed countries in particular is growing increasingly diverse. People with very different cultural backgrounds are living and working together. The social, political and economic implications of this situation are far-reaching, complicated and not completely understood. This paper addresses an important aspect of these implications by looking at the effects of cultural diversity on the labour market. In principle, negative effects can arise from communication problems between people of different cultural backgrounds, from hidden discrimination and even from open clashes. On the other hand, positive effects are possible, since workers from different cultures and nations may possess complementary skills and problem-solving abilities. The intensive interaction of people from different backgrounds can generate ideas and solutions that would not have been developed in culturally homogeneous environments.

There has been extended research into the balance of the two opposing forces starting with seminal articles by Ottaviano and Peri (2005, 2006) and later, among others, in the so-called NORFACE research programme on migrant diversity (MIDIE-REDIE). Some of us have contributed to this research (Trax, Brunow and Südekum

2013, Südekum, Wolf and Blien 2008 and 2014, Brunow and Blien 2014) by looking at the case of Germany.

Our recent paper (Südekum, Wolf and Blien 2014) estimates the effects of this cultural diversity, as measured by the diversity of nationalities, on the labour market outcomes of native workers in Western Germany. More specifically, it uses a panel of 326 NUTS3 regions (“Landkreise” and “kreisfreie Städte”) over the time period 1995–2006, and analyses the wage and employment effects for natives that are associated with the size and the diversification of the foreign workforce at this local level.

Theoretical background

Why should the diversity of the foreign workforce affect native employees at the level of small local labour markets? In order to address the possibilities that cultural diversity can affect locations, and the natives working therein, we use the seminal spatial equilibrium model by Roback (1982). Within this framework we recover the direction of the net impact of diversity, and the main channel through which it affects natives from wage and employment regressions. This paper merely outlines the construction of the approach. Its application to the problem at hand is treated in detail in Südekum, Wolf and Blien (2014).

Roback’s multi-regional model uses two different kinds of properties of regions: production amenities increase the productive capacities of regions, while consumption amenities are liked by people who live there. This paper hypothesises that the cultural diversity of a region can be regarded as such a location characteristic, affecting both production and consumption amenities in a region.

As far as the productive amenity is concerned, there is the general aspect of complementarities and knowledge creation in production. Cultural diversity may raise the productivity of a region due to production externalities like knowledge spillovers, which are known to be strongly localised. Too much diversity, on the other hand, may lead to lower productivity because communication becomes too costly. This trade-off between diversity as a productive (dis-)amenity has been described



¹ This paper draws heavily on the author’s previous writings, particularly on Südekum, Wolf and Blien (2014). Research support by the NORFACE Programme is gratefully acknowledged.

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in a formal model by Berliant and Fujita (2008), which bears the original title: “Knowledge creation as a square dance on the Hilbert cube”. In this model, knowledge creation or innovation requires interaction between individuals with some non-overlapping prior knowledge, because people with an identical background cannot learn from each other. At the same time, the individuals also need some common stock of knowledge since they otherwise have no common basis for communication. The positive productivity effects of diversity are also often included directly in the production function. Here it is typically assumed that different ethnic or cultural groups represent complementary input factors combined in a production process that exhibits increasing returns to variety, see for example, Alesina and La Ferrara (2005) or Ottaviano and Peri (2005).

In general, an increase in the productive amenity of one region enables firms in that location to pay higher wages. Thanks to the wage advantage, workers will move to the region. At the same time, productivity advantages also attract other firms. Wages and employment in the region increase as a result.

Secondly, cultural diversity may affect a region’s consumptive amenity and therefore, the quality of life that it offers at the local level. A tolerant native population may value diversity as an attractive location feature, for example, due to the greater variety of ethnic goods or more vibrant cultural atmosphere. Yet diversity may also be perceived as unattractive if natives fear that social conflicts between different foreign nationalities are imported to their own neighbourhood (Dustmann and Preston 2001). Therefore, we see that there are two forces operating in different directions with respect to the consumption amenity, meaning that it is unclear whether people associate a positive or negative value with the cultural diversity of a location.

However, an increase in a region’s consumptive amenity means that a region is more attractive to workers, and in the Roback model, it is concluded that for any level of employment individuals are willing to work at lower wages. As a result, people would move to that region, leading to a higher employment level, but accept lower wages at the same time.

In short, cultural diversity may affect locations, and the natives working therein, both on the production (labour demand) and the consumption (labour supply) side, and the net effect on either side can be positive or negative. In our empirical model we use wage and employment

regressions to recover the net effect of productive and consumptive amenities across regions.

A further major contribution of our work is to pay closer attention to the skill composition of the foreign workforce by separately studying the effects associated with the size and the diversification of the groups of high-skilled and low-skilled foreign workers, respectively. The rationale for this is directly related to the theoretical considerations above. High-skilled and low-skilled foreign workers affect regional productive and consumptive amenities very differently. A positive impact of diversity on productivity may require foreign workers to possess a certain skill level. When there are inter-cultural learning and knowledge spillovers, which possibly make heterogeneous locations more productive, it may require a certain skill level on the part of the foreigners in order for these production externalities to materialise. Similarly, the consumption value of a multicultural environment may also depend on how educated the group of foreigners is. High-skilled foreign workers are typically better integrated into the host country’s society, so that diversity is likely to be valued by its natives. For low-skilled foreigners, by contrast, this issue seems to be more complex. On the one hand, many ethnic goods are provided by low-skilled foreigners, so that their diversity may also be valued by a country’s natives. On the other hand, to the extent that integration with the host country is underdeveloped, diversity may also be considered as a negative location characteristic, since natives may fear social conflicts between groups of different nationalities.

Framework of empirical analyses

The theoretical framework outlined above suggests that wage and employment regressions for native German workers are well suited to sorting out the net effect of cultural diversity at the local level. We use the following specification for the empirical model:

$$\ln(wage_{r,t}) = \alpha_r^{wage} + \alpha_t^{wage} + \beta^{wage} \cdot div_{r,t} + \gamma^{wage} \cdot X_{r,t} + \varepsilon_{r,t}^{wage} \quad (1)$$

$$\ln(emp_{r,t}) = \alpha_r^{emp} + \alpha_t^{emp} + \beta^{emp} \cdot div_{r,t} + \gamma^{emp} \cdot X_{r,t} + \varepsilon_{r,t}^{emp}, \quad (2)$$

where $emp_{r,t}$ is employment and $wage_{r,t}$ is the average wage for native workers in region r and time t . $div_{r,t}$ measures cultural diversity and refers to the foreign workforce in region r at time t . The precise specification of $div_{r,t}$ for the empirical analysis is discussed below. $X_{r,t}$ are additional control variables, the α ’s are time and

region fixed effects, and the ε 's are error terms. Due to the fixed effects specification, identification of our regression model rests on the changes in local diversity levels over time.

The central coefficients of interest are β^{wage} and β^{emp} . If diversity is a positive productive amenity, we should find positive wages and employment effects ($\beta^{wage} > 0, \beta^{emp} > 0$). A negative productive amenity would imply negative signs of both coefficients. If diversity is a positive consumptive amenity, we should find positive employment and negative wage effects ($\beta^{wage} < 0, \beta^{emp} > 0$). If it is a negative consumptive amenity, there must be a compensating wage differential ($\beta^{wage} > 0$) and negative employment effects ($\beta^{emp} < 0$).

In the estimations we include two variables related to foreign labour market participation to measure cultural diversity. Firstly, we control for foreign workers as a share of total area employment, i.e. $s_{r,t} = \text{foreigners}_{r,t} / \text{emp}_{r,t}$. (3) This variable measures the size of the group of foreign individuals who work in region r at time t . The second variable then specifically measures the degree of diversification of the stock of foreigners into different nationalities. We use a fractionalisation index that is based on a standard Herfindahl-Hirschman index. It is defined in the following way:

$$frac_{r,t} = 1 - \sum_{k=1}^K \left(\frac{\text{foreigners}_{k,r,t}}{\text{foreigners}_{r,t}} \right)^2, \quad (4)$$

where group $k = 1, 2, \dots, K$ indexes the different foreign nationalities. This index takes on values between 0 and 1. If all foreigners in region r had the same nationality, we would have $frac_{r,t} = 0$, and the index then increases in the degree of diversity. The correlation between $s_{r,t}$ and $frac_{r,t}$ in the data turns out to be rather modest ($\rho \approx 0.2$), which allows us to control for both variables at the same time and, thus, to separate the fractionalisation and size effects of the foreign workforce.

When we explicitly distinguish the group of foreign workers in region r by their skill level, we replace $s_{r,t}$ by high-skilled (low-skilled) foreign workers as a share of total regional high-skilled (low-skilled) employment. Furthermore, we then separately measure the index $frac_{r,t}$ for the sub-population of high-skilled (low-skilled) foreign workers in region r .

The empirical approach has to address one more problem: foreign workers may not causally affect regional productivity, but instead select into productive locations. Our estimations may therefore suffer from a problem of reverse causality. Moreover, the share of foreigners and the fractionalisation index may be quite noisy measures of the “true” degree of cultural diversity at the

