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Changing Distribution of Factor Income: The Direct Role of MNEs

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Changing distribution of factor income: the direct role of MNEs

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Abstract: Globalisation enters the lives of people in a tangible way in the form of employment by a multinational (MNE). The OECD estimates that in 2014 about a quarter of the global workforce was employed by an MNE. It is well-known that on average, MNEs are more productive, have more imports and exports and pay higher wages than non-MNEs. This paper considers one of the channels through which foreign owned MNEs change the balance between labour income and capital income in the host economy through time. In this way these MNEs sometimes contribute to larger, sometimes to smaller inequality. Considering a group of 21 European countries as a whole, the ratio labour income/factor income rose 1 percent point at total level. But it rose 5 percent point for foreign controlled enterprises and remained equal for domestically owned enterprises. The main research question of the paper: what is the direct role of foreign owned MNEs in changes of the distribution of total factor income into labour income and capital income? The paper considers 12 European countries and their distribution of factor income in the business economy during the period 2008-2016. Changes in the labour part, the share of labour income in factor income, are decomposed into four parts. Namely, an industry mix effect, a foreign presence (in an industry) effect and distribution effects within industries (the share of labour income in factor income for foreign owned MNEs and domestic enterprises respectively). Effects of shifts between industries and shifts in foreign presence within industries were small. The effect of shifts in the labour share were larger. Although there was not a very clear pattern, shifts of the labour part at foreign controlled enterprises usually contributed to a larger labour part at total level. This also holds when considering the distribution of factor income related to exports. We find substantial heterogeneity of the labour part between and within industries.

Key words: MNE, labour income, capital income, GVC, heterogeneity

JEL codes: F23, E25, F62, C67

1. Introduction

Globalisation has been an important phenomenon in the last decades. Global value chains emerged, among others due to containerisation, digitalisation and the change of previously closed countries into more (foreign) market orientated economies (Baldwin 2016). Due to these global value chains, many workers improved their living conditions. However, globalisation has not been favourable for all. For example, the emergence of China led to lower employment and lower wages in competing American manufacturing (Autor et al. 2016). And if mainly low-paid jobs disappear, this might lead to increasing inequality. See Helpman (2018) for an excellent explanation and literature review how globalisation can influence inequality.

During this epoch of globalisation, MNEs rose more and more to the forefront. The OECD estimates that that MNEs are roughly accounting for one third of global output and world GDP, and half of global exports (Cadestin et al. 2018a). They provide jobs and wages for their employees and profits for their owners/shareholders. On average, MNEs are more productive, have more imports and exports and pay higher wages (see e.g., Doms & Jensen, 1998; Fortanier, 2008; Serrano & Myro, 2019). However,

in the public domain there are sometimes doubts about the contribution of MNEs to the host economy. Lech Wałęsa, the former president of Poland once said “I wanted democracy in this country but instead we got 20 multinationals” (Holtland, 2019).

Piketty (2014) noted that the return on capital in general is larger than economic growth and that this has consequences for the distribution of wealth. Although this cannot be translated into a gradually declining lower share of labour income in factor income¹, it put the theme more on the forefront. Timmer et al. (2014) use the WIOD data (Timmer et al. 2015) to slice value added in global value chains related to manufacturing into labour (with a further division into low-skilled, medium-skilled and high-skilled labour) income and factor income. They find that the share of labour income declined with 6.5 percent point during the period 1995-2008.

Considering the rise of globalisation and MNEs and the worries about the distribution of income to labour and capital, this paper aims to add facts to the debate. It studies and quantifies the actual contribution of MNEs to changes in labour income relative to total factor income. We define the labour part Q in value added as follows:

$$Q = \frac{\textit{personnel costs}}{\textit{value added at factor costs}} = \frac{\textit{labour income}}{\textit{factor income}}$$

The personnel costs comprise of wages and social insurances. Note that Q is different from the conventional labour share; therefore, we refer to Q as the labour part. See the appendix for further explanations. The labour part might measure something else, yet its trend and decomposition of its trend shed light on the effects of globalisation anyway.

The change in the labour part Q through time is decomposed into four factors:

- shift between industries, since the economy might shift towards industries with a larger/smaller labour part (industry composition)
- shift between foreign-domestic ownership within industries
- change of the labour part within the domestically owned part of an industry
- change of the labour part within the foreign owned part of an industry

Note that the third factor should be interpreted with caution. In some industries there is, among others due to the gig economy (see e.g., Woodcock and Graham, 2019), a trend towards more self-employment. In that case, the labour part will decline if everything else stays the same, even though a sizeable part of the capital income of the self-employed is actually compensation for their labour.

Globalisation influences the distribution of factor income into labour income and capital income through exports as well. Foreign owned multinationals are more likely to export (Piacentini and Fortanier, 2015) whereas domestically owned enterprises focus more on the domestic market. There might be more pressure on profits and wages due to international competition on foreign markets. To obtain more insights we decompose the labour part of factor income related to exports as well. Besides the four factors above, the decomposition will contain two additional factors. These reflect the relative export specialisation of respectively the domestically owned enterprises and the foreign owned enterprises in an industry.

¹ Factor income (value added at factor costs) is the sum of labour income and capital income (gross operating surplus). Adding (taxes less subsidies) not on products yields total value added. Throughout this article, labour income will be compared to factor income, and value added is value added at factor costs.

The structure of this paper is as follows. Section 2 discusses the data; section 3 explains the methods to obtain the results in section 4. The paper ends with discussion of the results and conclusions.

2. Data

The data for this paper consists of three parts; one part at industry level for 12 European countries, one part of yearly extended input-output tables for Germany, France and the United Kingdom, one part at enterprise level for the Dutch economy.

