



CPB Netherlands Bureau for Economic
Policy Analysis

CPB Background Document | 16 October 2018

The effects of globalisation in the Netherlands

A theoretical and empirical survey

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1 Introduction

Globalisation generally leads to an overall higher level of economic production in a country, but also to shifts in production. As a result, some people experience a substantial increase in their income; some a small increase and others a decrease. This way, globalisation may lead to an increase in inequality in a country. Economists have traditionally highlighted the net advantages of globalisation while the disadvantages are ignored. Recent research (Rodrik, 2011; Autor et al., 2016) has sparked renewed interest about the disadvantages. This research shows for some countries less favourable outcomes for local industries, resulting in lower wages and higher unemployment in certain regions. Together with the controversy on for instance trade of genetically modified food, the resistance against trade agreements has increased. The Brexit vote can also be interpreted as a protest against free trade and movement of people (Coyle, 2016).

Globalisation is highly integrated in everyday life: the mobile phone

In the current day and age, most people have access to a device symbolizing the constant changing and increasingly integrating and globalising environment we are living in: a mobile phone. Not only has the mobile phone facilitated communication and information exchange across the globe but the production process also illustrates the increased globalisation. The various resources used to produce our phones originate from different areas around the globe, after which the parts of the device are assembled in various locations and then exported to different countries of destination. Essential to this process is free global trade. But the face of cities and workplaces are changing too, as factors of production themselves are becoming increasingly mobile. Migration across borders has led to a more international environment in our daily lives. The place of birth no longer dictates where we work. In addition, mobility of capital has interconnected economies. In our phone example, it is likely that the production process was first sparked with foreign direct investment (FDI).

The purpose of this document is to put the developments of globalisation into perspective for the Dutch labour market. Globalisation has economic advantages, which nowadays many people hardly notice as they are highly integrated in everyday life (see textbox for an example). But it also has disadvantages. The Dutch economy relies strongly on foreign trade, with the biggest port of Europe located in Rotterdam and a current account surplus of 59 billion in 2016 (DNB, 2017).

Globalisation also implies migration. About one out of ten persons of the current population of the Netherlands is a first-generation immigrant while an additional one out of ten persons is a second-generation immigrant, that is to say native-born with at least one foreign-born parent (OECD, 2008a). This trend has continued over the years. Between 2010 and 2013 the inflow of permanent migrants was stable around 100 000 persons per year. Only about one out of eleven of these immigrants came from outside the European Union, with most migrants coming from Central and Eastern Europe (OECD, 2016).

The impact of globalisation in a country is highly affected by institutions. The Dutch labour market is characterised by various regulations. In terms of employment, there is a strict

regulation concerning dismissal of employees with a permanent contract. At the same time, a large share of the labour force is hired on a temporary basis. Employees in a flexible employment situation are more likely to become unemployed compared to employees with a permanent contract (Statistics Netherlands and TNO, 2013). In addition, the Dutch system is characterised by a relatively rigid wage structure, having for instance a minimum wage.¹ In general, the Netherlands has a highly redistributive fiscal and social security system. Lastly, the job market situation in the Netherlands has been improving since the financial crisis and can be considered as relatively good. Nonetheless, chances of finding work in no, elementary or low-skilled occupations are relatively slim, compared to becoming employed in the area of higher-skilled and university-level jobs, especially in technical, ICT or finance-related occupations (European Commission, 2017).

This background document is structured as follows: first we consider trade, then migration and finally Foreign Direct Investment (FDI). Within each topic, we discuss theory, present developments in the Netherlands and lastly we put these developments into perspective by comparing them to the international empirical literature.

2 Trade

Theory suggests that factor endowment in a country results in a comparative advantage in producing certain goods and services. The specialisation in these goods and services will lead to a more efficient allocation of production across countries, which should help increase production, income and employment in a country. This is the often presented story in favour of trade. However, the issue is more complicated since redistribution will also take place within a country, affecting income inequality. Furthermore, the effects depend on country specific labour market institutions. Below, we discuss the effects of trade on the Netherlands. We first cover the theoretical background, which is then applied to the specific case of the Netherlands and compared to international empirical studies.

2.1 Theory

A country's comparative advantage is determined by its relative endowments of factors of production (land, labour, and capital): countries have a comparative advantage in those goods for which the required factors of production are relatively abundant locally. The *Heckscher-Ohlin* (two-country) model and the *Stolper-Samuelson* theorem, which builds on the former, are the most widely applied and cited models for predicting the effect of trade on income. In the standard *Heckscher-Ohlin* model, a country's export and import are based on the abundance or scarcity of the production factors (Stolper and Samuelson, 1941). A relative surplus in a certain production factor will lead to the export of the related good,

¹ Wettelijk Minimumloon (WML) set by the government ([link](#)), but higher minimums are often agreed on in extensive collective labour agreements (CAO's)

while the good with a relatively scarce production factor will be imported. Usually, developed countries are assumed to be relatively abundant in capital and will export capital-intensive and import labour-intensive goods. The prediction of the Stolper-Samuelson theorem is that when the relative price of a good rises, the increasingly employed production factor is positively affected while the less needed production factor is negatively affected. Thus, the increase in trade due to globalisation benefits the owners of the relatively abundant production factor, leading to an increase in income for some and a decrease for others. Under the assumption that developed countries export capital-intensive goods, the 'capital owners' will have a greater income while the 'workers' fall behind. The relative lower wages affect income inequality, which is expected to rise in developed countries. Conversely, in developing countries, which have a relative surplus of labour, income inequality is expected to fall.