Figure 1

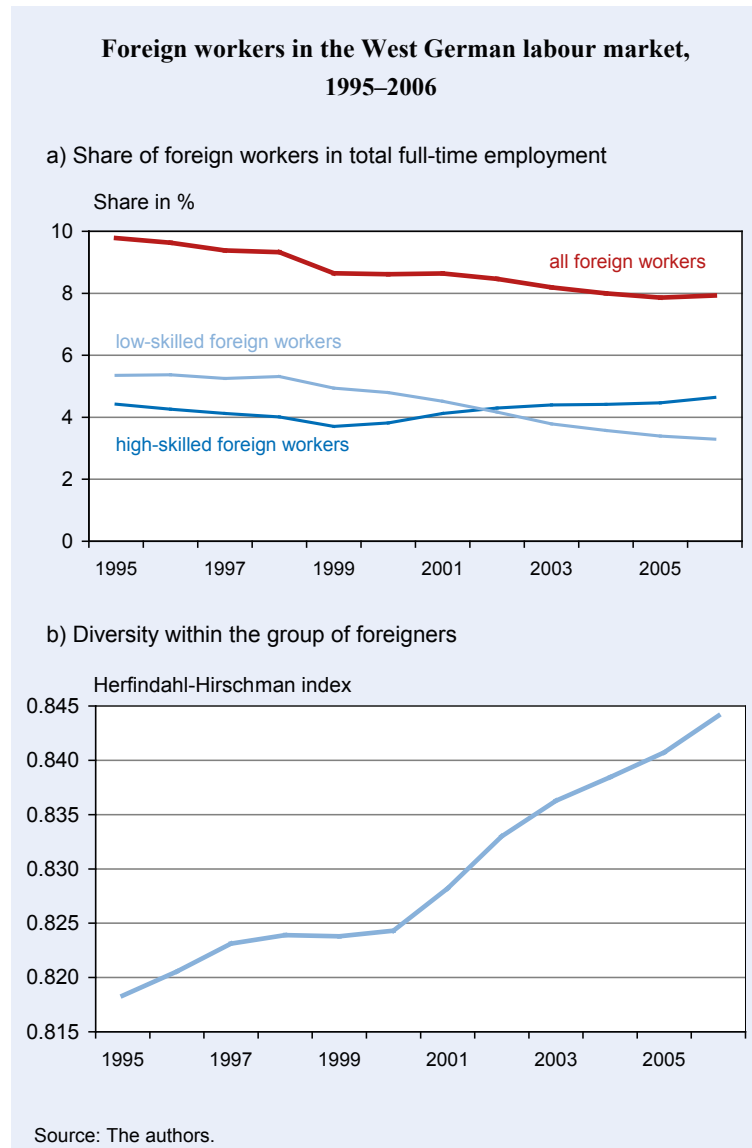


Figure 2

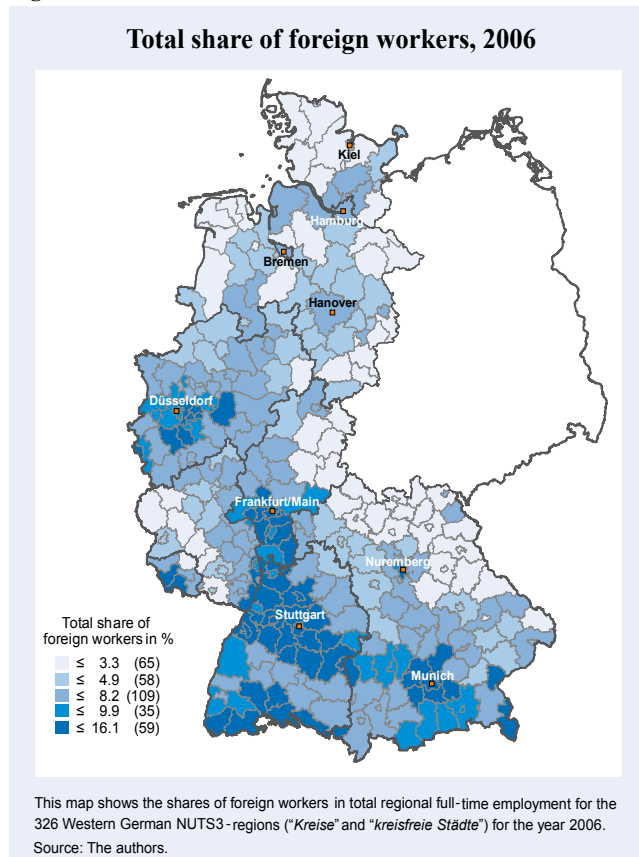
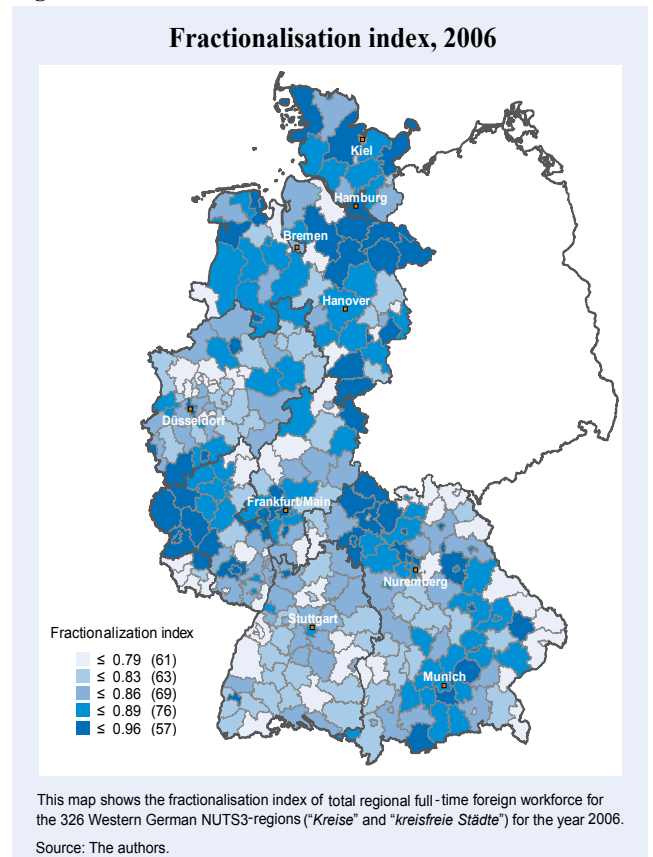


Figure 3



local level. Both problems – reverse causality and measurement error – can lead to biases in OLS estimations.

To address these concerns, we implement a so-called “instrumental variable approach”, by using first-order time lags of the share of foreign workers and the respective lagged fractionalisation indices as instruments. In addition, we include three further instrumental variables: the “shift-share”-instrument popularised by Card (2005), the minimum regional distance to either an exterior border or to one of the five major German airports, interacted

with time fixed effects and finally, the historical regional employment shares of classical guest worker industries (see Südekum, Wolf and Blien 2014 for details).

Data and descriptive overview

The data basis for this study is provided by the Institute for Employment Research (IAB). It includes the complete population of full-time employment relationships subject to social security (i.e. excluding civil servants

Table 1

Labour market participation of foreigners in selected urban areas, 2006

City	Total employment	Total share of foreign workers (%)		Diversity index, foreign employees	
	(native + foreign)	all	high-skilled	all	high-skilled
Hamburg	633,311	7.24	4.68	0.9160	0.9539
Munich	563,931	14.53	7.63	0.8913	0.9328
Frankfurt	396,702	13.85	7.00	0.9140	0.9545
Cologne	369,060	10.21	5.15	0.8243	0.9493
Duesseldorf	293,208	9.65	5.88	0.9137	0.9548
Stuttgart	286,546	13.49	5.96	0.8685	0.9476
Ø Western Germany		6.56	4.21	0.8370	0.9032

Sources: The authors.

and self-employed individuals), aggregated at the level of the 326 Western German NUTS3 districts for the years 1995–2006. The data is drawn from the individual data of official German Employment Statistics, which is used to calculate social security contributions and pensions, and therefore is highly reliable. As this official employment data does not include information on areas like language use or ethnic self-perception, we proxy culture with the recorded nationality of an individual.

This section offers a brief descriptive overview of the participation of foreign workers in the Western German labour market.

Figure 1a shows that about eight percent of all full-time regular employment relationships (i.e. all full-time employees subject to social security) involved workers of a foreign nationality in 2006. However, even though the size of the foreign workforce in the German labour market remained roughly stable over the time period 1995–2006, the group of foreign workers became more educated over time on average (Figure 1a). There was an increase in the share of foreign workers with completed tertiary education and a decline in non-university trained foreigners, particularly since 1998.

Another important compositional change is the aforementioned increase in the diversity of nationalities of the foreign workforce. Figure 1b depicts a fractionalisation of 180 different foreign nationalities in the total population of foreign workers with a regular employment relationship. This figure suggests that the German labour market has become more heterogeneous in terms of national and, thus, linguistic and cultural backgrounds.

Turning to the regional level, the maps in Figure 2 and Figure 3 illustrate the total shares of foreign employees in 2006 and the fractionalisation index in 2006, respectively. The largest shares are found in the metropolitan areas in Stuttgart, Frankfurt, Munich and in the Rhine-Ruhr area. The share of foreign workers is below one percent in several other, more rural areas in the North. Table 1 shows that all large urban areas have above-aver-

Table 2

All foreign workers		
	Wages (1)	Employment (2)
Share of foreign workers	0.0178 (.044)	-0.6467*** (.122)
Diversity foreign workers (fractionalisation index)	0.0331** (.014)	0.1119*** (.040)
Instruments	1 st time lag diversity variables, shift-share, distance to border/airport, historical guest worker	1 st time lag diversity variables, shift-share, distance to border/airport, historical guest worker
Controls / fixed effects	YES / YES	YES / YES
<p><i>Notes:</i> Dep. var. in the wage regression is the average daily wage (in €) of native employees in region <i>r</i> and year <i>t</i>. The dep. var. in the employment regression is the total employment level of native workers in region <i>r</i> and year <i>t</i>. All regressions include time and regional fixed effects and a set of control variables. We instrument the shares and the fractionalisation indices for all foreign workers. As instruments we use i) the respective regional variables with a time lag of one year, ii) the shift-share diversity index (see Ottaviano and Peri 2006), iii) the minimum distance of the region to either the closest exterior border of (Western) Germany or to one of the five major German airports and iv) the regional employment shares in mining, household-related services and building&construction for the years 1977–1988. Standard errors are reported in parentheses. Significance levels: *) 10%, **) 5%, ***) 1%.</p>		
Sources: The authors.		

age total shares of foreign workers. Table 1 also suggests that the foreign workforces in large urban areas tend to be relatively highly skilled compared to the Western German average.

Finally, Table 1 reports the fractionalisation index of the foreign workforce indicating that the high-skilled foreign workforce is more diverse than the overall foreign workforce. This is due to the fact that foreigners of certain nationalities (particularly Western Europeans and North Americans) are likely to be high-skilled if they work in Germany. Furthermore, urban foreign workforces tend to be more diverse than rural ones, and this is also true when focusing only on the diversity of high-skilled foreigners.

Results

All foreign workers

Table 2 presents the results for the wage and employment regression when we do not distinguish between foreign workers by skill level.

For expositional purposes, we only report the results for our central explanatory variables, and omit the other estimated coefficients (see Südekum, Wolf and Blien 2014 for details). As column 1 of Table 2 shows, the share of foreign workers does not significantly affect the av-

average wages of native workers. However, the fractionalisation index is positive and significant, indicating that cultural diversity positively affects the average wages of native workers. The relevant coefficients of the employment regression (column 2) are both significant and indicate that the share of foreign workers negatively affects employment, while cultural diversity has a positive impact.

What would be the literal interpretation of these results? Since the total share of foreign workers is negatively associated with native employment, the application of the Roback model would suggest that it is a negative regional amenity. These results should not be interpreted as evidence for strong displacement effects for native workers in the German labour market. Several authors have studied the labour market impacts of immigration on the German labour market and found little evidence for such displacement effects (for example, Glitz 2006). Our results do not contradict those findings, as we do not consider inflows of foreigners from outside Germany. Instead, we exploit the cross-sectional and time variation of foreign employment shares and diversity levels across regions that could stem from different sources, for example, from structural change and from the different employment profiles of natives and workers, who often do not compete for the same jobs in an economy. Anyway, since the wage effect is insignificant, this negative overall impact would be a mixture of one effect on the consumption (labour supply) and one effect on the production (labour demand) side.

As for the impact of the fractionalisation index, the model suggests that the overall effect of diversity is positive and is again derived from a combined labour demand and labour supply effect. However, this interpretation is derived from a regression model that does not divide the group of foreigners into high-skilled and low-skilled workers. The results are therefore likely to capture a net effect that masks more specific impacts of foreign workers with different skill levels. We now turn to this issue in a more detailed analysis.

Table 3

Foreign workers by qualification group		
	Wages (1)	Employment (2)
Share of high-skilled foreign workers	0.1705*** (.041)	0.6027*** (.114)
Fractionalisation index, high-skilled foreign workers	0.0313*** (.011)	0.0588* (.031)
Share of low-skilled foreign workers	-0.0706*** (.018)	-0.3817*** (.050)
Fractionalisation index, low-skilled foreign workers	0.0219** (.011)	0.0582* (.030)
Instruments	1 st time lag diversity variables, shift-share, distance to border/airport, historical guest worker	1 st time lag diversity variables, shift-share, distance to border/airport, historical guest worker
Controls / fixed effects	YES / YES	YES / YES
Notes: Dep. var. in the wage regression is the average daily wage (in €) per native employee in region <i>r</i> and year <i>t</i> . The dep. var. in the employment regression is the total employment level of native workers in region <i>r</i> and year <i>t</i> . All regressions include time and regional fixed effects and a set of control variables. We instrument the shares and the fractionalisation indices for high-skilled and low-skilled foreign workers. As instruments we use i) the respective regional variables with a time lag of one year, ii) the shift-share diversity index (see Ottaviano and Peri 2006), iii) the minimum distance of the region to either the closest exterior border of (Western) Germany or to one of the five major German airports and iv) the regional employment shares in mining, household-related services and building&construction for the years 1977-1988. Standard errors are reported in parentheses. Significance levels: *) 10%, **) 5%, ***) 1%.		

Sources: The authors.

Foreign workers differentiated by skill level

Table 3 reports the results for the wage and employment regression for native workers when controlling separately for the share and the fractionalisation of high-skilled and low-skilled foreign workers. The estimations use the same control variables as above.

For the group of high-skilled foreign workers we find that their total share of regional high-skilled employment is associated with positive wage and employment effects for the native workers. This positive impact is reinforced if the high-skilled foreigners are heterogeneous in terms of nationalities.

With respect to low-skilled foreign workers, the regression results lead to a qualitatively different conclusion. The larger the number of low-skilled foreigners as a share of total low-skilled employment the lower the average wage and employment level of the natives. Hence, the size of this group can be interpreted as a negative productive amenity from a regional perspective. For given group sizes, we nevertheless find positive productivity effects associated with the degree of diversification. This means that a region with a large share of low-skilled foreign workers (call it "region 1") need not to be

less productive than an otherwise similar region with a smaller share (“region 2”), provided that the low-skilled foreign workers in region 1 are sufficiently more heterogeneous than in region 2.

To get an idea of the economic importance of these effects, we use the results of Table 3 and calculate the counterfactual effect on the average daily wage of a native worker if the share of high-skilled (low-skilled) foreign workers and the respective fractionalisation index for either group is increased by one standard deviation. As for the share of high-skilled foreign workers, this amounts to a *ceteris paribus* increase of two percentage points, which, in turn, leads to an expected increase of the average daily wage from EUR 89.68 to 89.97, that is, by roughly EUR 0.30 per day. Increasing the share of low-skilled foreign workers by one standard deviation (from 13 to 20 percent) leads to an expected decrease of the average daily wage by EUR 0.29, *ceteris paribus*. The counterfactual effects of the fractionalisation indices are somewhat smaller. The expected increase, *ceteris paribus*, is EUR 0.20 for high-skilled and EUR 0.18 for low-skilled foreigners. These are certainly not exorbitant, but still non-negligible amounts.

Conclusions

The results found in our paper extend our own previous research and do not contradict the findings of others for the labour markets of the US (Ottaviano and Peri 2005, 2006), the UK (Lee and Nathan 2010) and of other countries. The cultural diversity of the population has positive employment and wage effects for natives. In the case of Germany, some results are available that highlight the causal paths that are important in generating these results. Brunow and Blien (2014) and Trax, Brunow and Südekum (2013) show that basically the same results can be found at the level of individual establishments. Niebuhr (2010) finds that cultural diversity is connected with high regional levels of patents. Audretsch, Dohse and Niebuhr (2010) show that high degrees of regional cultural diversity have positive effects on the foundation rates of new firms. And finally, on the individual level, Bauer, Flake and Sinning (2013) find that immigration decreases the unemployment probability for high-skilled natives. Results for other countries confirm those for Germany.