At industry level for several European countries, the so-called Inward FATS (Foreign Affiliates Statistics, see Eurostat, 2012) for the time period 2008-2016 is used. This concerns data about domestically owned and foreign owned enterprises in an economy. An enterprise is considered to be a foreign-owned multinational when it is an enterprise based in the host country but is ultimately controlled from abroad. An enterprise is considered a domestically owned enterprise when it is ultimately controlled from the country where it is located. EU-countries collect this data at industry level and share it with Eurostat, the EU statistical agency, to be published. The data contains variables such as turnover, value added at factor costs, personnel costs, gross operating surplus and employment. We used the variables personnel costs and gross operating surplus; their sum is the value added at factor costs. The industry level was at the letter level of the ISIC Rev. 4 industry classification (United Nations, 2008), see Appendix 1 for more detail. Several industries, among them agriculture, financial services and government services, were not taken into account since they are not included in the Inward FATS.

The choice for the 12 industries and 12 countries (see Appendix 3 for the exact countries) in the analysis was determined by availability of the data. At a more detailed industry level, data more often has to be kept confidential because of large enterprises in that industry. In some countries that were left out of the current analysis the data was relatively often kept confidential even at the current industry level in the analysis. Note that in general, the larger the country, the larger the likelihood that data of industries do not have to be kept confidential. The number of enterprises will be larger and the largest enterprise in an industry will have a smaller share (less dominance) than in smaller countries. Therefore, we extended the analysis for the largest three European economies, namely Germany, the United Kingdom and France, with slightly more detailed data.

The detail of that data was to align with that of the industries in the AMNE² extended inter-country input-output tables compiled by Cadestin et al. (2018b). These tables are split according to ownership, i.e., it shows not only the link between the Dutch metal industry and German car manufacturers but also the link between the foreign-owned Dutch metal industry and the domestically owned German car industry. We collapse the data into single country input-output tables for the period 2008-2016. For a country, the intermediate imports are combined as total imports at the level of type of enterprise by industry, e.g., the domestically owned car industry. Exports are combined at the level of the type of enterprise by industry as well. For seven industries³ in the AMNE data there is no data available in the Inward FATS to split value added in an industry into labour income and capital income by ownership. There is only a split of value added for the whole industry available. Therefore, the domestically owned part and the foreign part of these industries are taken together. The resulting

² Activities of MultiNational Enterprises

³ These are respectively agriculture, forestry and fishery; financial services; government services; education; healthcare; arts, entertainment, recreation and other service activities; activities of households.

single country input-output table contains 27 industries that are each split into 2 types of enterprises (domestically owned and foreign owned) and 7 industries that are not split.

The data for the Dutch economy stems from the Structural Business Statistics and the UCI (Ultimate Controlling Institute) list. Both are compiled by Statistics Netherlands for the Inward FATS. The Structural Business Statistics follow from a survey among Dutch enterprises. Among others, it asks for personnel costs and gross operating surplus. The UCI list is a list at enterprise level that provides information about the country where the ultimate controlling institute is located. We only use the distinction between domestically owned enterprises (UCI in the Netherlands) and foreign owned enterprises (UCI in a country outside the Netherlands).

3. Methods

This section will explain the methods that were used to decompose the change of the labour part into several factors. The main ideas in the approach for the labour part of total production and for the labour part related to exports are very similar.

3.1 Decomposition of the labour part for all value added

We use a standard decomposition method to decompose the change of the labour part Q . Set

$$Q = \sum_{i,j} \Theta_i * \lambda_{ij} * Q_{ij}$$

with

$\Theta_i = \text{share of value added of industry } i \text{ in total value added}$

$\lambda_{ij} = \text{share of firms of type } j \text{ in value added of industry } i$

$Q_{ij} = \text{labour part } Q \text{ at firms of type } j \text{ in industry } i$

J can be equal to one (foreign owned enterprises) or 2 (domestically owned enterprises). Of course, $\lambda_{i1} + \lambda_{i2} = 1$. Set $\Delta(\text{variable}) = \text{variable}_{t=1} - \text{variable}_{t=0}$ and simplify notation by removing the sums and replacing the subscripts $t=0$ and $t=1$ by 0 and 1, respectively. Then

$$\begin{aligned} \Delta(\Theta\lambda Q) &= \Theta_1\lambda_1Q_1 - \Theta_0\lambda_0Q_0 = \Theta_1\lambda_1Q_1 - \Theta_0\lambda_1Q_1 + \Theta_0\lambda_1Q_1 - \Theta_0\lambda_0Q_1 + \Theta_0\lambda_0Q_1 - \Theta_0\lambda_0Q_0 = \\ &= \Delta(\Theta)\lambda_1Q_1 + \Theta_0\Delta(\lambda)Q_1 + \Theta_0\lambda_0\Delta(Q) \end{aligned}$$

Writing this out translates into

$$\begin{aligned} Q_{t=1} - Q_{t=0} = \Delta Q &= \Delta \left(\sum_{i,j} \Theta_i * \lambda_{ij} * Q_{ij} \right) = \\ &= \sum_{i,j} \Delta(\Theta_i) * (\lambda_{ij} * Q_{ij})_{t=1} + \sum_{i,j} \Theta_{i,t=0} * \Delta(\lambda_{ij}) * Q_{ij}_{t=1} + \sum_{i,j} (\Theta_i * \lambda_{ij})_{t=0} * \Delta Q_{ij} \end{aligned}$$

We interpret the first term as a shift between industries and the second term as a shift between foreign-domestic ownership within industries. The last term is further decomposed:

$$\sum_{i,j} (\Theta_i * \lambda_{ij})_{t=0} * \Delta Q_{ij} = \sum_i (\Theta_i * \lambda_{i1})_{t=0} * \Delta Q_{i1} + \sum_i (\Theta_i * \lambda_{i2})_{t=0} * \Delta Q_{i2}$$

And we interpret the first part as a change of the labour part within the foreign owned part of an industry and the second part as a change of the labour part within the domestically owned part of an industry.