The structure of labour markets is also important in explaining differences in outcomes of trade across countries (Slaughter et al., 1997; World Bank and IMF, 2017). A relative decline in the demand for labour due to trade will, in decentralised markets with relatively flexible wages such as the United States, lead to lower relative wages for workers. In contrast, centralised labour markets with relatively rigid wages will channel this decline in demand through a negative adjustment of employment.

The effect of trade on the level of employment is expected to be temporary because of the adjustments in the labour market and the mobility of labour in the long run. In the short run, trade should lead to a reallocation of resources and production factors in accordance with the principle of comparative advantage (Jansen and Lee, 2007). Therefore, trade liberalisation is associated with both job destruction and job creation. Depending on country specific factors and the labour market, the effects on employment can be positive or negative in the short run. In general, neoclassical models of the economy focus on macroeconomic variables and labour market-related institutions rather than trade and trade policy to determine long-run levels of employment and unemployment (Hoekman et al., 2005).

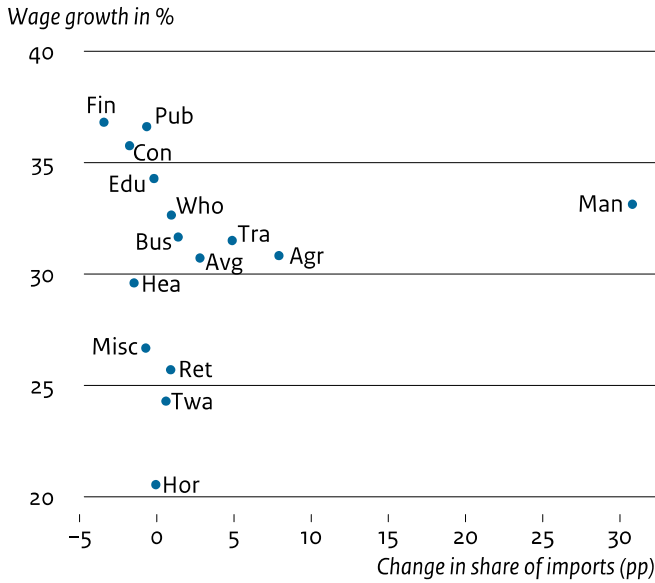
2.2 The Netherlands

Following the theoretical approach, we would expect to see some negative effects on either income or employment in the importing sectors in the short run. As the Netherlands is a developed country, we would expect pressure on wages and employment in particular for the labour intensive sectors. Moreover, due to its relatively rigid wage structure, we would expect effects in particular on employment and less so on wages in the short run.

On the basis of sectoral level data, the relationship between imports and wages seems to be inconclusive for the Netherlands (figure 2.1). While the sectors 'Transportation and communication', 'Agriculture' and 'Manufacturing' had a substantial increase in imports, wages did not stay behind. All three sectors are close to the average wage growth. The three sectors all did seem to have experienced relatively low employment growth (figure 2.2). Yet other sectors with a low increase in imports experienced a decrease in employment as well.

Figure 2.1 Sectors with an increase in imports experience an average increase in wages, 2001-2011

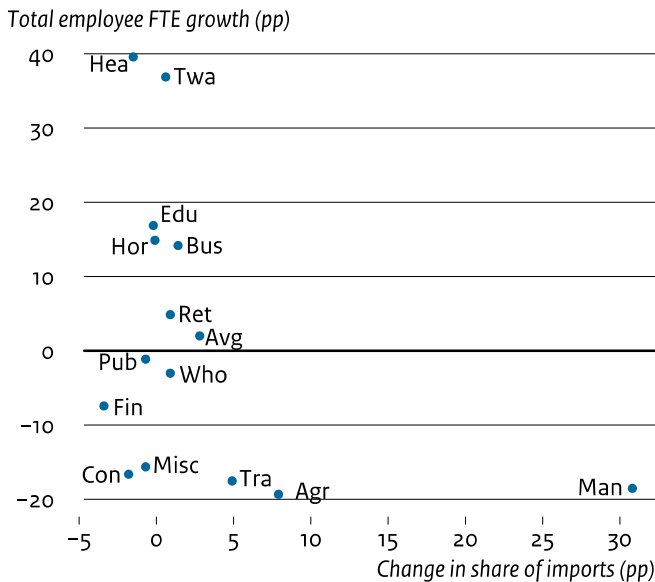
Imports and wages



Note: Agr = Agriculture, forestry and fishing, Man= Manufacturing & Electricity, Con = Construction, Who = Wholesale, Ret = Retail & Repair, Hor = Accommodation & Food serving, Tra = Transport & Communication, Fin = Financial services, Bus = Business services, Twa = Employment activities, Pub = Public administration and services, Misc = Other services, Edu = Education, Hea = Health, Avg = Average