Our results for different skill groups show more details about the processes going on. The high-skilled foreign workers affect native employees in regional labour mar-

kets quite differently than low-skilled foreign workers. The presence of high-skilled foreign workers can be regarded as a positive productive amenity from a regional perspective, especially if this group is diversified in terms of national and cultural backgrounds. For low-skilled foreign workers the results are different: the larger the size of this group the lower regional productivity levels. Yet, depending on the size of the low-skilled foreign workforce, we still find positive productivity effects associated with diversification. These findings have important implications for the policy debate over the principles of immigration to Germany. This debate has strongly focused on the skill composition of immigrants. It led to several attempts to target high-skilled foreign immigrants in specific industries where native specialists are in short supply (for example, in the IT business). The cultural diversity of the immigrants, that is, the composition of the group of immigrants in terms of foreign nationalities, has played a minor role in this debate to date. Our results suggest that there are returns to cultural diversity in regional labour markets, and that immigration policy can consequently be improved by taking these aspects into account. Moreover, our results suggest that multiculturalism has rather tangible effects. The effects do not appear to be mainly transmitted through “soft” location factors that shape perceptions about the quality of life in different locations, but the primary effects seem to be on regional productivity.

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DOES THE CONSTITUTIONAL RIGHT TO HEALTH MATTER? A REVIEW OF CURRENT EVIDENCE

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Introduction

In recent decades there has been a tension between the exercise of the right to health by individuals and health-care priority-setting at the level of the general population. Health is widely recognized as a basic human *right*. However, it has been claimed that the introduction of a legally enforceable right to health and associated court rulings has led to distortions that undermine the optimal resource allocation of health care and potentially harm population health (Yamin, Gloppen and Bergallo 2011; Hogerzeil et al. 2006). This claim represents a population health issue that goes beyond the question of human rights laws within court systems.

Considering the right to health as a statement of a desirable goal creates ethical issues. Thinking about the right to health as a legal instrument for achieving desirable health outcomes, however, we have formulated an empirical question that can be addressed with data: namely, does the introduction of a right to health or associated legal rule X improve or deteriorate population health outcomes measured by Y, implied by a right to health?

The empirical examination of health laws has recently grown in the area of empirical legal studies. Researchers have conducted hundreds of studies using data to estimate the effects of health laws on accident rates, health outcomes, health care utilization and costs and other outcome variables (Mello and Zeiler 2008). The empirical examination of a legal right to health or an associated legal rule can be seen as part of this empirical legal tradition.

There are at least three objectives in the empirical investigation of a legal right to health or to health care. The first is to examine whether or not a right to health in constitutions or associated health laws is consistent with achieving the health objectives of the targeted population implied by the right. Secondly, it is equally important to check whether or not such legal strategies are, in fact, the most effective way to translate this right into actual health policies and health outcomes. Thirdly, attention should also be paid to the side effects of such legal strategies. The right to health is not the only goal of a society. The implementation of such rights must be financed through national budgets, which may mean that the implementation of one right harms other, competing social objectives.

To maximize the benefit and minimize the cost of a legal right to health, the right to health as a legal instrument requires strong empirical evidence. This article summarizes recent progress and challenges associated with empirical investigations of the imposition of a right to health or associated health legislation. We confirm the health- or health-care-access improving effects of these laws and no health-deterioration effects based on the available studies. The rest of the paper is organized as follows. The next section summarizes the historical development of a right to health or to health care as legal instruments for improving individual and population health. The following section discusses the concept and definition of a right to health or to health care. Section *Constitutional right to health and its direct effects* examines the literature on the constitutional right to health and its direct effect on health outcomes. Section *Health legislation, regulations, and access to health care: lessons from the United States and other developed countries* examines the literature on health legislations enacted in order to achieve this right and assesses their effect on population health outcomes. The last section concludes the paper.

From social objectives to legal instruments

Before the 20th century, the right to health or to health care was merely an ethical norm, or, at most, it was considered to be one of the objectives of social progress.



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The idea that it is the government's duty to secure patients' access to health care or maintain an adequate level of health existed previously, but it was not until the last half of the 20th century that a right to health came to be incorporated into national and international laws and began to be considered as a legal instrument for achieving the health objectives implied by this right.

The idea of a right to health first appeared in the political arena in the late 18th century. During the French Revolution, revolutionaries incorporated the idea of a social contract into their theory of public health and sought to implement a right to health (La Berge 1992). Reformers, however, soon faced political, religious, and professional opposition once the revolutionaries seized power (Weiner 1993). In the end, the term "health" was eventually excluded from the Declaration of the Rights of Man and of the Citizen in 1789, as well as from the French Constitutions of 1791, 1793, and 1795. On the other side of the Atlantic, the term "right to health" first appeared prior to 1796 during congressional debates over quarantine laws in US politics (Visscher 1972).

One hundred years later, Article 7 Section 20 of the Wyoming Constitution of 1889 in the United States recognized a right to health in the state's constitution.² Since then, the right to health has increasingly been given a more concrete form through certain definitions and measurements with a view to applying this right to actual health policies. In 1936, the USSR became the first nation to provide a guarantee of access to health care at the national level, although Article 120 of the USSR Constitution focused exclusively on access to health care rather than on a right to health in general.³ The provision is also clear about the strategies to achieve this right to health care access.⁴

The concept of a right to health has spread widely from the constitutions of socialist countries to the constitutions of democratic countries, but is called "a right to health" rather than "a right to health care" in the post-World War period. The Constitution of the Italian Republic enacted in December 1947 became the first democratic nation's constitution to recognize the right to health at the nation-

al level.⁵ In December 1948, the Universal Declaration of Human Rights (UDHR) was adopted by the 56 members of the United Nations.⁶ Article 25 of the UDHR provides for an "adequate" level of medical care and other necessary social services for health and well-being. Furthermore, the International Covenant on Economic, Social and Cultural Rights (ICESCR) was adopted as a legally binding treaty in December 1966.⁷ Ambitiously, the ICESCR moves the goal from an "adequate" level of medical care to the "highest attainable standard". Finally, the Declaration of Alma Ata (1978) and General comment 14 of the UN Committee on Economic, Social, and Cultural Rights (2000) further addresses this issue and provides a more detailed list of what the right to health should include. With greater recognition of this right by the international community, a constitutional right to health has spread to a number of Latin American and African countries since 1980.

In Latin America, South Africa and other parts of the world, courts have started assuming more active roles in redressing the failures of government health policy by using this right in the last 20 years (Hogerzeil et al. 2006). Successful cases have been primarily connected to constitutional provisions of this right, which are supported by international treaties (Hogerzeil et al. 2006; Biehl et al. 2012).

The emergence of judicial activism regarding health rights attracts both praise and criticism. While some see this right as a powerful tool in the struggle against poverty and health inequality, others criticize that this rights-based litigation has distorted the allocation of health resources and should be used as a last resort (Pieterse 2008; Yamin, Gloppen and Bergallo 2011; Hogerzeil et al. 2006). The empirical investigations of the imposition of a right to health or associated health legislation contributes to the literature and provides a method for directly examining both sides of these claims, by using existing datasets at population level.

Right to health versus right to health care

According to today's understanding, the right to health is a broad and inclusive concept, extending not only to timely and appropriate access to health care, but also to the underlying social determinants of health such as

² "As the health and morality of the people are essential to their well-being it shall be the duty of the legislature to protect and promote these vital interests" (Article 7 Section 20, Wyoming Constitution of 1889).

³ More precisely, "the right to maintenance in old age and also in case of sickness or loss of capacity to work" (Article 120 of the USSR Constitution).

⁴ This right was "ensured by the extensive development of social insurance of workers and employees at state expense, free medical service for the working people, and the provision of a wide network of health resorts for the use of the working people" (Article 120 of the USSR Constitution).

⁵ Effective on January 1948.

⁶ UN. Universal Declaration of Human Rights. G. A. Res. 217A (III), UN GAOR, Res. 71, UN Doc. A/810. New York: United Nations, 1948.

⁷ UN. International Covenant on Economic, Social and Cultural Rights (ICESCR). New York: United Nations, 1966.

income, education or social cohesion (Anand, Peter and Sen 2004). The reference to “health” rather than “health care” can be regarded as a practical way of characterizing the relevant socially controllable factors outside the traditional health care system (Sreenivasan 2008). This method, however, has its limitations. If a person’s health status is not the result of the actions of other people or society at large, but is deemed a personal responsibility instead, then it is difficult for individuals to claim protection under this right (Daniels 2013). Recent literature has attempted to identify the conditions under which avoidable health inequalities are not unfair or a violation of a right to health (Sreenivasan 2009).

Regardless of the scope and extent of the term “health”, many agree that a right to health at least includes a right to access health care. The right of access to health care is perhaps the least difficult area for a court in terms of justifiability. However, in terms of enforceability, this right is one of the most difficult human rights. Courts are generally reluctant to direct government on issues of resource allocation. Even in countries where health care is recognized as a basic legal right, there is also an ongoing debate over the scope and extent of a right to health or to the health care enforceable by individuals.

Constitutional right to health and its direct effects

In the last 70 years, the UN and other international organizations have adopted international treaties and other instruments that include a right to health. They have gradually developed the concept of a right to health or to health care, with a view to applying this right to actual health policies. Despite its significant contribution to the wider recognition and understanding of this right in the international community, recent research has found that the effects of these international treaties are limited, even in the countries that ratified them. Palmer and his colleagues have investigated the relationship between the cumulative numbers of treaty ratification and health indicators like maternal, infant, and child mortalities, and found no systematic association between them (Palmer et al. 2009).

Given that some of the successful court cases dealing with the right to health litigation are connected to constitutional provisions of this right, Matsuura reviewed the constitutional right to health or to health care of 157 countries and found that, with the exception of South Africa, only countries with French commercial law or Soviet socialist law origins gave their citizens a consti-

tutional right to health or to health care (Matsuura 2013). Unlike international treaties, the study found that infant and under-five mortality rates decreased significantly after these countries introduced a right to health provision into their national constitutions. This effect seemed to be much larger in countries with good governance and a high democracy score, which reflects both political competition and the rule of law.

This study is further supplemented by the study of the US state constitutions (Matsuura 2012). The US is a nation with typical British common-law origins, which means that it does not guarantee health care as a fundamental right in its constitution. However, the federal constitutional design allows fifteen state constitutions to contain provisions relating to health and health care (Leonard 2010). The study found that the introduction of a stronger constitutional commitment, which imposed a duty on state legislatures to provide health care specifically to the poor, was associated with a reduction in infant mortality rates. Such health-improving effects are found mainly in non-white populations, which have been historically disadvantaged.

Current empirical evidence dealing with a right to health focuses on the availability of a right to health described in national or state constitutions, but human rights lawyers have traditionally focused their attention on case law and how to apply general principles described in national and international law to specific circumstances. From the viewpoint of empirical legal studies, there is still an empirical question as to whether the provision of a right to health in constitutions or the practical application of such provisions actually improves population health outcomes. Unfortunately, while legal instruments and litigation are increasingly common as ways to enforce the constitutional right to health, they are still limited to countries such as South Africa and some Latin American countries. However, this is a testable hypothesis. The next challenge in this area will be to investigate these issues using the sample of Latin American countries from the Demographic and Health Surveys (DHS).

Health legislation, regulations, and access to health care: lessons from the United States and other developed countries

Like many other human rights provisions in constitutions or treaties, a right to health or to health care is extremely ambiguous and would have only limited practi-

cal application without associated health legislation. To achieve a right to health or to health care, health laws and regulations must tackle a wide variety of barriers that combine to prevent patients from seeking necessary health care. The inability to pay for health care services strongly affects access to health care. However, even for paying patients, there remain barriers to treatment based on race, disability, and other factors such as nationality, fear, cultural beliefs, language, residence, and distance. In the last quarter of the twentieth century, legislation designed to assure patients' legal right to access health care has been enacted in different ways across different countries. This section focuses on the empirical studies of four different legislative approaches that are designed to protect patients' right to access health care: (1) regulating the formation of patient-physician relationships, (2) guaranteeing the right to access to emergency medicine rather than health care, (3) anti-discrimination laws, and (4) requiring hospitals to provide charitable care.

Many countries have adopted one or more of these health laws, even without a constitutional right to health. However, these health laws are more important in some countries than in others. Without any doubt, these laws are most important in countries where universal health care has not yet been achieved like the United States. However, even among the countries with universal health care systems, these laws are perhaps more important in some countries than in others. The existence of these laws are more important in countries where health care is financed via social insurance, but health care is delivered by the private sector,⁸ than in countries where hospitals and medical staff are directly financed by the state and patients have direct access to these facilities.⁹

Regulating the formation of patient-physician relationships

The formation of the patient-physician relationship is one of the most highly-regulated fields in contract law. The laws in this area attempt to balance the rights and responsibilities of both health care provider and patient. The freedom of physicians and hospitals to refuse or accept patients is to some degree – and sometimes severely – regulated in order to provide health care to the whole population.