The decomposition “went from left to right” in this case; one can “go from right to left” as well:

$$\Delta Q = \sum_{i,j} (\Theta_i * \lambda_{ij})_{t=1} * \Delta Q_{ij} + \sum_{i,j} \Theta_{i,t=1} * \Delta(\lambda_{ij}) * Q_{ij} + \sum_{i,j} \Delta(\Theta_i) * (\lambda_{ij} * Q_{ij})_{t=0}$$

This non-uniqueness decomposition is well-known and the usual solution is to take the average of the two solutions. We do so as well. Decomposing the year-on-year change every year and adding the effects of each factor through time yields a decomposition of the change of the labour part in the whole time period.

3.2 Decomposition of the labour part for value added embodied in exports

First, we will derive value added of enterprises in a given industry i of type j (either domestically or foreign owned) that is embodied in national exports. Note that it concerns value added embodied in their direct exports (of the enterprises themselves) and their indirect exports (when they act in the supply chain of exporters). These estimates are obtained using standard input-output analysis, see e.g., Miller and Blair, 2009. Start with an input-output table IO for a given country in a given year. Set

VA = vector of value added, $diag(VA)$ as the matrix with VA on its diagonal and zero elsewhere.

X = vector of exports

p = vector of total production, $diag(p)$ as the matrix with p on its diagonal and zero elsewhere.

Int = the matrix of intermediate links in IO

$A = Int * diag(p)^{-1}$ and I_n = the unitary matrix of dimension n . Then the Leontief inverse L is derived as

$$L = (I_n - A)^{-1}$$

Then the vector $VAX = diag(VA) * diag(p)^{-1} * L * X$ is the vector of value added of enterprises in industry i that is embodied in total exports.

Set $\Theta_i, \lambda_{ij}, Q_{ij}$ as above. Furthermore, set

$$RES_{ij} = \frac{VA_{total}}{VAX_{total}} * \frac{VAX_{ij}}{VA_{ij}} = \frac{VAX_{ij}}{VA_{ij}} / \frac{VAX_{total}}{VA_{total}}$$

We will interpret RES_{ij} as an export specialisation of enterprises of type j in industry i relative to the total economy⁴. Then the labour part in exports QX is equal to

$$\begin{aligned} \sum_{i,j} \frac{VAX_{ij} * Q_{ij}}{VAX_{total}} &= \sum_{i,j} \frac{VAX_{ij} * Q_{ij}}{VAX_{total}} * \frac{VA_{total}}{VA_{total}} * \frac{VA_{ij}}{VA_{ij}} = \sum_{ij} \frac{VA_{ij}}{VA_{total}} * RES_{ij} * Q_{ij} = \\ &= \sum_i \Theta_i * \lambda_{i1} * RES_{i1} * Q_{i1} + \sum_i \Theta_i * \lambda_{i2} * RES_{i2} * Q_{i2} \end{aligned}$$

⁴ Similar to the revealed comparative advantage in a Balassa-index.

Therefore,

$$\begin{aligned} \Delta(QX) &= \Delta(\sum_i \Theta_i * \lambda_{i1} * RES_{i1} * Q_{i1} + \sum_i \Theta_i * \lambda_{i2} * RES_{i2} * Q_{i2}) = \\ &\sum_i \Delta(\Theta_i) * (\lambda_{i1} * RES_{i1} * Q_{i1})_{t=1} + \sum_i \Delta(\Theta_i) * (\lambda_{i2} * RES_{i2} * Q_{i2})_{t=1} + \\ &\sum_i (\Theta_i)_{t=0} * \Delta(\lambda_{i1}) * (RES_{i1} * Q_{i1})_{t=1} + \sum_i (\Theta_i)_{t=0} * \Delta(\lambda_{i2}) * (RES_{i2} * Q_{i2})_{t=1} + \\ &\sum_i (\Theta_i * \lambda_{i1})_{t=0} * \Delta(RES_{i1}) * (Q_{i1})_{t=1} + \sum_i (\Theta_i * \lambda_{i2})_{t=0} * \Delta(RES_{i2}) * (Q_{i2})_{t=1} + \\ &\sum_i (\Theta_i * \lambda_{i1} * RES_{i1})_{t=0} * \Delta(Q_{i1}) + \sum_i (\Theta_i * \lambda_{i2} * RES_{i2})_{t=0} * \Delta(Q_{i2}) \end{aligned}$$

And a similar decomposition can be derived where everywhere instead of $t = 1$ it shows $t = 0$ and vice versa. We will take the average of those two decompositions. The terms at the right-hand side of the equation each have their own interpretation:

- The sum of the first two terms is interpreted as a change in industry composition (between industries).
- The sum of the third and the fourth terms is interpreted as a change in foreign presence within an industry.
- The fifth term is interpreted as a shift of foreign owned enterprises within an industry towards/away export specialisation.
- The sixth term is interpreted as a shift of domestically owned enterprises within an industry towards/away export specialisation.
- The seventh term is interpreted as a shift of labour part at foreign owned enterprises within an industry.
- The eighth term is interpreted as a shift of labour part at domestically owned enterprises within an industry.

Thus, the year-on-year change of QX is decomposed into these six items. Summing the effect of each item through time yields the total effect of this item during the period under concern.