Figure 2.2 In some sectors an increase in imports matches with a decrease in employment, but in other sectors these developments do not match, 2001-2011

Imports and employment



Note: Agr = Agriculture, forestry and fishing, Man= Manufacturing & Electricity, Con = Construction, Who = Wholesale, Ret = Retail & Repair, Hor = Accommodation & Food serving, Tra = Transport & Communication, Fin = Financial services, Bus = Business services, Twa = Employment activities, Pub = Public administration and services, Misc = Other services, Edu = Education, Hea = Health, Avg = Average

Although no causal relationship can be inferred from these developments, the decrease in employment for import penetrated sectors is in line with the theoretical predictions of the previous section.

2.3 Empirical evidence

We now turn to the international empirical literature on the economic impact of trade. Although the predictions from economic theory are clear, it is difficult to find similarly clear empirical evidence. The impact of trade on employment and income has been disputed in the literature for several decades and only recent empirical studies find more clear-cut evidence. The same holds true for the empirical evidence on income inequality. One reason for the mixed results may be the impact of technological progress on the economy, which is difficult to disentangle from the impact of trade.

2.3.1 Employment

Empirical evidence for the United States and Canada hints at a negative impact of trade on sectoral employment, while for Europe only recent evidence hints in this direction. Using the 1988 free trade agreement between Canada and the United States, Trebler (1999) suggests that close to 30% of the observed employment losses in manufacturing in Canada were a result of the tariff cuts. Recent empirical research finds that Chinese import competition explains a relatively modest 17% of the decline in US manufacturing employment (Autor et al., 2016). This effect seems to be the strongest during the period 2000-2007. Other authors arrive at a similar conclusion (Pierce and Schott, 2016). For Europe, recent evidence for Germany (Dauth et al., 2014) and France (Malgouyres, 2017) suggests a negative impact on imports on manufacturing employment. Earlier evidence (Bentivogli and Pagano, 1999; Dewatripont et al., 2004) did not find strong effects of trade or hint at a small impact of trade (Donoso et al., 2015). For the Netherlands there is no evidence for a connection between international trade and the probability of being fired (Groot et al., 2013). Also, the effects on aggregate employment in the long run are especially difficult to capture and evidence is limited (Hoekman et al., 2005).

The economic impact of trade on employment is partly determined by the degree of mobility between sectors. In model specifications of international trade, it is often assumed workers receive the same wage in case of sectoral mobility, thus there should be no mobility costs (McLaren, 2017). However, empirical research highlights the limitations of this theory. Different studies show that labour mobility frictions can make adjustments for workers more costly and prolonged. Workers that need to reallocate tend to be unemployed during the transition and risk substantial earnings losses (Haltiwanger, 2011). Haltiwanger (2014) estimates that in the US, there is an annual job creation and destruction rate of about 18% and 16%, which would imply a gross job reallocation rate of about 34%. The constantly changing economic environment forces firms and workers to adapt and reinvent themselves all the time. Evidence suggests that birth cohort is a predictor of the likelihood of re-employment and older workers suffer more from displacement (Lippmann, 2008; Deelen et al., 2014). However, if workers choose to resign in good economic times, they will only be

shortly unemployed, or not at all (Haltiwanger, 2011). Additionally, they may experience an increase in earnings relative to their previous jobs. On the contrary, workers tend to experience adverse effects in terms of unemployment and income if they are dismissed in an economic downturn or in a mass-layoff.

In addition, the literature makes a distinction between job changes and occupational changes. For instance, Ebenstein et al. (2014) find that occupation switching due to trade leads to a real wage loss of about 15%-points. They present empirical evidence that the reallocation leads workers from high wage manufacturing jobs into other, less well paid, sectors and occupations. Mobility frictions due to reallocation seem to be more pronounced in developing countries, where the adjustment period can stretch up to a decennia and reduce trade gains by up to 30% (Artuç et al., 2013; Dix-Carneiro, 2014). Moreover, occupational changes generally lead to a less satisfactory employment situation (Longhi and Brynin, 2010). Some argue that globalisation increases the number of flexible work arrangements, which could lead to greater dissatisfaction (Muffels, 2008; Green, 2013). Furthermore, changing occupation can lead to a destruction of the prior acquired human capital of workers (Kambourov and Manovskii, 2008). Consequently, various authors stress the importance of mobility frictions and the importance of making more dynamic models (Cabral and Silva, 2006; McLaren, 2017).