In common-law countries like the United States and the United Kingdom there is no general duty for ei-

ther physicians or hospitals to provide health care to others, even in emergency situations (Mulheron 2010). At least one American court has concluded that: “Even the Hippocratic Oath, by which every doctor is morally bound, assumes a pre-existing relationship of patient and physician, which relationship in its inception is basically contractual and wholly voluntary.”¹⁰ This position is distinct from Japan, where Article 19 of the nation's 1948 Medical Practitioner Law and other health laws stipulate that physicians and other health professionals cannot refuse to care for patients if they are asked to do so (Matsuura and Sase 2013). Unfortunately, no empirical study to date has investigated the effect of such regulations.

Guaranteeing the right to access emergency medicine rather than health care

The no obligation rule in common law contributed to instances of ‘patient dumping’ in the United States, especially prior to 1986 when the federal anti-patient dumping law was enacted. Since its enactment in 1986, the Emergency Medical Treatment and Active Labor Act (EMTALA) has become the single most important legal tool governing Americans' access to emergency medical care. Under EMTALA, hospitals are required to examine all people who need care in the emergency room and to provide treatment to stabilize their condition if necessary (Treiger 1987; Moy 1999). EMTALA has been a controversial mandate ever since its creation. While it guarantees life-saving treatment to patients under emergency conditions, the unfunded nature of EMTALA's mandate has been criticized as a major source of emergency room overcrowding and a cause of financial pressure for hospitals (O'Shea, 2007). Despite these criticisms, empirical results indicate that, while EMTALA had health-improving effects among children, the law did not contribute to either emergency department overcrowding or cost pressure to hospitals in aggregate (Matsuura 2012). Instead, studies showed that the laws only shifted emergency department patients and hospital costs from public and non-profit hospitals to for-profit hospitals. Although the study confirms the obvious benefit of EMTALA, EMTALA only guarantees the right to access to emergency medicine, not the right to health care. In this sense, the health-improving effect of EMTALA is expected to be smaller than the regulation of the formation of patient-physician relationships.

⁸ such as Japan, Germany, and France.

⁹ such as the United Kingdom and the United Arab Emirates.

¹⁰ Agnew v. Parks, 172 Cal App 2d 756, 764 (1959).

Anti-discrimination laws

Many countries have adopted a wide variety of anti-discrimination laws and treaties. In the United States, anti-discrimination laws such as Title VI of the Civil Rights Act of 1964, the Americans with Disabilities Act of 1990, and Section 504 of the Rehabilitation Act of 1973, prohibit health care providers from refusing treatment on certain bases. Title VI of the Civil Rights Act of 1964 prohibits any program or activity that receives federal financial assistance from discriminating against individuals on the grounds of race, color, or national origin. Some studies have found that the civil rights movement and a range of anti-discrimination legislation had health-improving effects in areas such as infant mortality rates and traffic accident mortality rates. (Zhou 2011; Almond, Chay and Greenstone 2006). Zhou also reported that the distance that African Americans had to travel to the nearest hospital fell by 50 miles after the desegregation of hospitals in the Deep South (Zhou 2011).

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disability Act (ADA) of 1990 affect patients' ability to access health care. *Bragdon v. Abbott*¹¹ first drew attention to the application of these disability laws and how they protect the rights of disabled patients to access health care. The court affirmed that physicians cannot use a patient's disability, including HIV/AIDS, as a reason not to provide health care. There is extensive literature examining the employment effects of the ADA, but no study has yet examined the effect of the ADA on access to health care or health outcomes (Stapleton and Burkhauser 2003). Recently, Honeycutt (2011) examined the effect of ADA on a participation restriction in health coverage and found a shift in health coverage away from private health insurance toward public coverage in his PhD dissertation. However, there is no study to date that examines the relationship between the ADA and disabled patients' access to health care.

Finally, undocumented immigrants face significant challenges in accessing health care. In many EU countries, undocumented immigrants have the right to access emergency care, but access to more advanced health care is restricted and may be subject to additional payment (Terminski 2013). In the United States, while EMTALA protections may apply to undocumented immigrants who seek emergency care, Congress has also sought to reduce immigrant use of public assistance programs by passing legislation such as the Personal

Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). PRWORA restricts many public benefits, including retirement, welfare, health, and disability benefit, to certain immigrants. Derose and her colleagues reviewed the empirical literature of the effect of PRWORA and found a decline in immigrants' health insurance coverage, use of health care, and the satisfaction of health care quality following the passage of PRWORA (Derose et al. 2009).

Requiring hospitals to provide charitable care

Another approach is to require hospitals to provide some kind of charitable care to the community. In the case of the United States, some hospitals are required to provide charitable care under laws such as the Hill-Burton Act and § 501(c)(3) of the Internal Revenue Code.¹² The proportion of US physicians in a hospital setting providing charity care, however, dropped from 66 percent in 1996/1997 to 54 percent in 2004/2005 (Cunningham and May 2006).

The Hill-Burton Act of 1946 provided grants and low-interest loans for hospital construction, and specified that recipients would be obliged to provide charity care for 20 years after the initial fund had been disbursed. Almond and his colleagues investigated the infant health benefits of the Hill-Burton Act and found that charity care requirements were, in fact, binding on hospitals, but that private hospitals under the obligation "cream skimmed" the least risky maternity patients (Almond, Currie and Simeonova 2011; Almond et al. 2007). In this way, they provided less intensive maternity services than public hospitals without compromising patient health.

Non-profit hospitals under Section 501(c)(3) were primarily used as an instrument to tackle market failures that existed when only for-profit hospitals were in control of the market. Over the last forty years, however, both government and non-profit hospitals have been steadily declining, while for-profit hospitals have been growing substantially (Cutler 2000). The changes in ownership type have come under increasing criticism from advocates of non-profit hospitals. Recently, Malani and his colleagues began to argue in favor of what might be called "for-profit" charity (Henderson and Malani 2009; Malani and Posner 2007). Malani and Posner (2007) argue that philanthropic services could be carried on equally well by for-profit firms. The majority of empirical studies support their view, and find

¹¹ *Bragdon v. Abbott*, 524 US 624, 631 (1998).

¹² *Sabeta v. Baptist Hospital of Miami, Inc.* 410 F. Supp. 2d 1224 (S.D. Fla. 2005).

that non-profit hospitals do not reduce their provision of uncompensated care following a change to for-profit status (Needleman, Lamphere and Chollet 1999; Desai, Young and VanDeusen; Lukas 1998; Young and Desai 1999). Studies have also found that with the change to a for-profit structure, hospitals introduce few changes of hospital provision of other essential community services like emergency departments (Chollet and Kirk 1999; Hadley, Gray and Collins 2001).

Conclusion

This article summarizes recent progress made in empirical research into a right to health or to health care in national and state constitutions, as well as in health legislation and regulation. Although not all laws have been empirically examined, the literature generally found that these health provisions have had significant health- or health-care-access improving effects. A few exceptions to this rule are the effect of a right to health in international treaties and the tax-free status of non-profit hospitals under Section 501(c)(3). According to literature on the subject, the effects of these international treaties are limited even in the countries that ratified them. However, these international treaties have provided for a better recognition and understanding of this right by the international community and promoted its introduction at the constitutional and legislative level in each country. The same is true for not-for-profit hospitals. A large market share of not-for-profit hospitals in the region may contribute to the creation of the norm that charitable care must be provided even in for-profit hospitals.

Although we were able to generally confirm the health- or health-care-access improving effects of these laws from the available studies, there are at least three potential challenges in applying the empirical evidence in this field to current health policies. Firstly, current empirical evidence has concentrated too much on the United States, where empirical legal research is particularly active. More evidence is needed from outside of the United States. Secondly, implementation of these laws may be an unreliable way of allocating research resources. Judicial court cases may reflect the power of interest groups or the preference of judges, rather than the effect of the right to health. We need to seek institutional, demographic, and social conditions that maximize the benefit of the constitutional right to health and appropriate health legislation. Thirdly, these empirical papers are designed to obtain the effect of specific health laws

on health and other health-related outcomes and assume that the effects of other laws do not modify that analysis. In reality, however, the effects of these laws combine to guarantee access to health care. To promote the better legal design of a right to health, we need to examine the interaction of these laws and address which legal strategies can best improve the health of the targeted population.

Finally, we arrive at the consequentialist nature of empirical legal studies. The main claim of this paper is that a right to health as a legal instrument requires a strong empirical base to justify the existence of legal intervention. In other words, the value of a right to health as a legal instrument is determined by how much associated laws improve the population health outcomes implied by the right. This position asserts that moral rightness depends only on population health consequences. This idea is not always accepted in actual health policies.

Despite the challenges outlined above, I am fairly optimistic about the future of empirical research on health and human rights and its potential to change the field of health and human rights. Human rights lawyers tend to focus on individual legal cases, but the effects of a right to health are bigger than just these cases. Thus, we need to pay attention to the population health effect of relevant legislation. The right to health, of course, includes certain components that are legally enforceable through the court system, but this right also imposes an ethical obligation on individuals and society to protect it. This ethical demand is likely to involve legal instruments for enforcement, but is even more likely require individuals, governments, and non-state players to internalize public ethical norms in order to enhance implementation and compliance with the right to health (Ruger 2006). The estimated effects of a right to health and associated health legislation include not only the effects through the judiciary system, but also the political and social effects of these laws. By taking this approach, empirical research will extend the scope of traditional human rights law. It will inform health policies and apply the best methods to achieve the health objectives implied by this right beyond the judicial system.

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QUOTA REGULATIONS OF GENDER COMPOSITION ON BOARDS OF DIRECTORS

NINA SMITH¹

Introduction

During the last ten years, a number of European countries have implemented more or less radical regulations on the gender composition of the largest companies' supervisory boards. Norway was the first country to implement a binding quota of 40 percent by law in 2005 that took full effect in 2008. Recently, Iceland has followed Norway's suit and now has a binding 40 percent quota. In 2012, the European Commission announced a proposal for a directive related to gender representation on boards with binding quotas of 40 percent for all EU companies (European Commission 2012). Although the proposal was not approved by the European Commission, the idea of regulating board composition is still high on the agenda in many European countries and in the European Union. In the autumn of 2013, the EU Parliament voted in favour of quotation, and one of the big EU countries that used to be reluctant in this area, Germany, decided to implement a 30 percent binding quota on German DAX companies.

The main reason for these new regulations is broad political pressure on companies to push women further up their internal hierarchies. In many countries over half of all university graduates are women, and they have been full-time members of the labour force for decades. However only about 18 percent of board members in large EU companies were women in 2013 (European Commission 2014a). Female representation in boardrooms has increased only slowly in recent decades, despite the fact that an increasing proportion of women have succeeded in climbing at least a few steps of the career ladder within firms. From an economic point of view this evidence may reflect a loss of talent and

human capital investments, and may cause an efficiency loss for firms. There are, of course, also other political arguments for a larger proportion of women getting onto boards of directors like fairness and equal opportunity, but this article focuses on the economic arguments for and against quotas on the gender composition of supervisory boards.

Women on boards of directors in the EU and policy regulations

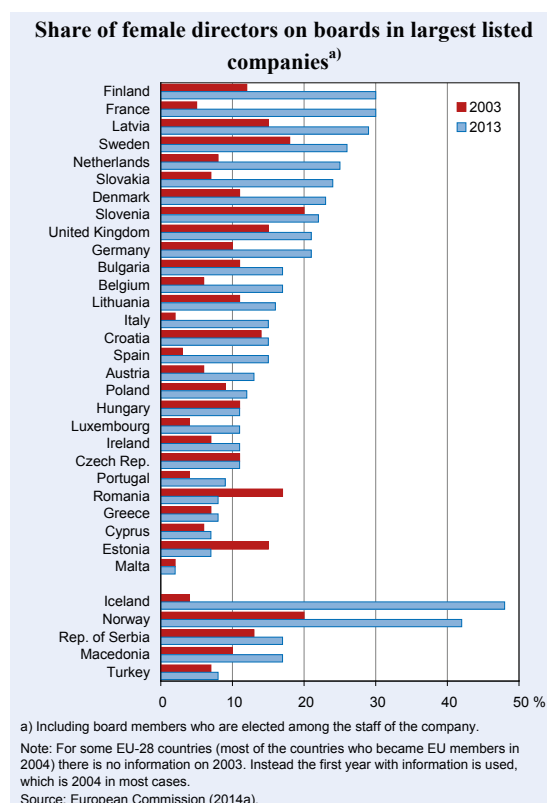
Times seem to be changing. The share of women on boards of directors in the 28 EU countries has been increasing during the latest ten years, and especially since 2010 this increase has been almost 'dramatic'. In 2003, the average share of female board members was nine percent, a figure that increased to 12 percent in 2010 and to 18 percent in 2013 (European Commission 2014a,b).

The average figures mask a large variation across EU countries, both with respect to the level and the speed of change in female board representation. Figure 1 shows the share of female members on the boards of the largest companies in 2003 and October 2013 in the 28 EU countries plus five other European countries that are included in the regular EU database on female board membership.