4. Results

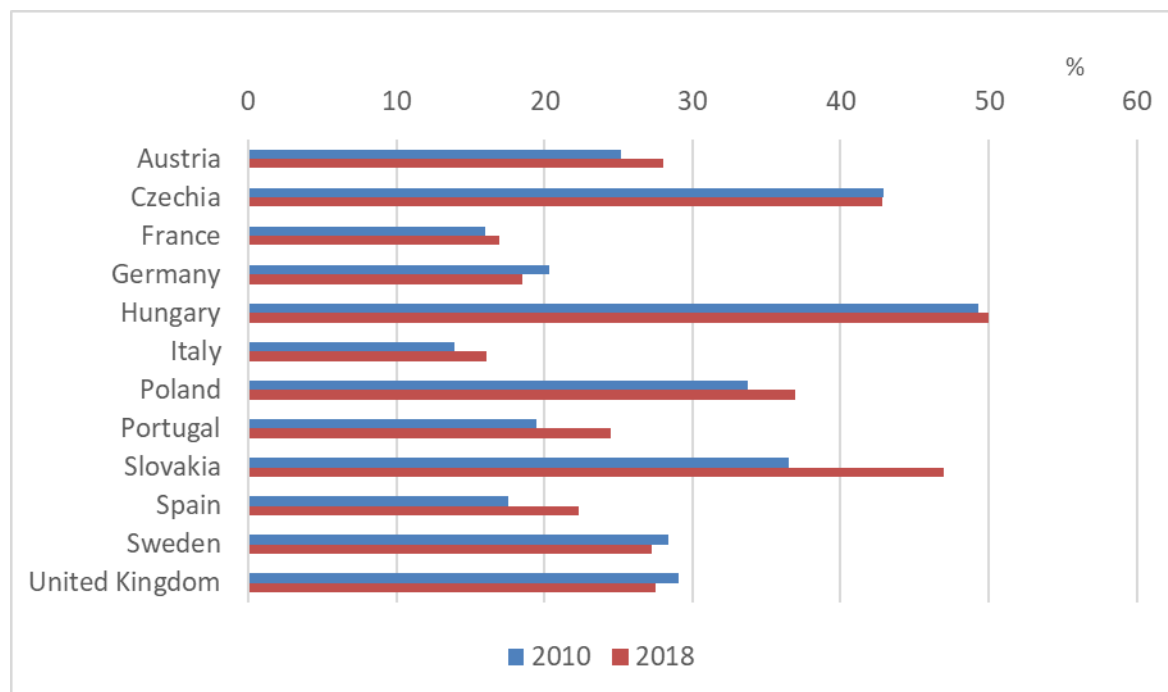
This section consists of three parts. The first part decomposes the change in the labour part Q into four factors. The second part decomposes the change in Q related to exports into six factors. The third part considers the distribution of Q at enterprises in 5 Dutch industries under foreign and domestic ownership.

First, a graph to gauge the foreign presence in the 12 economies considered in this paper. Foreign presence is measured as the ratio of value added at foreign owned enterprises in total value added of the business economy. The business economy is defined as the whole economy minus the seven industries⁵ that were mentioned earlier. In most countries foreign presence increased during the period 2010-2018. In the large economies France, Germany and Italy foreign presence is relatively

⁵ Agriculture, forestry and fishery; financial services; government services; education; healthcare; arts, entertainment, recreation and other service activities; activities of households.

modest to that in other countries, 14-20 percent. But in the Central and Eastern European countries Czechia, Hungary, Poland and Slovakia this is far higher, 34-50 percent. Especially in those countries a change of the labour part at foreign owned enterprises will reflect in the overall labour part.

4.1 Share of foreign owned enterprises in total value added of the business economy



Source: author's calculations based on data OECD.

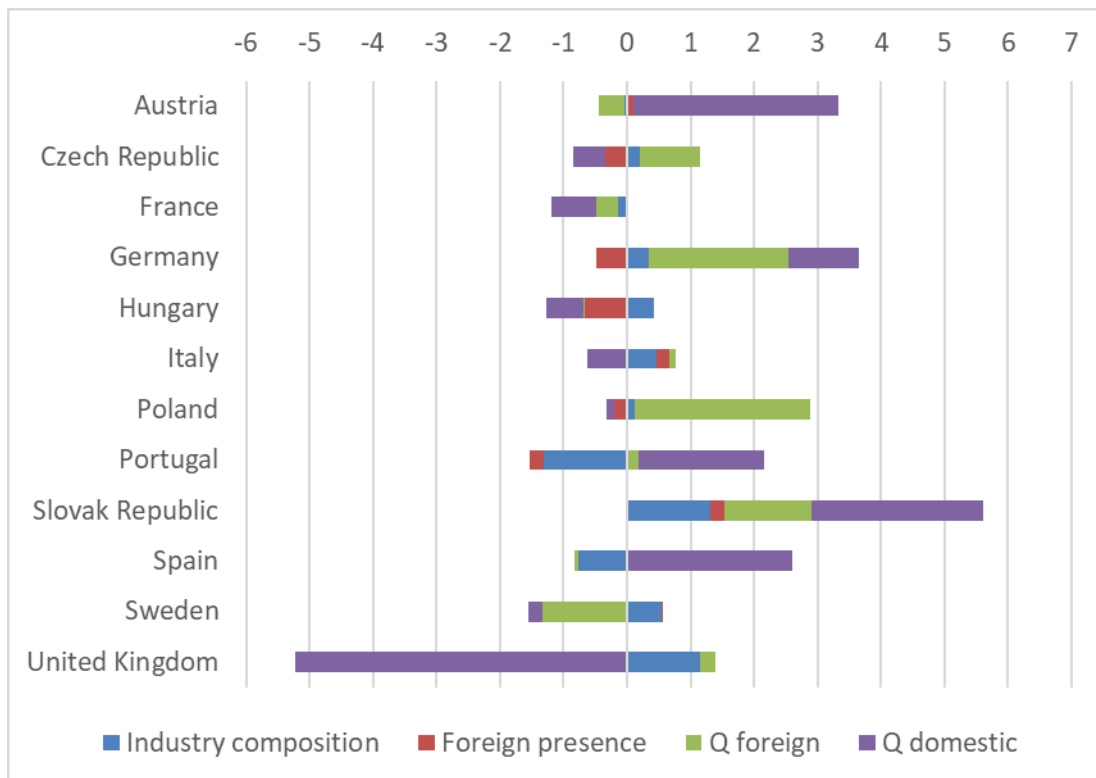
Note: due to breaks in time series, the data for Hungary and the United Kingdom is 2010-2017.