2.3.2 Wages and income

The effect of trade on wages and income is disputed in the literature whereby the recent empirical evidence hints at effects that are in line with theory. Recent studies show that employment and wages are at least temporary under pressure for sectors exposed to international competition from cheap imports for countries like the United States, Germany and France (Dauth et al., 2014; Ebenstein et al., 2014; Autor et al., 2016; Malgouyres, 2017). For Germany, however, it is also shown that export-oriented sectors profited from trade (Dauth et al., 2014).

The effect of trade on aggregate income is disputed in the empirical literature. Frankel and Romer (1999) identify a positive effect of trade on income. However, when using the same approach, but controlling for omitted variables such as distance to the equator or institutions, other authors do not find a robust effect (Rodríguez and Rodrik, 2000; Ortega and Peri, 2014). Exploiting the closing of the Suez Canal as a natural experiment, Feyrer (2009) finds a positive causal effect of trade on aggregate income. Furthermore, Lang and Mendes Tavares (2018) find a significant and positive effect of globalisation on aggregate income, but this effect becomes small with the development level of a country.

2.3.3 Income inequality

There is a large body of literature on income inequality, within and between countries (see for an overview Anand and Segal, 2014). Lakner and Milanovic (2016) find that although global inequality remains high, recent years have seen a remarkable increase in what may be called a “global median class”, resulting in the well-publicised elephant shaped growth incidence curves. The authors focus on the effects of globalisation in general though, but not on trade in particular. There is, however a substantial literature focusing on the relationship

between trade and income inequality. The *Stolper-Samuelson* theorem seems to apply to some relatively capital abundant developed countries. For instance, there has been an increase in income inequality over the years in the United States. Nonetheless, in many relatively labour abundant developing countries, such as India and Brazil, the corresponding outcome, decreasing inequality, has not become reality (Kanbur, 2015).

The evidence on cross-country analysis is mixed with some recent evidence that is in line with theoretical predictions. Lang and Mendes Tavares (2018) find a significant and positive effect of globalisation on income whereby the gains are concentrated at the top of the national income distributions, leading to more inequality. Baek and Shi (2016), use a panel dataset of 26 developed and 52 developing countries to find empirical support for the *Heckscher-Ohlin* and *Stolper-Samuelson* predictions. With increasing trade intensity, developed countries experience an increase in income inequality while developing countries experience a decrease. For a set of developed countries including the Netherlands, Alderson and Nielsen (2002) and Roser and Cuaresma, (2016) find a similar effect on income inequality. There are, on the other hand, studies that find mixed or insignificant effects of globalisation on inequality (Gustafsson and Johansson, 1999; Jaumotte et al., 2013). Dorn et al. (2017) find a positive correlation between globalisation and income inequality for a sample of 140 countries, but they do not find such evidence for a subsample of developed countries and furthermore, are reluctant to draw any conclusions on causality.

2.3.4 Technological progress

The causal link between trade and employment, income and income inequality has been investigated various times over the years with little consensus (see, amongst others, the surveys of Richardson, 1995; Feenstra and Hanson, 2003; Chusseau et al., 2008).

Coinciding with the increase in trade, there has been increasing technological progress over the years. Both trade and technology can increase the demand for highly skilled labour compared to low skilled labour and thereby increase differences in income, employment composition and income inequality. The evidence seems to point towards a relatively greater importance of technology (Feenstra, 2000; Kanbur, 2015). Some authors exemplify this development with the United States at the end of the 20th century where the relatively low trade volume cannot be related to the increase in income inequality (Krugman et al., 1995). However, authors also stress that the importance of trade should not be underestimated (Richardson, 1995; Krugman, 2008). For instance, Wood (1995) assigns a significant part of the explanation of the pattern of income inequality to trade while doubting the role of technology. Also, Morrison Paul and Siegel (2001) find that technological change has had the largest impact on changes in labour composition, but emphasise the reinforcing relationship between trade and technological advancements. Trade requires digitalisation, which further enforces skill-biased employment.

3 Labour migration

An important reason for foreign workers to enter the Dutch labour market is the relatively high wage level. For firms, the reasons to attract migrants are varied and include lower costs, internationalisation of companies, more flexibility or motivation. However, at the same time, the native workers often feel that the increase in competition will lead to lower wages or higher unemployment on their side. The Dutch situation will again be compared to the theoretical explanations and put in perspective by a survey of the empirical literature.

3.1 Theory

The economic literature distinguishes various ways how labour migration affects the economy. It may change the demographics of the working population, increase competition for native workers and affect productivity. Overall, the effect of migration is difficult to generalise since it depends on the characteristics of the migrant and of the receiving country.