According to Figure 1, Finland and France are now the two EU forerunner countries with the largest share of female board members (25 percent), while at the other end of the scale, Malta, Estonia, Cyprus, Greece, Romania, and Portugal have less than ten percent of females on the boards of their largest companies. All 28 EU countries are far below the level of 40 percent that the European Commission proposed in 2012. Only the non-EU countries Norway and Iceland have reached this goal. From Figure 1 it is clear that in many countries, mainly Western and Northern European countries, the share of women on the board of directors has increased significantly during the ten year period. In other countries like Romania and Estonia, the share of female directors has stagnated or even decreased considerably.

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Figure 1



The development represented by Figure 1 may partly be the result of the initiatives launched by national governments and the European Commission since 2003 – the causality may, of course, also be reversed! About half of the 28 EU countries have adopted the diversity issue in the official guidelines for Good Corporate Governance (GCG), while eight EU countries have decided or already implemented more or less binding quotas like Norway and Iceland (see Table 1). In Finland, there has to be at least one woman on the board as of 2010, a binding quota of 20 percent is in force as of 2014 and 40 percent in 2017 in France, while Italy and Germany have decided to introduce binding quotas of 33 or 30 percent in 2015 and 2016, respectively. A ‘binding’ quota regulation is defined as a regulation where non-compliance implies more or less severe sanctions on the company.

In the 13 EU countries that have introduced or decided upon quota or soft law regulations on the gender composition of boards, the average female proportion of women in the boards of the largest listed companies increased from eight percent in 2003 to 20 percent in 2013 (non-weighted average of countries). In the comparison group of EU countries that did not introduce any regulation, the increase during the same period was only from nine percent to 11 percent. Thus, it seems fair to argue

that the soft law regulations, quotas, and/or the mere discussion and political signals of potential quotation may have had a major impact on the behaviour of the largest companies in many EU countries, although the speed of change, at least until recently, has been slower than in Iceland and Norway.

Outside Europe times also seem to be changing and the low level of female representation on boards of directors is on the agenda in many countries including the US, Canada, Australia and a number of East Asian countries. Some of these countries have introduced soft law regulations (guidelines for good corporate governance, ‘comply or explain’ rules etc.) see a recent survey on regulations in Deloitte (2013).

Women on the board of directors: do they make a difference?

The public discussion over the presence of women on the boards of directors of privately-owned companies has been heated in many European countries. The economic arguments in favour of more women often refer to the large number of highly-educated women with university degrees, the increasing number of females who make a career in private sector jobs, and the loss of talent when so few women reach board positions. The most frequent arguments against formal regulations are that regulations and quotation mean that it will not be the best individuals who become board members, or that board composition will be sub-optimal when regulated by outside authorities. If a company is initially optimising its behaviour when selecting board members, a quota will imply a distortion of this behaviour and will potentially reduce efficiency. The key question is whether there are initially market failures, imperfect information or discriminative preferences that govern the selection processes of new board members. If, for instance, an ‘old boys’ network’ is protecting the status quo in terms of positions and power, or if only incomplete and outdated information is available on potential female directors’ qualifications, a quota regulation obliging companies to hire more qualified women might improve the efficiency of their board selection process.

Research in this area lists a number of further arguments in favour of and against more gender balanced board composition (Adams and Ferreira 2009; Ferreira 2010; Terjesen, Sealy and Singh 2009). Diversity on boards is expected to create a qualitatively more valuable decision-making process compared to less diverse

Table 1

Quota regulations or softer regulations, inclusive gender diversity in official guidelines for good corporate governance (GCG).				
	Compliance year for quota	Quota (private-sector companies)	Gender diversity in guide-lines for good corporate governance (GCG)	Increase female share on boards, 2003-2013*
EU countries with quota and/or GCG regulations				8% to 20%
EU countries with no quota or GCG regulations				9% to 11%
Finland	2010	>= 1 woman, binding	GCG 2010	12% to 30%
Spain	2015	40% not binding	GCG 2006	3% to 15%
France	2014, 2017	20%, 40% binding	GCG 2010	5% to 30%
Belgium	2017-19	33% binding	GCG 2009	6% to 17%
The Netherlands	2015	30% not binding	GCG 2010	8% to 25%
Italy	2015	30% binding		2% to 15%
Germany	2016	30% binding	GCG 2009	10% to 21%
UK	2015	25% not binding	GCG 2010	15% to 21%
Denmark	2013	Flex "quota", not binding	GCG 2008	11% to 23%
Sweden	-	-	GCG 2004	18% to 26%
Luxembourg	-	-	GCG 2009	4% to 11%
Austria	-	-	GCG 2010	6% to 13%
Poland	-	-	GCG 2010	9% to 12%
Countries outside EU:				
Norway	2008	40% binding	GCG 2009	20% to 42%
Iceland	2013	40% binding	-	4% to 48%
Australia	-	-	GCG 2010	? to 15%
US	-	-	GCG 2009	? to 16%
* For some EU-28 countries (most of the countries that became EU members in 2004) there is no information on 2003. Instead the first year with information is used, which is 2004 in most cases. Simple non-weighted mean of countries.				

Sources: Ahern and Dittmar (2012), Smith (2014), Ahern and Clarke (2013), EU Commission (2014a,b), Deloitte (2013), Catalyst (2014).

boards because more alternative perspectives may be discussed and evaluated. Boards with more women tend to act more independently than male-dominated boards, where board members with close relationships to other boards or networks ('old boys club') tend to constitute the majority. Diverse boards, supervisory boards or management boards may in some cases, depending on the type of company, have a better understanding of the market place, or they may imply more legitimacy and a better company image. Furthermore, role model and/or mentoring may have positive effects on the career development of women at lower levels within organisations (Matsa and Miller 2011). On the other hand, diverse boards may experience more conflicts, and their discussions may be more time-consuming and less time-effective than those of more homogenous boards. If a company's (probably male) CEO and executives are reluctant to share key information with demographically dissimilar directors, this may compromise board efficiency (Ferreira 2010).

The results of empirical research into the impact of gender diversity on board efficiency and firm performance is very mixed (Smith 2014). Part of the reason for the ambiguous results is that the studies stem from many different countries with different institutional settings, company structures etc. Secondly, statistical methods and identification of the causal relationship between gender diversity and firm performance is an important issue. This relationship may be subject to two main types of endogeneity problems. One problem is related to omitted variables. For instance, companies with good corporate governance behaviour and HR policies may have more gender diverse boards and tend to perform better. The second problem is reverse causality. Companies who perform well during a given period, for example, may 'take the risk' of hiring a woman for the board. The opposite may also occur, i.e. companies that perform poorly during a period may tend to hire a female CEO or chairman of the board (Ryan and Haslam 2005).

A number of the empirical studies and reports from the Catalyst organisation (see for instance Catalyst 2012; McKinsey & Company 2010), which tend to find a positive relation between women on boards and firm performance, have not explicitly addressed these endogeneity problems. Empirical studies, which apply alternative estimators with and without control for endogeneity problems, document that simple OLS estimates typically tend to be positively biased because of these problems. When applying panel estimates to take account for (time constant) unobserved heterogeneity and IV instruments etc. to address reverse causality, the positive relationship between diversity and performance often disappears, or may even become negative (see for instance Smith, Smith; Verner 2006; Adams and Ferreira 2009).

Female board members do seem to impact the work done by supervisory boards. Adams and Ferreira (2009) find for US boards that female board members tend to have fewer attendance problems, and that having more females on the board also increases the attendance rate of male board members significantly. In the same study it is found that boards with more female directors tend to have significantly higher CEO turnover in companies that are not performing well. The authors conclude that female board members tend to be tougher monitors of CEO performance. Huse, Nielsen and Hagen (2009) studied the board processes based on a survey of Norwegian firms (after the introduction of the quota law). They find that boards with more female directors tend to have better processes and board discussions, which may imply a positive impact on board efficiency.

However, not all studies document a significant difference between male and female directors. When levels of female representation on the supervisory or management board are very low in a country, the impact and behaviour of female directors may be very different from that of the rest of the female population (and more like that of their male peers) because these women constitute a highly selected group of women. Adams and Funk (2012) find that this is, in fact, the case for Swedish women serving on supervisory boards. Swedish female board members were found to have values concerning security, traditions, and risk attitudes that were more in line with those of their male peers than representative of women in general in the Swedish population. Thus, results concerning the impact on gender diversity may be different in countries with a very low rate of female board representation compared to countries with a high representation rate because of factors like quota regulations or other political regulations.

The empirical evidence from the Norwegian quota

In view of the statistical problems related to identifying the causal impact of female directors on firm performance and firm behaviour, it might be argued that the empirical evidence from Norway is the optimal means of studying the causal impact of gender diversity on firm performance. Norway has experienced an almost perfect ‘natural experiment’ since it was the first country in the world to decide to implement a binding 40 percent gender quota on large listed Norwegian companies in the private sector within a fairly short period of time.

In 2002, the Norwegian minister of Trade and Industry announced in Norway’s largest newspaper *Verdens Gang* that he was, “sick and tired of the old men’s club” and that he wanted to impose a 40 percent quota for females on the largest Norwegian firms’ board of directors (Ahern and Dittmar 2012, 155–156). In 2002, less than ten percent of the board members of Norway’s largest publicly listed companies were women. The law was passed in Parliament in 2003, but with a grace period of two years. If companies subject to the quota failed to reach the 40 percent limit by July 2005, the quota became mandatory. In early 2006, the Norwegian parliament decided (since the 40 percent goal had not been reached by firms), that the quota was to be mandatory as of January 2008. The quota was mandatory for publicly-listed companies (ASA), i.e. large listed companies that are also subject to stricter rules with regard to capital stock and other aspects of board composition (for a detailed description see Storvik 2011 and Ahern and Dittmar 2012). In 2008, all Norwegian ASA companies complied with the quota law: 40 percent of their directors were women!

The research results concerning the impact of the quota law on firm performance seem, at first glance, to be contradictory and to point in opposite directions. According to Ahern and Dittmar, there was a 3.5 percent drop in share prices at the stock exchange for ASA companies without any women on their board following the announcement of the law. Ahern and Dittmar estimate a number of models where they use the fact that the ASA companies subject to the quota law had a different number of women on their boards in 2002 (identification strategy). They find that the law had significantly negative effects on a number of economic performance variables, and that the effects were more negative the fewer the number of women already on the board when the law was announced in 2002, i.e. the companies where the quota law was most binding as a constraint

on board composition experienced the largest negative impact. Matsa and Miller (2013) use a slightly different sample of Norwegian firms and a different identification strategy (they compare to other large Nordic companies as their main identification strategy and analyse the impact after the binding quota law was implemented in 2006). They also find a significantly negative effect on the economic performance of the companies subject to the quota law. According to Matsa and Miller, this is mainly because the companies subject to the quota were less reluctant to lay-off their workers during the cyclical downturn in 2008.

Dale-Olsen, Schöne and Verner (2013) compare the ASA companies with Norwegian private companies that were not subject to the law. They find that for the majority of surviving ASA companies, the law had no impact on economic performance (their outcome measure is the percentile ranking of growth of ROA). For the poorest performing companies, however, they find that the reform had a positive effect. This may correspond to the results found in Adams and Ferreira (2009) that gender diversity has a positive effect in poorly managed companies because female directors tend to be tougher monitors than their male peers on the board.

Thus, the results for the Norwegian quota law are not unambiguous. Part of the reason may be the validity of the identification strategy, i.e. what is the comparison group.² Another reason for the apparently different results may be different outcome variables. The share price reaction of the stock market to the quota announcement and political decisions in 2002–2003 may be much more instant compared to the potential impact on labour costs or ROA outcome variable, which will occur much later than at the date of the announcement of the quota law. Additionally, one might argue that stock market reactions are not rational, but merely reflect market ‘prejudices’ or an overshooting reaction. We do not yet know the long-term impact on Norwegian firms’ performance, which may be different from the short run reaction. The labour hoarding behaviour of the companies subject to the quota may,

² Ferreira (2010) criticises the instrument used by Ahern and Dittmar (2012) for not having a randomly selected control group. The timing of the announcement of the quota law and the anticipation within the firms of the ‘threat’ of a law and the timing of their reaction to this ‘threat’ is the crucial point. Dale-Olsen et al. (2013) analyse the companies that survive as ASA companies and do not give up being publicly listed companies may be a selected group (sensitivity studies, however, indicate that the results are robust to this problem). In Matsa and Miller (2013), the control group critique does not apply, but Matsa and Miller are not able to precisely identify which companies are subject to the quota law. They use information on whether the company is a public or private company as a proxy for being subject to the quota law.

for example, have positive long run effects on workforce loyalty and image. Companies may adjust over time to the law, and the female board members and the pipeline of qualified women will increase over time since female board members acquire more experience.