4.1 Results at country level – total value added

Figure 4.1.1 shows the decomposition of the change of the labour part Q through time for 12 European countries. There is a large variety in the results. In 8 out of 12 of the cases Q increases. Of the underlying factors, there are always several countries where a given factor increases but also several countries where it decreases. With the exception of Portugal and Slovakia, changing industry decomposition does not really play a part over the whole time period. A change of foreign presence in industries also plays a minor part. The changes in labour part at foreign owned enterprises or at domestically owned enterprises are more sizable.

For example, a large part of the increase of the overall labour part in Austria, Portugal, Slovakia and Spain is due to a higher labour part in domestically owned enterprises. However, in the United Kingdom the change of this particular labour part is the underlying factor of the decreasing labour part in general. A positive change in labour part at foreign owned enterprises can be observed in Czechia, Germany, Poland and Slovakia. In Sweden this change was negative and it was the main underlying factor in the decline of the overall labour part.

4.1.1 Decomposition of change of Q into four factors for selected EU-countries, 2008-2016

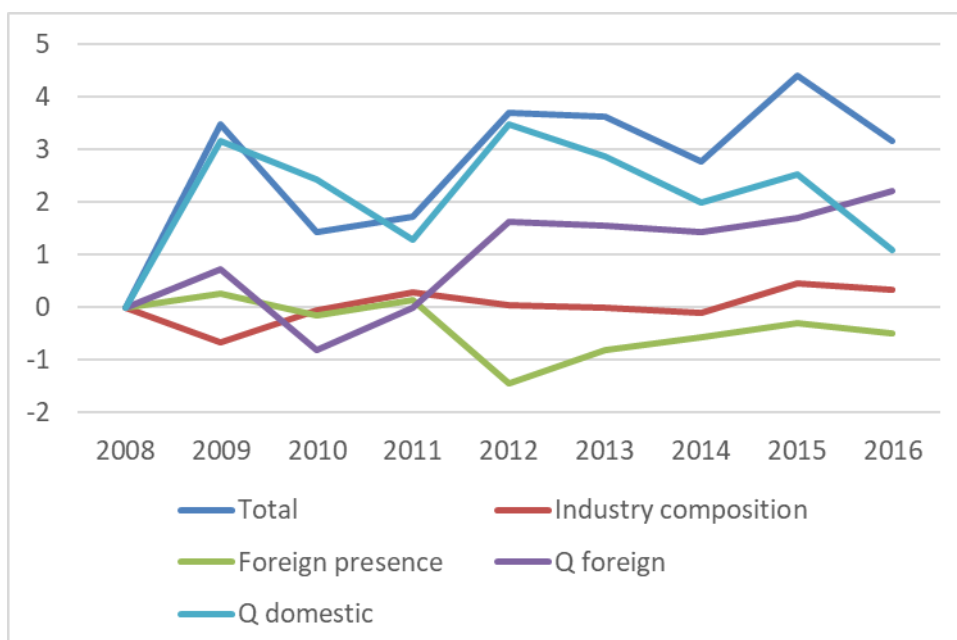


Source: author's calculations based on data OECD.

Note: due to breaks in time series, the data for France is for 2009-2016, the data for Italy 2010-2016.

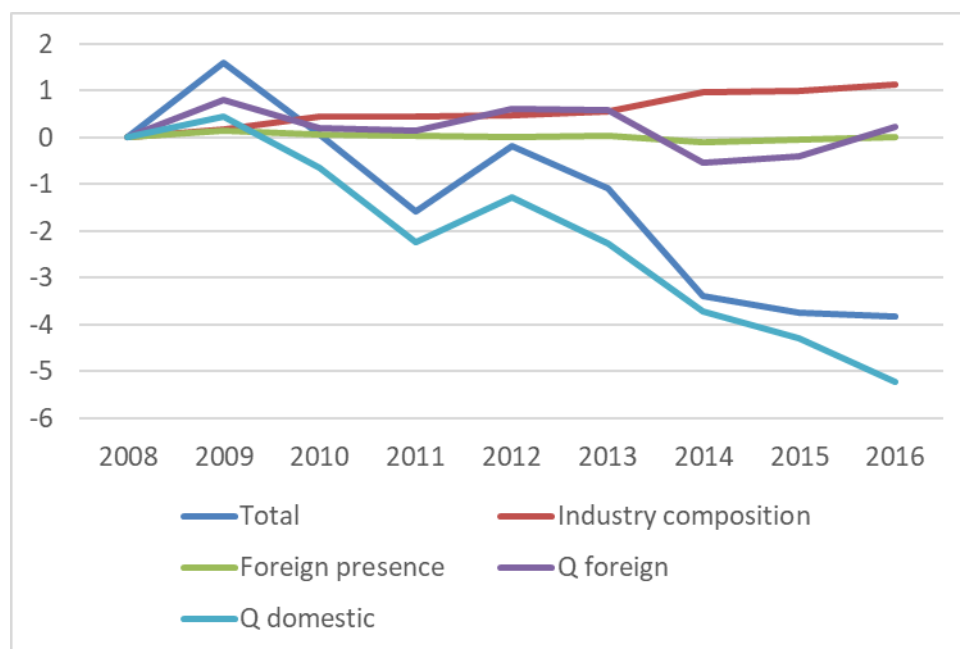
As stated in the methods section, the underlying approach is to decompose the yearly change into four factors. The change during the whole time period is decomposed by adding the yearly four factors. One might wonder whether there are any trends in the factors or not. Therefore figure 4.1.2 and 4.1.3 show the yearly decomposition of the change for Germany and the United Kingdom.