First, the increase in labour migration may have an impact on wages and employment in the receiving country. Theoretical starting point is a simple partial equilibrium model of the labour market and its income distribution. An inflow of a particular type of foreign labour, for example of a particular skill level, will lead to a decrease in the wages of employees performing similar types of work (Ruhs and Vargas-Silva, 2014; Dustmann et al., 2016). The decrease in income holds in relative as well as in absolute terms. If nominal wages do not adjust, as may be reasonable to assume for several European countries, unemployment is expected to rise (Zorlu and Hartog, 2005). The impact on domestic workers due to an increase in labour migration will ultimately depend on the substitutability of migrant workers with domestic workers (Card, 2009). With imperfect substitutability, labour migration will mainly lead to labour market effects within the migrant group (Manacorda et al., 2006; Ottaviano and Peri, 2012).

Moreover, the effect of migration on labour productivity is also important (Ottaviano, 2014). An influx of diverse migrants from different backgrounds may increase labour productivity and economic development through the diversity of the backgrounds of migrants (Ozgen et al., 2013; Alesina et al., 2016). As a result of higher labour productivity, wages and possibly employment may increase, while income inequality may decrease. Then again, the increase in competition among workers could boost the marginal productivity and possibly increasing the reward of capital owners (Ruhs and Vargas-Silva, 2014; Dustmann et al., 2016). Such an income increase would only benefit a part of the population and could subsequently lead to an increase of income inequality rather than a decrease.

As shown above, the economic effects of migration depend on a large number of factors, including the characteristics of migrants like educational attainment, age and gender and the characteristics of the local labour market and institutions. In addition, the literature shows

that a significant part of migration is temporary, which may lead to different effects than for permanent migration (Dustmann and Görlach, 2016).

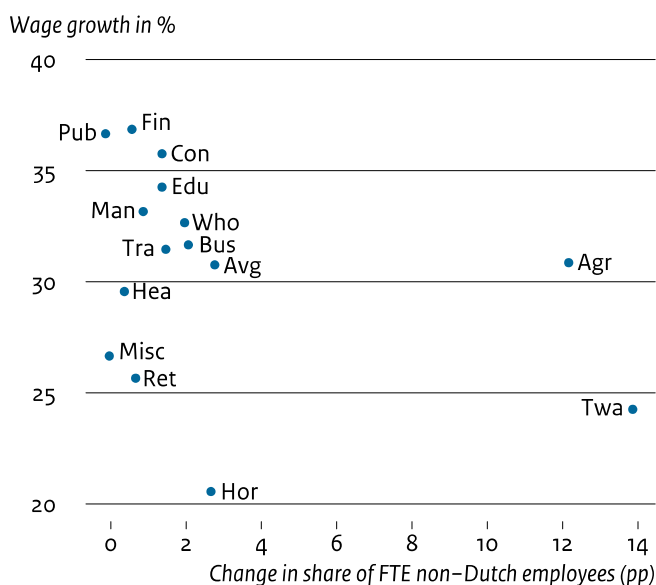
3.2 The Netherlands

Due to the relatively high wages, labour migrants consider the Netherlands an attractive country to work. This holds true in particular for the lower end of the labour market, where wages are high due to institutions like minimum wages and the welfare system. Considering a simple model of the labour market in combination with the rigid wages in the Netherlands, we would expect effects such as the displacement of workers, but less so on their incomes. However, when factors such as worker productivity or characteristics of migrants are considered, employment and income effects become less clear.

Both the effects on employment and on wages are gauged by considering the change between the years 2001 and 2011 for a range of sectors. While the effect of migration on wages is examined by looking at the share of non-Dutch employees, absolute numbers are used when considering the relation between migration and employment.

Figure 3.1 Sectors with an increasing share of migrants do not necessarily experience a lower average increase in wages than other sectors, 2001-2011

Migration and wages

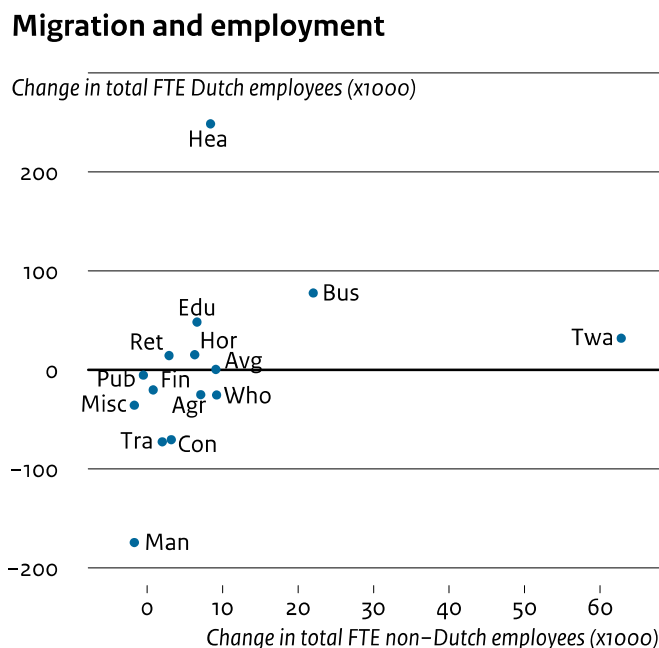


Ret = Retail & Repair, Hor = Accommodation & Food serving, Tra = Transport & Communication, Fin = Financial services, Bus = Business services, Twa = Employment activities, Pub = Public administration and services, Misc = Other services, Edu = Education, Hea = Health, Avg = Average

