

Globalisation and the Decline of the Labour Share: a Microeconomic Perspective

Abstract

This paper contributes to the infant literature on the determinants of the labour share at the level of individual firms and provides novel insights on the effect of firms' patterns of internationalisation. The analysis is performed using a rich dataset, covering six EU countries (Austria, France, Germany, Hungary, Italy and Spain), and combining information from the EFIGE survey and Amadeus balance sheets. Our results show that the labour share is lower for exporting firms and for those engaged in foreign direct investments or offshoring activities. These findings are robust to an array of sensitivity tests. Our instrumental variable analysis indicates that causation goes from internationalization to changes in the labour share. Investigation into the channels of the negative impact of internationalisation shows that these effects are not related to the composition of the labour force, nor to technological factors or firm market power. The analysis for subsectors of different technological regimes is consistent with this interpretation.

Keywords: labour share, firm-level analysis, globalisation, functional income distribution

JEL Classification: D33, F61, F16, J30

1. Introduction

The decline in the aggregate labour share (LS) – the ratio of labour compensation to domestic output – observed in the last decades in the majority of developed countries has attracted a growing attention and has materialised into an extensive theoretical and empirical literature. Despite the purely microeconomic nature of the potential drivers of the labour share, empirical research has so far been carried out mainly at the aggregate (country or sector) level, with few recent exceptions (Berkovitz et al., 2015 and 2017; Hwang and Lee, 2015; Sieghentaler and Stucki, 2015; Kyyra and Maliranta, 2008; Bockerman and Maliranta, 2012; Growiec, 2012; Dall’Aglia et al., 2015; Alvarez, 2015). Our paper contributes to the microeconomic literature on the drivers of the LS relying on data for manufacturing firms from six European countries (Austria, France, Germany, Hungary, Italy and Spain) and combining information from the 2010 EFIGE (European Firms in a Global Economy) survey and the Amadeus balance sheet information. The analysis covers the period 2008-2014 and focuses on the drivers of the labour share related to firms’ internationalisation patterns.

The explanations of the decline in the LS include first of all factors related to the production function, such as capital augmenting technological change and increasing substitutability of labour with capital (Bentolila and Saint-Paul, 2003; Lawless and Whelan, 2011; Antràs, 2004) or capital deepening (Piketty, 2014; Piketty and Zucman, 2014; Karabarbounis and Neiman, 2014). The framework gains much in explanatory power if labour and capital heterogeneity is taken into account, separating high- and low-skilled workers (Arpaia et al., 2009; Elsby et al., 2013) and ICT and non-ICT capital (European Commission, 2007; Lawless and Whelan, 2011). The overall effect of skill-biased technological change on the labour share depends indeed on the interplay between levels of substitutability of different types of capital and labour and on workers’ relative skill premia (Karaborbonis and Neuman, 2014).

A second set of explanations is related to market imperfections; when remunerations do not mirror workers’ marginal productivity, the extent to which emerging rents accrue to capital or labour depends on the institutional settings that shape the bargaining power of workers *vis-a-vis* employers (Blanchard and Giavazzi, 2003). The existing literature has emphasised particularly the role of product market competition (Azmat et al., 2012; Autor et al., 2017; Barkai, 2016) and labour market

institutions (Bentotila and Sain-Paul, 2003; OECD, 2011; Bental and Demougin, 2010; European Commission, 2007).

The forces related to globalisation add complexity in all sources of labour share change. According to classical trade theories, developed countries specialize in capital-intensive industries and this drives the labour share downwards, provided that the elasticity of substitution is lower than one (i.e., capital and labour are gross complements) (European Commission, 2007). The introduction of labour heterogeneity (high- and low-skilled) complicates the predictions of the model since the overall effect on the LS now depends on the relative elasticity of substitution of the different types of labour with respect to capital (Guscina, 2006; ILO, 2011). In addition, wage setting institutions and rigidities can alter labour/capital substitutability and the impact of internationalisation patterns on the LS (Decreuse and Maarek, 2011; Davis, 1998).