4.1.2 Decomposition of change of Q into four factors for Germany, by year



Source: author's calculations based on data OECD.

4.1.3 Decomposition of change of Q into four factors for the United Kingdom, by year



Source: author's calculations based on data OECD.

Both countries show an increase in the labour part from 2008 to 2009, both at domestically owned enterprises and foreign owned enterprises. This can be observed in several of the other countries (not shown) as well. This is during the financial crisis. Leitner and Stehrer (2012) show that there is labour hoarding during the crisis. Enterprises sometimes do not fire employees because after the crisis search and training costs for new employees can be high. As a consequence, the personnel costs will be higher relatively to the gross operating surplus and the labour part will increase.

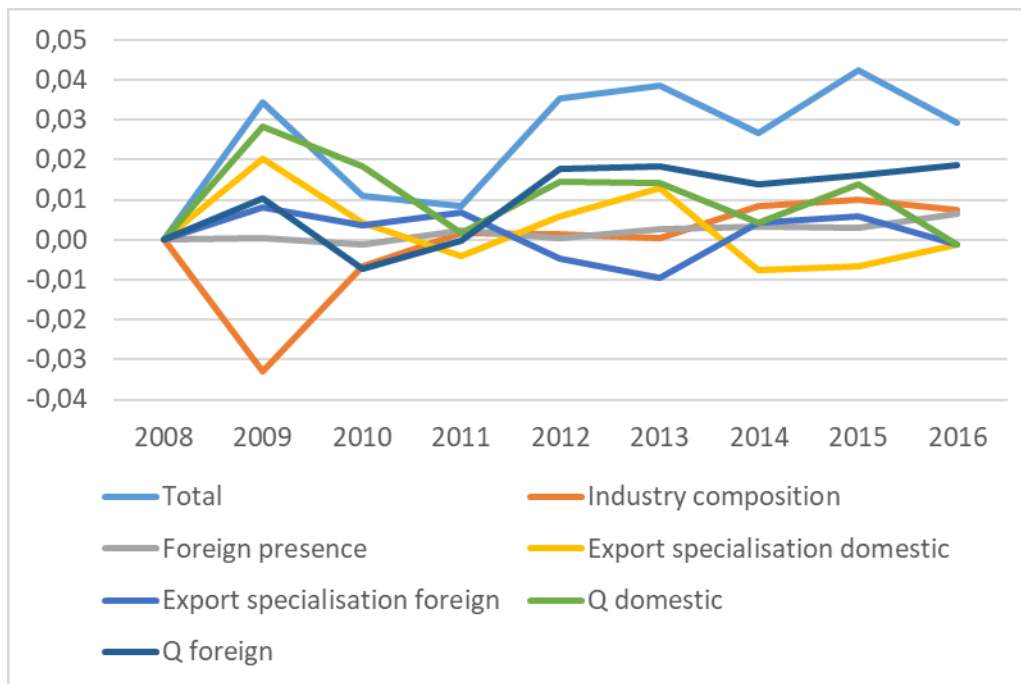
In Germany, the factors industry composition and foreign presence hardly change through time. However, the changes of the labour part at the types of enterprises are larger. For foreign owned enterprises it rose quickly 2010-2012 and then stabilised; for domestically owned enterprises it rose during the crisis but declined in later years. In the United Kingdom, all factors remained relatively small through time with the exception of the labour part at domestic owned enterprises. This had a negative effect on the overall labour part in most years.

4.2 Results at country level – value embodied in exports

Now switch to exports and the value added that is embodied in these exports. Part of it will be labour income, part capital income. Figures 4.2.1, 4.2.2 and 4.2.3 visualise the influence of the underlying factors in the labour part related to exports for Germany, the United Kingdom and France, respectively. Again, one can observe the rise in labour part from 2008 to 2009 and return to previous level in the years after that.

In Germany, the labour part related to exports rose by about 3 percent point during the period 2008-2016. It is mostly the labour part at foreign owned enterprises that is driving the results and foreign presence and industry decomposition play smaller roles.

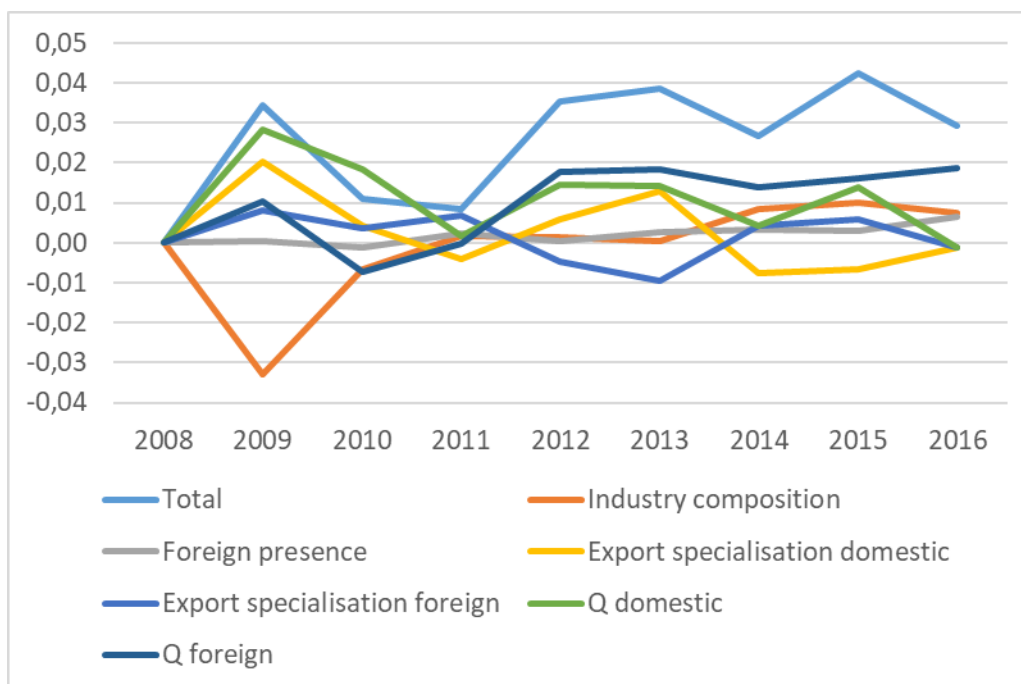
4.2.1 Decomposition of change of Q related to exports into six factors for Germany, by year



Source: author's calculations based on data OECD.