The results on the impact of migration on wages and employment are inconclusive. While the change of non-Dutch compared to total employees has especially increased within 'Agriculture, forestry and fishing' as well as 'Employment activities', they both had different wage growth (Figure 3.1). While the sector 'Employment activities' does exhibit less strong

wage growth, 'Agriculture, forestry and fishing' had an increase of wages closer to the median of the group. In absolute numbers, the largest increase of non-Dutch can be found in the sectors 'Employment activities' and 'Business services'. The changes in employment do not show any conclusive results (Figure 3.2). These results can be considered in line with the theory underlining the difficulties of capturing the effects of migration at the macro level.

Figure 3.2 Sectors with an increasing share of migrants do not experience in employment of native workers, 2001-2011



Ret = Retail & Repair, Hor = Accommodation & Food serving, Tra = Transport & Communication, Fin = Financial services, Bus = Business services, Twa = Employment activities, Pub = Public administration and services, Misc = Other services, Edu = Education, Hea = Health, Avg = Average

3.3 Empirical evidence

In this section, we turn to the empirical literature. In terms of employment for both the US and European countries, some authors find an effect while others do not. The outcomes in terms of wages and income inequality are also disputed although there is some evidence of a small negative impact of migration on wages at the lower end of the labour market. The recent literature hints at more inequality due to migration, whereby the characteristics of the migrants and the receiving country are clearly important for the size of the impact.

3.3.1 Employment

The empirical literature does not report clear evidence of a displacement effect of labour migration on native employment on average. Taking recent evidence into account we conclude that migrants have no or at best little impact on overall employment. The impact may vary across groups but robustness checks suggest that the findings are subject to uncertainty.

With regards to the 'Mariel Boatlift', Card (2009) finds no evidence of displacement. Similarly, Hunt (1992) uses the repatriation of French from Algeria in 1962 as a natural experiment and does not find significant displacement effects. The research by Peri et al. (2015) concludes similarly. For the United Kingdom, Devlin et al. (2014) and the Migration Advisory Committee (2014), only find an indication of displacement of low skilled labour during periods of recession. Berkhout et al. (2014) investigate the possible displacement on the Dutch labour market from 2001 to 2011². Although at the macro-level there may be displacement due to unequal competition, at micro-level, many employees who compete with migrant workers do not appear to become unemployed and instead find a different job. On the other hand, Borjas (2003) and Ho and Shirono (2015) do find some displacement effects for the United States and the Scandinavian countries respectively. Jean and Jiménez (2011) investigate the effect of immigration on employment opportunities in OECD countries and find displacement effects that disappear over time. The controversy in the literature is still not solved, but at least it is clear that displacements effects are hard to find. This hints at the fact that displacements are at best small and probably disappear over time (Migration Advisory Committee, 2018).

3.3.2 Wages and income

The empirical literature does not report a clear negative impact of immigration on wages on average, whereby empirical results differ between studies. The existing evidence suggests that migration is not a major determinate of the wages of workers that are already present. There is however some evidence suggesting that lower-skilled workers face a negative impact while higher-skilled workers benefit, however the magnitude of the impacts are generally small.

The empirical literature focusing on experience in US cities, often reports no or minor wage effects (Friedberg and Hunt, 1995; Lewis, 2005; Card, 2007; Ottaviano and Peri, 2012). Using the inflow of Cubans in Miami during the 'Mariel Boatlift' as a natural experiment, Card (1990) also does not find wage effects, which has been opposed by a recent study by Borjas, (2017). However, the results by Borjas have been contested by Clemens and Hunt (2017). Zorlu and Hartog (2005) find no evidence of major wage declines for the Netherlands, the United Kingdom and Norway. According to Zorlu and Hartog (2005), this is partly a result of the national institutions that are linked with relatively high wage rigidity in Europe.

Some recent studies hint at a small negative impact at the lower end of the labour market. Dustmann et al. (2012) conclude that in the United Kingdom, immigration reduces the wage of relatively low-paid domestic workers but relatively high wages increase. Berkhout et al., (2014) only find an effect on wages for low-skilled as well as young people in the Netherlands. Some earlier studies did find an overall negative but nevertheless small effect. Borjas (2003) and Borjas and Katz (2005) find negative wage effects by using a simple partial equilibrium model and US data at national level. In addition, within the group of

²In 2004 and 2007, the EU expanded with various Central and Eastern European countries.

labour migrants in the United Kingdom, Manacorda et al. (2006) find that immigration exerts downward pressure on wages.