This observation points to another potential effect of the quota. The main purpose of the law was to increase the number of women on boards and to reduce ‘old boys’ network’ effects as announced by the Norwegian minister. In that sense the Norwegian quota law was a success. In 2008 the goal was reached and 40 percent of board members were women. However, female directors cannot have been the ultimate policy goal. This target must have stemmed from a more general ambition to get more women into powerful positions in the private sector, and not only to help a limited number of high profile women to obtain more positions on supervisory boards (‘the golden skirts’ discussion). From this perspective, it is debatable whether the Norwegian quota law has achieved its goal. According to Ahern and Dittmar (2012, 170–172), the newly hired women on Norwegian boards were actually different (younger, less experienced as directors or top executives etc.) from the board members who stayed or exited the Norwegian boards during the period up to 2008. On the other hand, the female proportion of CEOs and the number of female chairmen on boards in the large Norwegian companies increased only slightly from about two percent in 2001 to about five percent in 2009. Since the same pattern is found in Denmark, a Scandinavian neighbouring country that has not introduced any quota regulation, it is doubtful whether the quota law has had a spreading effect and introduced more female role models in the Norwegian business sector (Smith et al. 2013). The most recent developments after 2008 do not look promising. According to more recent data from Statistics Norway (2013), there was notably no increase in the female share of directors in private limited companies (ASA companies that were not subject to the quota) or in the female share of top executives (CEOs) of public and private limited companies up until 2013. Only six percent of the 274 public limited companies in Norway had a female CEO (general manager) in 2013 and the share of female CEOs even decreased between 2012 and 2013!

A potential negative effect of the quota law has been the delisting of the ASA companies in order to avoid the quota law. There are clear disagreements in research into this phenomenon. Ahern and Dittmar (2012) and Bøhren and Staubo (2012) find that it had a major effect on the number of firms listed on the stock exchange and

as many as 30–50 percent of the ASA companies delisted due to the quota law. Again, the results from various authors seem to differ. Bøhren and Staubo (2012, 22–23) conclude that ‘half the firms choose to exit into an organisational form that is not exposed to the law’ This tendency to avoid costly regulation by changing organisational form varies systematically with firm characteristics. The opposite view is found in Storvik (2011, 40), who argues that only two percent of companies changed their organisational form due to the quota regulation. Her figure is based on telephone interviews with CEOs and chairmen from companies that changed from public to private limited companies. However, one may be fairly critical of this figure since the validity of answers from CEOs or chairmen is questionable, as it may not be optimal for the legitimacy of a Norwegian company to publicly admit that it changed organisational form due to the quota law.

Implications and conclusion

After many years of almost constant female representation on the boards of directors in large private sector companies, the figures now seem to be changing. From 2003 to 2013, the female share of board members in the largest listed companies in the EU increased considerably. However, the increase mainly took place in countries that had announced or already implemented quota or soft law regulations on the gender composition of supervisory boards. In these countries female representation increased from eight percent in 2003 to 20 percent in 2013. In the rest of the EU countries with no regulations the figures were nine to 11 percent. The mere discussion of guidelines for good governance and (the threat of) quotas seem to have had an impact on female representations in the countries where the debate has been heated and politicians have implemented regulations. This has unearthed a large number of suitable female board candidates in many countries within and outside Europe, and has increased female representation – a transition that probably would not have happened without the (threat of) quota regulations.

The EU figures are still far below the female share of directors on the boards of Norwegian and Icelandic listed companies, where binding quota laws in 2008 and 2013, respectively, prompted a very rapid increase in the number of female directors. The impact of the Norwegian quota on firm performance has been studied intensively and research into the impact of the quota yields conflicting results, mainly because it is difficult to identify what

exactly the counterfactual scenario was and which control groups Norwegian companies subject to the quota law should be compared to. The most reliable studies tend to indicate that there was a negative impact on firm value immediately after the quota was announced in 2002 and implemented in 2006, and the impact was largest for the companies that were most heavily affected by the quota. The Norwegian companies that were subject to the quota law were more reluctant to adjust their labour force during the cyclical downturn after 2007, and therefore incurred higher labour costs. However, for the weakest performing quartile of companies, the quota law seems to have had a positive impact on firm performance. Beside these results, the quota law also implied that a number of public listed companies that were subject to the quota decided to change their organisational structure in order to avoid the quota.

The Norwegian ‘experiment’ is interesting for many reasons. It might be considered a ‘perfect experiment’ to study with respect to the causal link between board gender diversity and firm performance. However, care should be taken about generalising the Norwegian experiences concerning the impact of gender diversity on firm performance and applying them to other countries that have not implemented a quotation and have a much lower level of female representation on their supervisory boards, as is the case in most other countries in Europe. The Norwegian quota was implemented within a very short time period, and initially, in 2002, Norway had a fairly low level of female representation on supervisory boards (less than ten percent). Women who were given directorships in Norway because of the quota were younger and less experienced than women who had board positions before the quota was implemented. Since other countries have been much slower to follow the Norwegian example, and since the female representation level on boards has been gradually increasing, the impact of quota regulations in countries other than Norway may be more positive because the adjustment will be more gradual since the female share has already increased considerably in recent years.

However, one crucial question and condition for the success of the gender quota and soft law regulations remains: will these regulations change the position of women in top management? Will the quota law imply that a much larger proportion of the female talent pool succeeds in rising to top positions in companies, either as directors or as top executives? The ultimate political goal of the quota cannot be that a limited number of women are given attractive jobs as directors, especially

since most research studies to date have not documented any positive causal impact of gender diversity on firm performance. Therefore gender diversity on boards has to be based on arguments in favour of fairness, equal opportunities or the long run argument of a better use of the female talent pool.

In this sense the Norwegian quota-law does not seem to have been a success. Until now the quota has not had much more than a scattered impact in Norway with respect to getting more women into executive positions or directorships in companies not subject to the quota. Here, as well as in the rest of Europe, female representation at the executive and supervisory board level remains low, and women in many cases do not succeed in climbing the career ladder and harnessing the huge human capital investment that they have made. Therefore, quota regulations on top of the company hierarchy and supervisory boards may not be the ultimate answer to these challenges. Politicians probably also have to address the challenges further down in the hierarchy where the pipeline is leaking, i.e. the early careers of young women and the balance between career and household responsibilities if they want to achieve a more balanced gender composition in top management positions in the long run.

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LABOUR MIGRATION

Any given labour market features inefficiencies that create institutional, as well as individual problems. These inefficiencies can include, for example, shortages of some sought-after skills or excesses of other skills in the labour supply. In the OECD countries, one concrete problem facing labour markets is population ageing. The labour force is consequently contracting because more people are dropping out of it than are entering, which has the potential to create a myriad of problems.

Labour migration is one way of creating more flexible labour markets that function efficiently, because migration can help to offset differences in skill shortages and excesses between various labour markets. Compared with many other potential solutions to the problems facing labour markets, migration can have an almost instantaneous effect. This is in marked contrast to, for example, education, which typically takes years to affect labour markets. This is not to say that there are no long-term effects caused by migration, or that these effects are easy to predict.

Labour migration regulations in OECD countries

Given the importance of labour migration, it is only to be expected that this area is often heavily regulated. In general, restrictions on labour migration have proven very widespread in the past. Existing regulatory policies in OECD countries operate on several different levels.

There are a number of general international and regional agreements that focus at least partly on labour migration (1). The latter is also regulated by several bilateral agreements between countries (2). Finally, labour migration is regulated at the level of individual countries, based on the legislation of each separate country (3). Naturally, the policies regulating labour migration in OECD countries are not immutable, but have undergone significant changes in response to perceived changes in the labour markets in question, changing political preferences, etc. (4), many of which have occurred in recent years.

Labour migration regulation in the EU

The regulation of labour migration between EU countries differs in some fundamental ways from the case of

other OECD countries, owing to the fact that free movement of labour is one of the basic principles of the EU. Hence, in principle, unhindered labour migration from one EU member country to another has been guaranteed by various union agreements, starting as early as the Treaty of Rome establishing the European Economic Community in 1958.¹ The latest version of the main EU treaties is the Treaty of Lisbon signed in 2007 (5).

However, following the enlargements of the union in 2004,² 2007,³ and 2013,⁴ transitional provisions were agreed upon, whereby existing members could choose to impose restrictions on the free movement of labour from the new member countries for up to seven years after the enlargement in question. The decision as to the precise nature of these restrictions was left, within given boundaries, up to the individual member countries. Use of these transitional provisions has accordingly been quite heterogeneous between different member countries. For example, Germany and Austria opted in 2004 for some general restrictions that remained in force for the maximum duration of 7 years, while Sweden chose not to utilise this option (6).

General aims of labour migration policies in OECD countries

The basic policies regulating labour migration in the OECD differ with the skill-mix of the migrants desired by individual countries. In general, the aim of the policies targeting low-skilled workers is to regulate the number of labour migrants coming into a country by placing restrictions on migration, while the aim of the policies targeting high-skilled workers is to create additional incentives to attract those migrants into the country (7).

Some frequently used policies for reducing the number of labour migrants admitted to a country, and targeting low-skilled workers in particular, include quotas, which can be country-of-origin specific, or more generally, restrictions on work permits and language requirements. Work permits, for example, are only granted in some cases after the relevant position has been listed in the local employment agency for a given number of weeks,

¹ Free movement of labour in some key industries was also a part of the treaty establishing the European Coal and Steel Community in 1951.

² In 2004, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, Malta, and Cyprus became members of the Union.

³ Romania and Bulgaria.

⁴ Croatia.

as in the case of Finland and the Netherlands,⁵ or the employer may be required to verify that the wage level for the migrant is appropriate, as in the case of Australia (8).

Limitations on temporary workers only staying for a short period of time have typically been more relaxed, because some sectors of labour markets, most notably agriculture and tourism, may in some cases be dependent on the ready availability of low-skilled seasonal workers (9).

Policies targeting high-skilled workers usually aim to create special incentives to encourage those workers to migrate and settle in the host country. Typical policies employed include tax-breaks, the fast-track issuing of work permits and relaxed requirements for obtaining temporary and/or permanent resident status. In many cases, OECD countries have introduced special skill shortage lists, which specify the sought-after skills needed to qualify for the relaxed entry rules. Some examples of the professions mentioned in the short lists include researchers and scientists, corporate executives, engineers and professional health workers (10).

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⁵ For migrants coming from outside the European Economic Area, comprised of the 27 EU members plus Iceland, Liechtenstein and Norway.

Table 1

List of related tables, links to DICE Database

(1)	Intra-regional Liberalisation of Workers Movements Across OECD Countries, 2012 (PDF, 37 KB).
	Regional Agreements on Migration Policy (PDF, 22 KB).
(2)	Agreements on Cross-Border Employment, 2004 (PDF, 22 KB).
	Bilateral Labour Agreements, 2004 (PDF, 35 KB).
	Guest Worker Agreements Signed by OECD Countries, 2004 (PDF, 57 KB).
	Trainee Agreements (PDF, 106 KB).
	Working Holidaymaker Schemes, 2004 (PDF, 21 KB).
(3)	Employment and Residence Permits for Migrant Workers, 2009 (PDF, 99 KB).
	Legal Requirements for Non-EU Workers in Selected EU-Member States (PDF, 263 KB).
	Migrant Employment Conditions Covered and Remedies Available, 2003 (PDF, 40 KB).
	Stay and Residence Rules for Immigrants in the Member States of the EU, 2007 (PDF, 221 KB).
(4)	Migration Policy Changes (PDF, 168 KB).
(5)	European Union Agreements on Migration, 1958 – 2001 (PDF, 40 KB).
(6)	Free Movement of Labour in the EU-15, 2009 – 2011 (PDF, 32 KB).
	Review of the First Phase of the Transition Period in EU-15, EEA and Switzerland (PDF, 32 KB).
(7)	Policy Priorities and Strategies for High-skilled Migration (PDF, 44 KB).
(8)	Labour Market Tests for Foreign Applicants (PDF, 34 KB).
(9)	Employment and Residence Permits for Migrant Workers, 2009 (PDF, 99 KB).
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	Legal Requirements for Non-EU Workers in Selected EU-Member States (PDF, 263 KB).
	Recruitment of Seasonal Workers (PDF, 50 KB).
	Stay and Residence Rules for Immigrants in the Member States of the EU, 2007 (PDF, 221 KB).
	Temporary Work Permit Programmes for Low-skilled Workers, 2006 (PDF, 38 KB).
(10)	Fiscal Incentives for Highly Skilled Immigrants (PDF, 21 KB).
	Controlled Immigration: Points Attributed Under Different Recruitment Systems, 2011 (PDF, 36 KB).
	Criteria for Temporary Recruitment of Skilled Foreign Workers, 2001 (PDF, 95 KB).
	Mechanisms to Attract Foreign Research Graduates in EU-Member Countries, 2006 (PDF, 48 KB).
	Migrant Entrepreneurship and Self-employment: Programmes to Support Investors, 2010 (PDF, 86 KB).
	Migrant Entrepreneurship Self-employment: Admission Criteria, 2010 (PDF, 160 KB).
	Migration Policies and Recognition of Foreign Qualifications for Health Professionals: Recognition of Foreign Qualifications (PDF, 41 KB).
	Migration Programmes for Health Workers (PDF, 88 KB).
	Policies for High-skilled Immigrants (PDF, 137 KB).
	Policy Measures Aimed at Highly Skilled Workers and Students / Researchers, 2006 (PDF, 36 KB).
	Policy Priorities and Strategies for High-skilled Migration (PDF, 44 KB).
	Trainee Agreements (PDF, 106 KB).

Source: CESifo DICE – Database for Institutional Comparisons in Europe, Tables in section Labour Market and Migration / Labour Migration.