In the United Kingdom however, the labour part related to exports fell by 1.5 percent point. This was in spite of rising export specialisation of foreign owned enterprises and rising labour part at these enterprises. But just as for the total labour part, the decline of the labour part at domestically owned enterprises, by 4 percent points, led to the overall decline.

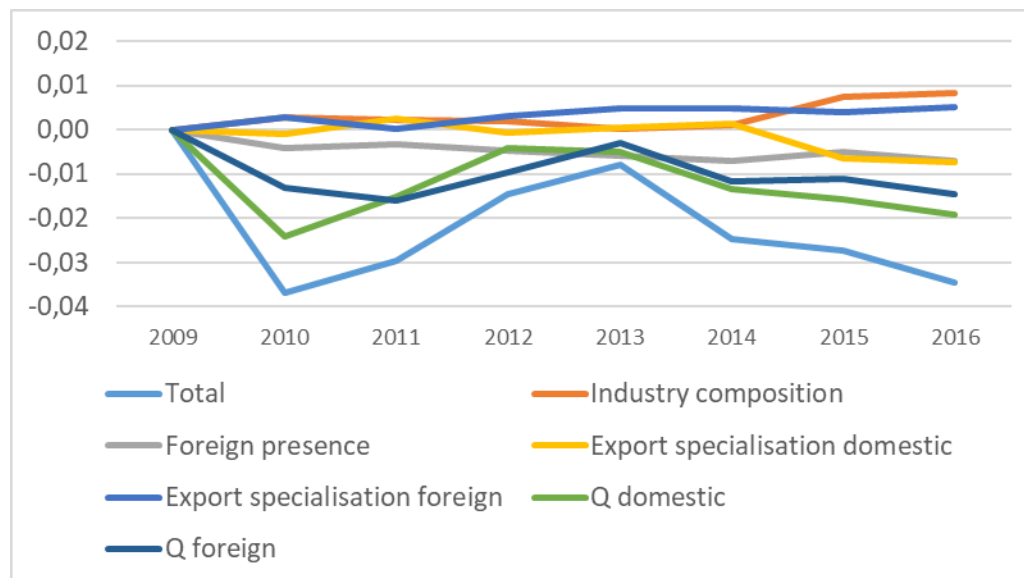
4.2.2 Decomposition of change of Q related to exports into six factors for the United Kingdom, by year



Source: author's calculations based on data OECD.

For France, the labour part related to exports fell by 3.4 percent point. Just as in the total labour part, this was mostly due to a declining labour share at domestic owned enterprises although a similar decline at foreign owned enterprises played a sizeable role as well. Note that the decline of the labour part related to exports declined more than the total labour part.

4.2.3 Decomposition of change of Q related to exports into six factors for France, by year⁶



Source: author's calculations based on data OECD.

4.3 Results at industry level, the Netherlands

The aggregate numbers earlier presented in this paper hide the heterogeneity at enterprise level. This can be substantial, as one can see in figure 4.3.1. It shows the labour part in 5 Dutch industries, namely

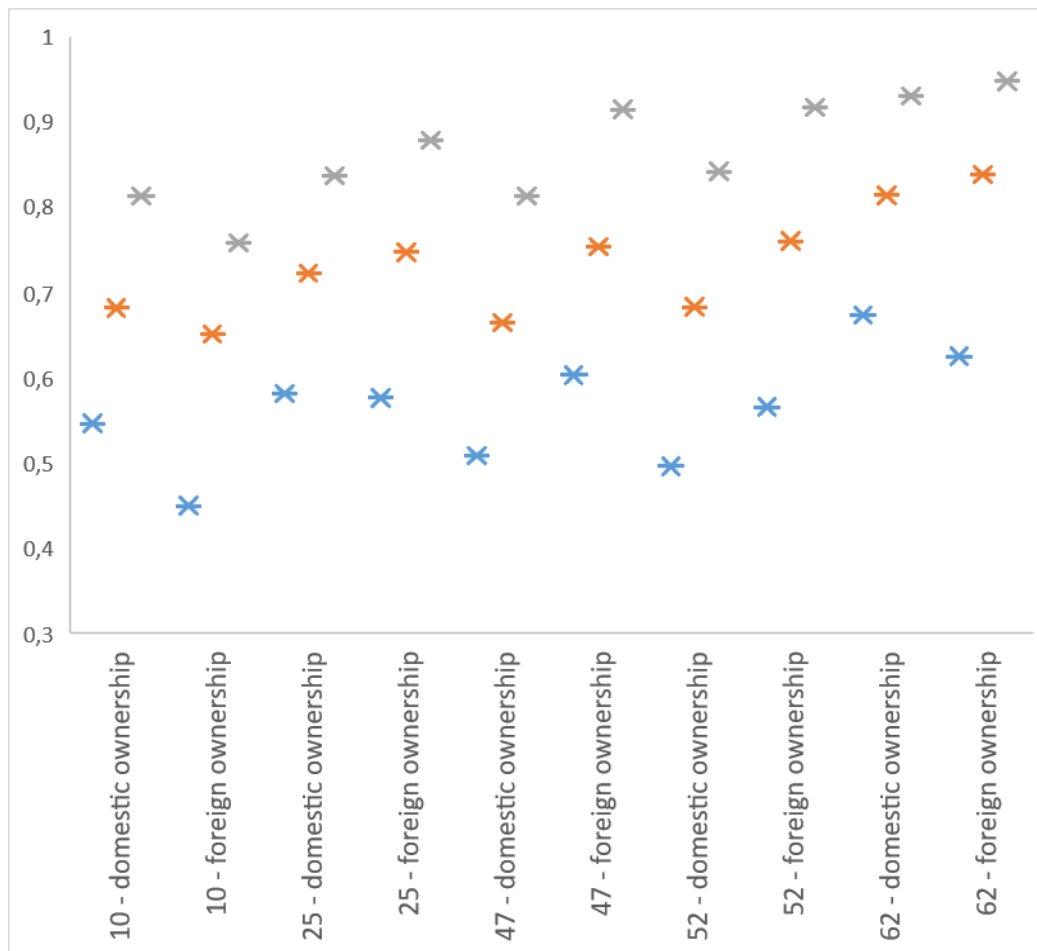
- 10⁷ – Manufacture of food products
- 25 – Manufacture of fabricated metal products, except machinery and equipment
- 47 – Retail trade, except of motor vehicles and motorcycles
- 52 – Warehousing and support activities for transportation
- 62 – Computer programming, consultancy and related activities