3.3.3 Income inequality

The recent literature hints at more inequality due to migration, whereby the size of the impact depends on the characteristics of the migrants and the institutions of the receiving country. In terms of income inequality, the research by Peri et al., (2015) finds a positive income effect for highly skilled domestic workers in the UK, which leads to more income inequality. Similarly, the results of Dustmann et al. (2012) with rising wages for high skilled and decreasing wages for low-skilled workers, implies rising wage inequality. In a study using 16 OECD countries, Alderson and Nielsen, (2002) conclude that migration increases income inequality. Migration is, however, the least contributing factor within their set of globalisation factors. Contrary to these results, Jaumotte et al., (2016) conclude that income growth is broadly shared, rather than concentrated at the top. In a recent international comparative study, Lang and Mendes Tavares (2018) find, however, a significant and positive effect of globalisation on income for 147 countries whereby the gains are concentrated at the top of the national income distributions, leading to more inequality.

3.3.4 Productivity

According to theoretical literature, economic effects of immigration also largely depend on the type of migrant, which could explain the different results even within a country. Borjas, (2008) argues that the average migrant group that enters the United States has a low productivity. The migrants in this group are mostly either low or high skilled, with fewer migrants falling in the education levels in between. Even so, Ortega and Peri (2014) find a robust positive effect of immigration openness on GDP per person. According to the authors this is a result of the increase in productivity due to the migration.

4 Foreign direct investment

Foreign direct investment (FDI) is a physical investment made by a firm that establishes a business operation in another country (Moran, 2012). A country can either receive or send FDI, or, in other words inward and outward FDI. The possible geographical movement of production processes, from the home country to abroad, might lead to declining wages, loss of employment in low-skilled labour intensive sectors and increasing income inequality.

4.1 Theoretical

Overall, outward FDI is expected to decrease both wages and employment as a result of the shifting of production processes. Inward FDI is expected to have opposite effects. The effect on income inequality, however, also depends on the kind of FDI (horizontal or vertical).³ The *North-South* model is often used as a theoretical framework for predicting the impact of FDI. According to Feenstra and Hanson (1995), and Feenstra (2004), the model predicts that relatively cheaper labour attracts foreign investment, shifting the labour-intensive production processes to developing countries while developed countries receive FDI for skill-intensive sectors. However, the movement from unskilled to skilled labour is relatively inelastic, at least in the short run, since it takes time to increase the supply of skilled labour. Thus, developed countries will experience an increase of wages in the skilled sector. However, demand for low skilled employment decreases due to the investment in relatively *unskilled labour-intensive* workers abroad and with it, their respective wages decrease. Overall, the model predicts an increase of average wages and employment as a result of FDI, but also increasing income inequality at home.

Studies also split foreign direct investment in vertical and horizontal FDI, which can have different effects, especially on the income inequality of the home country. Vertical FDI on the one hand occurs when a multinational company (MNC) seeks to decrease the cost of raw material or the supply of a certain component in the production process and thus sources it from abroad (Aizenman and Marion, 2004). It consequently chooses to locate each stage of a production in the country where it can be done at the lowest cost. A vertical venture replaces some of the low-skilled production process that was initially located in the home country, thus decreasing their respective wages and employment (Kokko, 2006). Overall, there should be an effect on income inequality. In horizontal FDI on the other hand, the company chooses to relocate all stages of the production process to multiple countries, in order to expand their operations into another market (Aizenman and Marion, 2004). Due to the opening of a foreign affiliate, there might be a loss of employment and wages due to the reduction of exports in the home country (Kokko, 2006). However, there is no expected increase in income inequality, since all production processes will be located abroad.

4.2 Empirical evidence

A distinction needs to be made between inward and outward FDI. While the effect of inward FDI has been studied more thoroughly, results on outward FDI are less extensive. Studies seem to point towards an increase of aggregate wages, ambiguous effects on employment and income inequality for inward as well as outward foreign direct investment.

³ Horizontal FDI is when firms locate similar activities in multiple countries; vertical FDI is when firms locate different stages of production in different countries.

4.2.1 Employment

In terms of inward FDI flows, Hale and Xu (2016) review the existing literature and find ambiguous results for employment. For instance, Jude and Silaghi, (2016) conclude that in Central and Eastern European countries, the inflow of FDI leads to creative job destruction and the introduction of labour-saving technology through the increasing competitive pressure as a result of new firms entering the market. However, according to Dinga and München (2010), FDI increased employment in the Czech Republic. Moreover, Bandick and Karpaty (2011) confirm the positive effects using a sample of Swedish manufacturers. A paper examining the Netherlands in the period between 2000 and 2007, affirms the ambiguity on employment outcomes, since they find that the effects vary across foreign investors with different characteristics (Fortanier and Moons, 2011).