OLDER EMPLOYEES – MORE INTEGRATED INTO WORKING LIFE

In the early 2000s, a discussion about the integration of persons aged 55–64 years into working life was only just starting in most European Union (EU) countries.¹ At that time, persons in this age group were widely excluded from working life, which was the outcome of previous retirement schemes and a culture that generally fostered early retirement.

In 2000, the employment/population ratios² of persons aged 55–64 lay below 40 percent in most EU countries and at an average of 37 percent in the EU21 countries.³ This figure was slightly above 50 percent only in Denmark, Portugal and the United Kingdom, and over 60 percent only in Sweden (see Figure 1).

The picture has changed for most EU countries over the past decade. The employment/population ratios for persons aged 55–64 years in 2012 show the positive trend in this age group compared to 2000. More persons of

this age group are now participating in working life than before. The EU21 average rose to 49 percent in 2012.

Most EU countries (with the exception of Greece and Portugal) raised their ratios and more people aged 55–64 are now in employment. Sweden remains top of the list with 73 percent, while the ratios in Ireland, United Kingdom, Finland, the Netherlands, Denmark and Germany are above 50 percent. Countries with a poor rate of integration and ratios that remain under 40 percent include Greece, Hungary, Poland and Belgium.

The change in the employment/population ratios in 2012 compared to 2000 for persons aged 15–64 and persons aged 55–64 show that in the older age group, the increase was over-proportional (see Figure 2) in comparison to all persons. Germany tops the list with a change of 23.8 percentage points, while the Slovak Republic and the Netherlands also increased their respective ratios by over 20 percentage points in 2012. Only the ratios of Portugal and Greece decreased compared to 2000. The EU21 average went up by 12.8 percentage points.

Employment/population ratios, however, are not the only figures that draw a positive picture for people aged 55–64 years. Unemployment rates among this age group are also below the average figure for all working people aged 15–64 years in most countries (see Figure 3). During the financial debt crisis and the following recession unemployment rates were rising and younger employees mostly tended to lose their jobs. Spain shows the highest unemployment rate among older persons – as well as overall.

What are the reasons for the positive development in the age group 55–64 years in the past decade? Of course, one reason was the need, widely recognised in the early 2000s, for a response to the demographical changes taking place in most industrial countries – namely that of an ageing society and rising life expectations. Governments installed various reforms to foster the improved and longer participation of older people in working life as a result, like raising the statutory pension age and eliminating male-female pension age differences, reducing incentives for early retirement,

¹ See, for example, Older Employees – A Neglected Source of Workers”, *CESifo DICE Report* 1 (1), 2003, 48–49.

² Employment/Population ratio = The employment to population ratio measures the proportion of the country’s working-age population (ages 15 to 64 in most OECD countries) that is employed. This includes people that have stopped looking for work. The International Labour Organization states that a person is considered employed if they have worked at least 1 hour in „gainful“ employment in the most recent week.

³ This article focuses on the EU21 countries following the OECD definition: “All EU countries prior to the accession of the 10 candidate countries on 1 May 2004, plus the four eastern European member countries of the OECD, namely Czech Republic, Hungary, Poland, Slovak Republic.”

Figure 1

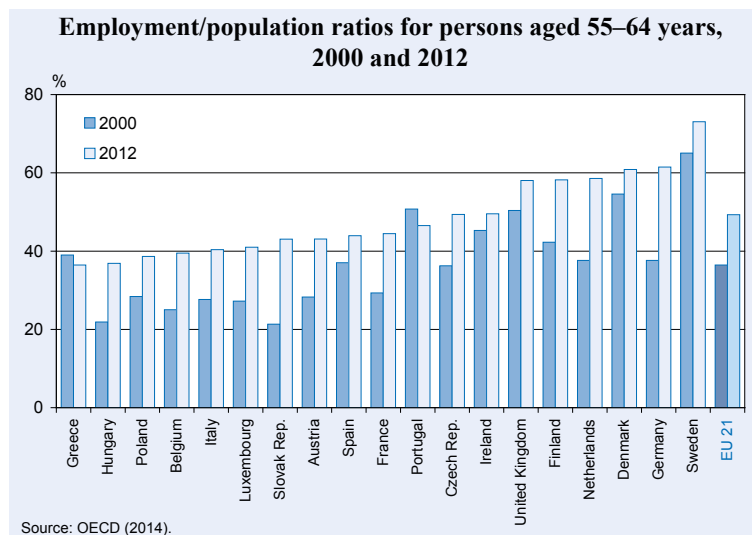


Figure 2

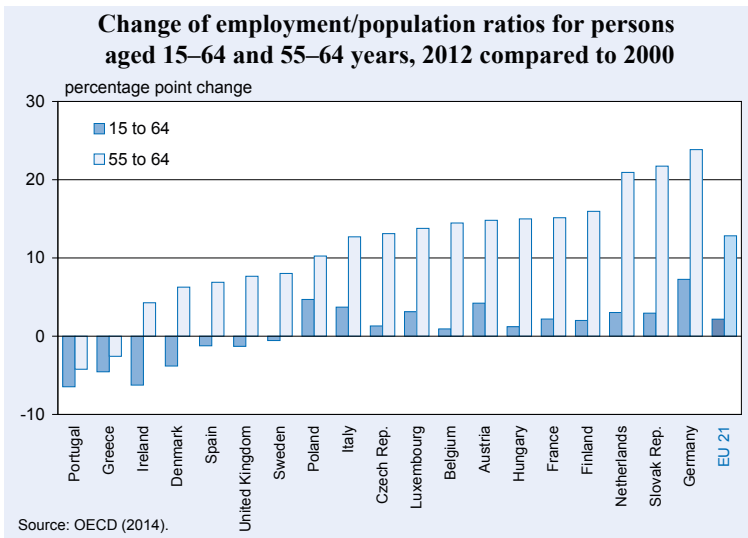
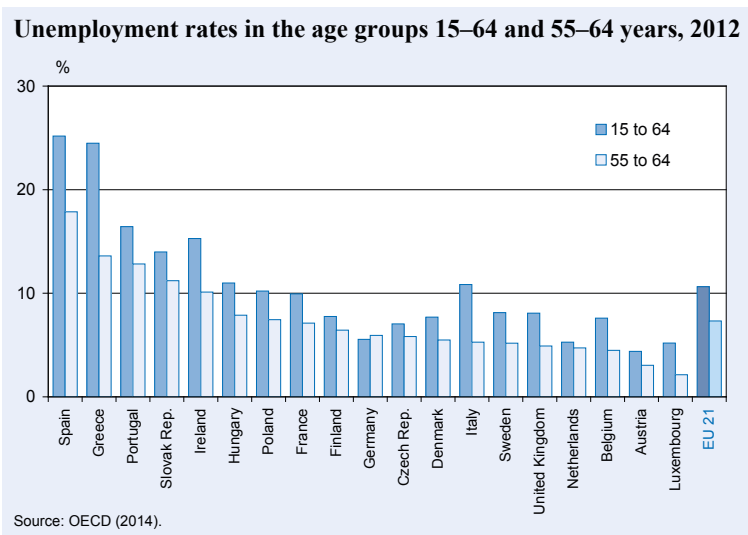


Figure 3



sickness/disability benefit reforms, introducing anti-discrimination policies and creating incentives to promote lifelong learning and skills development in the workplace (Eurofund 2012).

In Sweden, which topped the list with the highest ratio in the EU in 2000, the government has clearly focused on fostering the integration of older employees into the workforce since the 1990s by introducing programmes like lifelong learning, active labour market policy, by promoting healthy working conditions that maintain workers' well-being, by introducing employment-friendly tax-benefit systems (making work pay for older workers under and above statutory retirement age) and policies to combat age-discrimination in the labour market (EEO Review).

The Lisbon Agenda, which was launched in 2000, set an official goal for all EU countries to reach a rate of 50 percent by 2010 as an employment/population ratio for older employees. EU countries reformed their retirement schemes and changed the possibility of taking early retirement by raising the minimum age for early retirement, as well as the minimum general retirement age. Hence some countries like the Netherlands and the United Kingdom do not offer the option of early retirement or do not even have a fixed retirement age set by the government (DICE Database 2012). Ireland, United Kingdom, Finland, Netherlands, Denmark, Germany and Sweden reached the goal of the Lisbon Agenda by 2010.

To maintain this development in the future, one of the five major aims of the European Union's ten-year growth strategy EU-2020 set in 2010 is to foster employment – the target is a 75 percent employment rate for persons aged 20–64. Older employees are one of the special focus groups (together with youths, lower-qualified workers and migrants) – but there are no fixed employment/populations ratios to be reached for all

EU countries. Germany, for example, set a national goal of 60 percent for itself within the EU-2020 goal, but has already reached this target.

Hence the age group 55–64 years is the only special focus group for which there has been a rise in the ratio at all to date. The under-proportional changes in the development of the employment of all persons (see Figure 2) makes it clear that not all age groups gained in the last 10 years. Younger persons (aged 15–24 years) in particular became less integrated into working life, which has been part of the discussion for some time. There have been studies conducted concerning the question of whether older employees work longer and more at the expense of younger people (OECD 2013). Such studies investigate the belief that retiring older employees make

space for younger employees to enter working life, with both age groups seen as substitutes in a fixed amount of people in employment. There is, however, no empirical proof that higher employment rates among older workers reduce job opportunities for youths (Gruber and Wise 2010, Munnell and Wu 2012). The two groups are no longer seen as substitutes, but as complements nowadays, as they mostly do not compete for the same jobs.

As both age groups “older employees over 55” and “younger employees” are the special focus of the EU-2020 strategy, the challenge will be not to outweigh one group with the other, but to strengthen and raise employment rates for both groups.

However, there are critical voices concerning the interpretation of the statistics shown above concerning the employment rate of older persons. In Germany, in particular, there is a broad discussion about how to interpret the findings of these figures. The critics argue that these figures do not show the real picture as low-income jobs without social welfare security and part-time occupation in special models are included in the employment/population ratio. There are a number of older people who still need to work after their retirement if their pensions are too low to maintain a certain standard of living.

After all, and in addition to the figures shown, a lot of older people still want to be employed, as they see work as part of their social life (Eurofund 2012; ZEIT 2014). Hence most do prefer part-time models instead of being retired at one time directly or working full-time (GfK 2013). This would seem to suggest that this trend will continue in the future and flexible, part-time retirement models will probably remain on the agenda for some time to come.

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IMMIGRATION RESTRICTIONS SINCE THE 2007 CRISIS

Since 2007 most countries have been hit by recession and sharp increases in unemployment rates. Rising unemployment has compelled states to take various measures to stimulate job creation, or at least to avoid job destruction. In view of the current crisis, the attitude of governments towards the growing number of immigrants in the labour market has changed as well.

Figure 1 reflects the cyclical nature of immigration inflow. The period 2001–2007 saw strong economic growth and high inflows of immigrants (d'Addio and Cavalleri 2013; Figure 1). While some states experienced an important rise in immigration inflow, which, for example, doubled in Spain and the United Kingdom, and increased by over 37 percent in Switzerland; there was, however, a decrease of approximately 16 percent in Germany and nearly 80 percent in Portugal. These two countries went through a period of low economic growth rates compared to other European states. Inflows to Italy show an erratic pattern, reaching a peak in 2007, which is likewise more than twice the level of 2001. Immigration inflow to other states, like France and Hungary, was, on the contrary, more stable in the pre-crisis period.

The subsequent economic slowdown and the resulting fall in labour demand caused a strong decline in mobility opportunities (d'Addio and Cavalleri 2013). The states hit most severely by the crisis, like Italy and Spain, faced major reductions in immigration of 28 percent and 55 percent. These observations are in line with economic theory of high standards of living and job opportunities being the main attraction for immigrants (Grogger and Hanson 2011). Thus, European nations less affected by the crisis show fairly constant or even growing (for Germany and Switzerland) immigration rates. Inflows to Switzerland have increased to reach approximately the same level as France. Immigration to France, Hungary, Portugal and

the United Kingdom has remained comparatively stable. The OECD countries not shown in the graph experienced slight reductions in immigration flows. Figure 1, however, only presents immigration inflows, and does not make any statement about the decline or increase in net migration over this period. Ultimately, one can say that the pattern observed in immigration since 2007 is a combination of economic factors and government policy, whereby the extent to which states are affected by the crisis seems to impact immigration flows.