This is further split by ownership. The numbers are given for the 25th, 50th and 75th percentile. In general, there is a difference of about 0.15 between the 25th and 50th percentile, and a similar difference between the 50th and 75th percentile. Differences between industries are sizable, as was to be expected. In general, the values corresponding to a certain percentile in an industry are higher at foreign owned enterprises. In other words, their employees obtain a larger part of the value added than the employees of domestically owned firms.

⁶ Note that the time series starts in 2009, contrary to the time series for Germany and the United Kingdom. This is due to a break in the French time series; 2008 cannot be properly compared to 2009.

⁷ The numbers refer to the industry classification in ISIC Rev. 4.

4.3.1 Labour part in 5 Dutch industries, 25th-50th-75th percentile, by ownership, 2018



Source: author's calculations based on data Statistics Netherlands.

5. Conclusion and discussion

The paper considers the change in the labour part in 12 European economies during the period 2008-2016. It decomposes the yearly changes into four effects: a between industries composition effect, a foreign presence effect within industries, a labour share at domestically owned enterprises effect within industries and a labour share at foreign owned enterprises effect within industries.

There is substantial heterogeneity in the results. The direction of the total effect and the individual effects is positive in some countries and negative in some countries as well. The size of the industry decomposition effect is usually small. So is the foreign presence effect, with the exception of Slovakia and Portugal. The effect of a changing labour share at one of the two types of enterprises is usually larger, and sometimes (Austria, Germany, Poland, Slovakia, Spain, Sweden, United Kingdom) drives the total result. But only in Sweden a lower labour part was the main cause of a lower labour part at total level. Generally, worries that foreign multinationals will focus more on a larger share of profits in value added at the expense of a lower share of wages for their employees haven't yet materialised.

When considering the year-on-year changes for Germany, the United Kingdom and France, there is hardly any pattern visible. Nor for the total labour part nor for the labour part related to exports. The

only exception is the effect of the labour part at domestically controlled enterprises. For these countries it consistently contributes in a negative way to the total.

It is shown that there is considerable heterogeneity of the labour share within industries, even when separating the domestically owned and foreign owned parts. In general, the labour part is higher at the latter. A possible explanation is that MNEs more often operate on the international market, therefore face more competition which drives down the profit margin whereas personnel costs remain similar.

Similarly, there will be large heterogeneity between employees. The current analysis does not allow to conclude that foreign MNEs did not lead to lower or larger inequality at employee level. The data is not granular enough to arrive at such conclusions.

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Appendix

A1. Differences between the conventional labour share and the labour part Q in this paper.

- This paper considers a selection of industries, whereas the conventional labour share is computed for the whole economy. As the aim of this paper was to study differences between foreign owned and domestically owned enterprises, it considered only those industries where that is relevant (excluding e.g., government services) and data was available (excluding e.g., financial services).
- In this paper, the compensation for the labour of owners and non-paid family members is in the gross operating surplus. When calculating the conventional labour share, compensation for this labour is estimated, removed from the gross operating surplus and added to the labour part. Thus, the labour part will underestimate the actual compensation of labour in industries with high self-employment.
- The conventional labour share is the quotient of personnel costs by the (personnel costs plus net operating surplus). The net operating surplus is the gross operating surplus minus consumption of fixed capital (depreciation). Note that the net operating surplus is generally not available for MNEs and non-MNEs separately.

To get closer to the actual labour share and not the labour part (see the appendix for explanation of the difference) at least two steps are possible. First, take the personnel costs and gross operating surplus at enterprises with less than 5 persons employed, assume that these are all domestically employed enterprises, remove them from the total of the domestically employed enterprises. This might solve the problem with self-employed persons. Second, use the information about investments in fixed capital to estimate consumption of fixed capital (depreciation). Subsequently, estimate the net operating surplus (gross operating surplus minus consumption of fixed capital) that is the actual compensation for capital.

A2. Industries included in the analyses

ISIC Rev. 4	Description
B	Mining and quarrying
C	Manufacturing
D	Electricity, gas, steam and air conditioning supply
E	Water supply; sewerage, waste management and remediation activities
F	Construction
G	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	Transportation and storage
I	Accommodation and food service activities
J	Information and communication
L	Real estate activities
M	Professional, scientific and technical activities
N	Administrative and support service activities

A3. Countries included in the analysis

Austria
Czechia
France
Germany
Hungary
Italy
Netherlands
Poland
Portugal
Slovakia
Spain
Sweden
United Kingdom