The results on outward FDI are similar. A study of Italy's foreign direct investment between 1996 and 2001 shows that local employment is positively influenced by higher levels of outward FDI (Federico and Minerva, 2008). However, Mariotti et al., (2003) who also study the Italian case, only find a positive effect for horizontal investments. Vertical FDI, however, has a negative impact on the labour intensity of domestic production. Correspondingly, a study in Sweden (Eliasson et al., 2012) finds that offshoring has a considerable impact on the creation of skilled jobs.

4.2.2 Wages and income

In terms of inward FDI, the effect on wages seems to be positive. According to the OECD (2008b), MNCs tend to pay higher wages in the host country compared to domestic firms. For instance, Ernst (2005) finds a general trend towards an increase in the share of wages for the manufacturing sector in Argentina, Brazil and Mexico due to FDI. The positive wage effect of MNCs is also found in a study of the UK (Girma et al., 2001) and the US (Moran and Oldenski, 2014), where foreign firms tend to pay higher wages in both countries. However, Barry et al. (2003) argue that the positive impact could be a result of the selection-process of the companies – they select superior workers who receive higher wages. Onaran and Stockhammer (2008) argue that in Central and Eastern European countries, FDI has an overall positive effect on wages. They also add that this wage increase is mostly driven by the capital intensive and skilled sectors. In addition, other authors argue that FDI can potentially indirectly, but positively affect wages through spillover effects (Arnal and Hijzen, 2008; Moran and Oldenski, 2014; Hale and Xu, 2016). Foreign firms can bring new production techniques or management know-how, which can be exploited by domestic firms (Moran and Oldenski, 2014). Nonetheless, the possible crowding out effect of domestic investment through the incoming FDI flows is an important issue (Jenkins, 2006). The effect of outward flows of FDI or offshoring on income is less well researched probably because the effect is more difficult to capture.

4.2.3 Income inequality

The outcomes for income inequality do not lead to a consensus. In a literature review, Hale and Xu (2016) find that the majority of the empirical studies points towards an increase in income inequality. Also, the IMF (2007) concludes that for developed countries, FDI has the strongest effect on income inequality among the different globalisation factors. Jaumotte et al., (2013) confirm this reinforcing effect using a large dataset. Asteriou et al. (2014) report EU-based results: for the total group of EU27 countries, income inequality increases with more financial integration, but the result does not prove to be robust for the subgroups. Baek and Shi, (2016) conclude that financial integration leads to a decline in inequality for developed countries. Milanovic (2005) uses a panel analysis with a variety of countries and finds no effect of direct foreign investment on income distribution. Herzer and Nunnenkamp (2013) find a negative impact on income inequality for EU countries for both inward and outward streams of foreign direct investment. Lastly, a part of the literature also confirms the theory of Greenwood and Jovanovic (1990) that investment flows to developing countries first increase inequality, and only after a certain *threshold* or *turning point* of financial development, decrease inequality again (Figini and Görg, 2006). Such results are however not confirmed in recent studies, leading to no consensus on such issues.

5 Conclusion

Over the years, there has been an increase in worker mobility, trade and foreign direct investment. In order to remain competitive, workers and firms need to be adaptive. Moreover, the increasing worldwide economic integration means that firms and workers are no longer only competing within a country, but also increasingly on a global scale. The overall effect of globalisation on the Dutch economy is positive as daily shopping becomes cheaper, production increases and the number of high-skilled jobs increases. Nevertheless globalisation also gives rise to concerns regarding the effects on wages, employment and income inequality. The literature review shows that these concerns, especially for the US, are not unjustified. However, in Europe the effects of globalisation do not seem pronounced, which can be explained by differences in fiscal systems and labour market institutions.

The case of the Netherlands exemplifies this; we do not see any strong wage reductions in trade or migration related sectors. The only trend tentatively found in our analysis is the impact of trade on employment in sectors that are relatively import-intensive. However, since empirical results on these effects are not conclusive, it is essential to keep in mind that there can also be other factors that influence this relationship, such as technological growth.

So while the overall effect of globalisation on the Dutch economy seems to be positive, there can be negative effects of globalisation on the micro-level. Therefore, it is important that the gains of globalisations are shared broadly, for example by institutions that help redistribute the gains and protect the most vulnerable workers. Lastly, workers, especially those who are young, will also experience a constantly changing environment. Globalisation increasingly

demands adaptability, which might be difficult for some. Though the overall effects of globalisation in Europe are still positive, more empirical research on the Netherlands is needed to get a clearer picture of the impact of globalisation and to design better policies.

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Publisher:

CPB Netherlands Bureau for Economic Policy Analysis

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October 2018