Table 1 shows that there was a convergence of government policy between 2008 and 2010 towards the implementation of restrictions on immigration, but to different degrees. Germany, Hungary and Portugal officially justified their measures by citing the economic crisis. These official statements and the simultaneity of the changes within the EU reflect a wish to protect the employment of natives against competition from migrants, in times of economic uncertainty. Southern European states like Portugal, Spain, and Italy, have implemented the toughest policies limiting or cancelling the quota of admitted foreign and non-seasonal workers, with the former two enforcing reductions of 56 percent and over 90 percent, respectively. While immigration inflows have remained fairly constant for Portugal since the start of the crisis, Italy and Spain experienced a strong decline. Germany and the United Kingdom have adjusted and extended restrictions to a lower extent, having implemented policies that concerned only migrants from EU-12 new member states and non-EEA, respectively. Furthermore, these countries have shown constant or even increasing (Germany) immigration

Figure 1

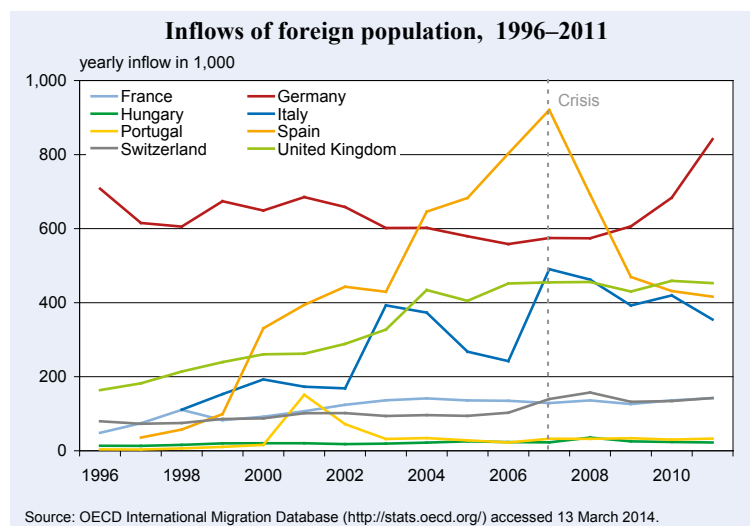


Table 1

Impact of the economic crisis on migration: policy changes, 2010 (excerpt)	
Country	Migration policies: admission restrictions / quota reductions
Germany	The German government announced amidst the recession that the country would extend restrictions on the free mobility of labour from EU-12 new Member States until the year 2011.
Hungary	Due to the economic slowdown as the number of vacant jobs decreased, the quota in 2009 was set lower than in 2008 (the quota decreased from 65,000 in 2008 to 60,000 in 2009).
Italy	In Italy quotas for migrant workers were almost completely phased out in 2009; only seasonal agricultural workers and tourism workers were admitted (OECD, 2009a).
Portugal	In 2009 Portugal reduced the quota of admitted foreign workers (which included specific sectors believed to be experiencing a shortage of workers) to 3,800 individuals from 8,600 in 2008 (-56 percent). The government officially justified the reduction by citing the economic crisis (IOM country survey, Portugal).
Spain	Spain reduced admissions based on reductions of certain skills on labour shortages lists. The country drastically lowered its ceiling for non-seasonal workers to be recruited from abroad (Contingente) in 2009. In December 2008, the annual quota by occupation for non-seasonal workers was set at 901 for 2009, compared to 15,731 in 2009 (OECD, 2009a).
UK	The UK has reduced admissions based on reductions of certain skills on labour shortages lists. The current list focuses on specific job categories, most of which require a high degree of specialization (OECD, 2009). The government has made it more difficult for non-EEA migrants to enter the UK. The UK Border Agency has been established as a single agency combining borders and immigration. It is intended to make border operations more efficient (UK case study).

Source: DICE Database (2014).

inflows since 2007. By contrast, France did not adopt any further restrictions in 2008-2010 in direct response to the crisis. Finally, Switzerland had not introduced any restricting measures prior to the referendum in February 2014. Some European states not listed in the table excerpt have either not (considerably) changed their migration policy during this period (e.g. Estonia, Romania and Greece), or have, on the contrary, taken initiatives to increase immigration flows, like Finland and Poland.

The divergence in policy partly reflects the absence of consensus and the challenge faced by countries dealing with public scepticism regarding the benefits of migration. According to a survey by Dustman and Glitz (2006), fears of immigrants “taking away jobs” from native workers are widespread in Europe (Jean and Jimenez 2007). In view of the current economic crisis, the latest example of the Swiss referendum limiting “mass immigration” reflects the prevalent and intensified anti-immigrant sentiment. Docquier, Oezden and Peri (2011), however, argue that the public fears in European countries concerning immigration are misplaced, and that the concern should be directed towards emigration instead. Various economists have investigated the effects of immigration on wages and the labour market in host countries and empirical studies generally find no evidence of migration flows lowering

the labour market prospects of natives (Gonzalez and Ortega 2014). Thus, theory and empirical evidence are needed more than ever to answer the question of which policies, quota, or optimal immigration rates states should adopt (Nijkamp, Longhi and Poot 2010).

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DEVELOPMENT OF CURRENT ACCOUNTS

The current account, as part of the balance of payment, records the flow of goods and assets between natives and foreigners. It consists of the balance of trade, or a country's exports less its imports of goods and services, net income from abroad and net current transfers. If a country imports more than it exports, it will face a current account deficit or vice versa.

Furthermore, the balance of the current account implies the capital account. The share of imports exceeding exports has to be financed by borrowing from a foreign country. If these current account deficits persist, a country will run into a net foreign deficit. This was the case in most of the southern European countries like, for example Greece, Spain and Portugal. These deficits often lasted due to weak private savings and can be seen as a sign of a lack of competitive ability. In recent years, the deficits of these countries decreased due to lower imports and stagnating exports.

The current account imbalances in the Eurozone (Figure 1) were widely discussed before and after the financial crisis. Germany in particular – together with some other Northern European countries – was often criticised for its weak domestic demand and high surpluses, which increased again in 2013. Thanks to even faster growth in imports, the German current account surplus is expected to decrease this year. With the Southern European countries disclosing lower deficits, or even small surpluses (as indicated by predictions for Spain or Portugal for 2013), European current account imbalances are expected to continue to narrow.

The same phenomenon can be seen at a global level. The imbalances declined from around five percent of global GDP in 2008 to around half of that figure in 2012. Most of the adjustment took place shortly after the financial crisis, with negative global growth and lower demand in external deficit economies. In most of these economies investment and government savings declined, while private saving sometimes increased. The imbalances are projected to stay at their current level until 2015, rising only in Japan and the US, but narrowing, for example, in China.

China is now far from surpluses of almost ten percent of GDP (Figure 2). Despite export market share gains, the relative strength of domestic demand is forecast to result in surpluses of up to four percent by 2018, which was the level of 2010.

Figure 1

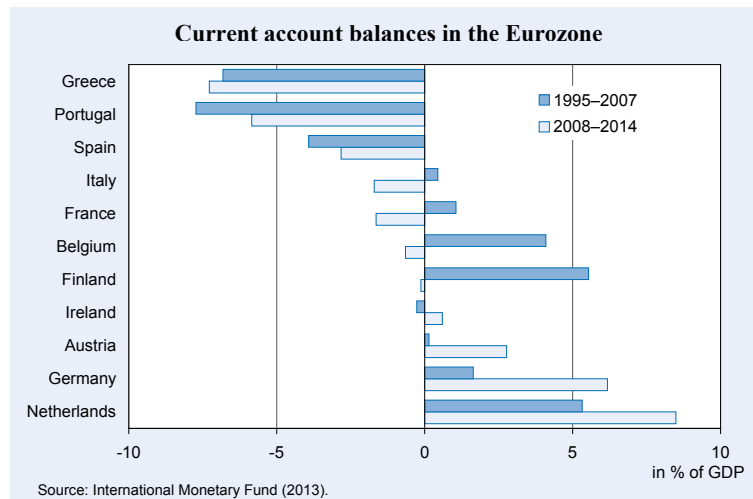
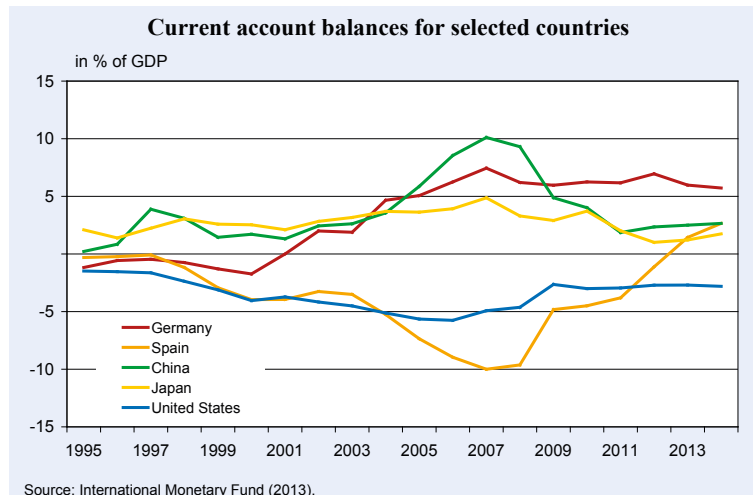


Figure 2



The US current account deficits are projected to stay close to three percent. The deficit looks set to decrease this year to around 2.7 percent, but to increase again in the years ahead due to strong growth in domestic demand in 2014 and 2015.

Japan's current account surplus is expected to stabilise this year, after falling due to rising energy imports after the earthquake of 2011. The depreciation of the yen worsened the terms of trade. The effect on the current account is now offset by strong net export volume growth and a rising net investment income balance. Fiscal consolidation is likely to dampen demand. This, in turn, means that the current account surplus is expected to rise to 1.9 percent by 2015.

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NEW AT DICE DATABASE

Recent entries to the DICE Database

In the second quarter of 2014, the DICE Database received a number of new entries, consisting partly of updates and partly of new topics. Some topics are mentioned below.

- Indicators of Product Market Regulation
- Trends and Developments in Cartel Enforcement
- Value Added Tax Rates
- National Programmes to Support Knowledge Transfer and Commercialisation of Public Research
- Licensing Procedures and Licensing Complexity for Business Start-ups
- Spectrum Tendering Process
- Net Neutrality Regulation
- Broadband Targets and Policies in the European Union
- Local Loop Unbundling Prices
- Contribution of Different Components of Pension Systems to Total Pension Promise
- Average Collectively Agreed Normal Annual Working Time
- Environmental Protection Expenditure by the Public Sector

The interactive graphics application [Visual Storytelling](#) has been further expanded.

FORTHCOMING CONFERENCES

Venice Summer Institute 2014

21–26 July 2014, Venice

Five workshops dealing with the following topics:

- The Economics and Political Economy of Energy Subsidies (
- Behavioural Political Economy
- Regional Mega Deals: New Trends, New Models, New Insights?
- Demographic Change and Long-Run Development
- Reforming the Public Sector

Scientific organisers (in the order of the workshops)

- Professor Jon Strand
- Professor Arye L. Hillman, Urs Fischbacher, Professor Heinrich Ursprung
- Professor Gabriel J. Felbermayr, Professor Mario Larch
- Professor Uwe Sunde, Matteo Cervellati
- Professor Apostolis Philippopoulos

ETSG 2014 Munich - 16th Annual Conference

11-13 September 2014, Munich

The European Trade Study Group (ETSG) is a forum for academic discussion and research on international trade among European universities and research institutes. Participation in ETSG activities is open to all academic and research economists. ETSG 2014 is being hosted by LMU Munich and Ifo Institute.

Scientific organisers: Prof. Dr. Carsten Eckel, Prof. Dr. Gabriel J. Felbermayr, Dr Lisandra Flach

CESifo Area Conference on the Economics of Education 2014

12-13 September 2014, Munich

The conference will be held in Munich for all members of the CESifo Research Network with an interest in the Economics of Education. Organised by Eric A. Hanushek (Stanford University, Area Director) and Ludger Woessmann (Ifo Institute), the conference brings together Network members to discuss their recent research and to encourage broader interactions, particularly on both sides of the Atlantic. All CESifo research network members are invited to submit their papers, which may deal with any topic within the broad domain of the Economics of Education.

We gratefully acknowledge support from the Jacobs Foundation

Scientific organisers: Professor Eric A. Hanushek, Professor Dr. Ludger Woessmann

NEW BOOKS ON INSTITUTIONS

Institutions and Organization – Ideas, Interests, and Identities *Fourth Edition*

W. Richard Scott
SAGE Publications, 2014

Financial Systems, Markets and Institutional Changes

Palgrave Macmillan Studies in Banking and Financial Institutions
Edited By Ted Lindblom, Stefan Sjögren and Magnus Willesson
Palgrave Macmillan, 2014

Social Insurance, Informality, and Labor Markets How to Protect Workers While Creating Good Jobs

Edited by Markus Frölich, David Kaplan, Carmen Pagés, Jamele Rigolini, and David Robalino
Oxford University Press, 2014



THE DATABASE FOR INSTITUTIONAL COMPARISONS IN EUROPE

The Database for Institutional Comparisons in Europe – DICE – was created to stimulate the political and academic discussion of institutional and economic policy reforms. DICE is a unique database offering comparative information on national institutions, regulations and economic policy. Although DICE is not a statistical database, it also contains data on the outputs (economic effects) of institutions and regulations where relevant.

DICE covers a broad range of institutional themes: Business and Financial Markets, Education and Innovation, Energy and Natural Environment, Infrastructure, Labour Market and Migration, Public Sector, Social Policy, Values and Other Topics.

The information is presented in tables (text or data), graphics (interactive application Visual Storytelling), and reports. In most cases, all EU countries are covered as well as some other major OECD countries. Users can choose between current comparisons and time series that show developments over time.

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