Even more relevant for our analysis is the fact that intra-industry trade between developed countries has become largely prevalent as a result of a shift towards the production of horizontally differentiated goods, which normally leads firms to benefit from some market power, higher mark-ups and profits. “*New*” *New trade* theories emphasise the importance of firm heterogeneity (Melitz, 2003) and of international competitive pressure as a stimulus to productivity enhancing micro-restructuring (creative destruction) within industries (e.g., Bernard et al., 2007; Lileeva, 2008; Bockerman and Maliranta, 2012). If higher productivity is driven by higher capital intensity aimed at reducing labour costs, international firms will tend to have a lower labour share; however, if capital and skilled labour are complements, the final effect on the labour share will depend on the relative change of the workforce composition by skills within the firm. Additionally, in imperfectly competitive labour markets, globalisation forces tend to adversely affect the relative bargaining position of the least mobile production factor, i.e., labour (Rodrik, 1997, Slaughter, 1999). Workers’ bargaining position will consequently deteriorate due to an increase in the outside options of firms (IMF, 2007). The threat of relocating the production process (or part of it) through FDI, outsourcing or imports of intermediate inputs, is therefore likely to compress wages and to lead to a decline of the labour share. When domestic firms in developed countries decide to produce abroad, or to offshore the most unskilled labour-intensive segments, labour demand for low skilled workers decreases and its wage

elasticity grows (Crinò, 2012). Both factors drive the labour share downwards, as shown by various empirical studies on developed countries (Guscina, 2006; Harrison, 2002; Jaumotte and Tytell, 2007; Jayadev, 2007). Opposite or no effects of internationalisation/offshoring are expected in low-wage countries (Bassanini and Manfredi, 2012). However, once again the overall impact on the labour share in the presence of heterogeneous labour is ultimately an empirical matter, depending on the relative size of the gains/losses of the groups of workers. Guerriero and Sen (2012) provide empirical evidence on the different effect of trade openness on the labour share for OECD (negative) and non-OECD (positive) countries; when they distinguish between developed and developing countries they find that the effect of openness is in both cases positive, but much weaker for the advanced economies.

Our paper contributes to the existing literature on different dimensions. With the few exceptions mentioned above, empirical investigation on the drivers of the labour share at the firm level is still scarce and limited to firms within a single country. Hence, our first contribution is to extend the perspective of the analysis to a cross-country sample of firms. Second, while studying the microeconomic drivers of the labour share, we focus on a comprehensive set of aspects related to globalisation patterns/strategies (export, offshoring, FDI) and their interplay with other firm-level characteristics. The latter include the extent of productivity performance, market power and the composition of the workforce. Third, given the crucial importance of technological factors in explaining labour share dynamics and that large variation in the phenomenon is associated with cross-industry differentials in production technology (Karabarbounis and Neiman, 2014), we provide an overview of the drivers of the labour share distinguishing sectors on the basis of their innovation and technological capabilities.

The paper is organised as follows. The next section (2) illustrates our empirical model. In Section 3 we describe the data used in the analysis and provide some preliminary descriptive evidence on our sample of firms. Section 4 presents and discusses the results. Section 5 concludes.

2. Empirical Specification

In order to derive the empirical model for the drivers of the labour share, we follow Bentotila and Saint-Paul (2003) in assuming a general multiplicative form of the labour share function:

$$LS_i = g(k_i, A_i)h(Z_i, X_i) \quad [1]$$

where subscript i denotes firms and the function $g(k_i, A_i)$ describes the labour share drivers strictly derived from the production function (the capital/output ratio and technological progress, respectively). The separate exponential function $h(Z_i, X_i)$ is instead meant to account for the other potential firms' characteristics able to affect their labour share dynamics. In particular, the set Z_i includes aspects related to globalisation, the emergence of mark-ups and other factors able to shape the relative bargaining power of labour and capital (Bentotila and Saint-Paul, 2003); the set X_i adds other firm-level control variables (their full description is provided in the next section).

Assuming that both $g(\times)$ and $h(\times)$ in equation [1] are also multiplicative, we can express the LS (in logs) as:

$$\ln LS_i = b_0 + b_1 \ln A_i + b_2 \ln k_i + b_3 Z_i + b_4 X_i + e_i \quad [2]$$

where e_i is a residual term.

As explained in the next section, the analysis is based on cross-sectional data from a sample of manufacturing firms. Therefore, the regression analysis is developed using the OLS estimator. Our aim is to estimate the coefficients of Equation [2] to derive the causal impact of the various factors on the labour share. However, our model is likely to be affected by endogeneity issue, attributable to omitted variables and reverse causality. For example, with reference to the explanatory variables of interest here (related to internationalisation of firms), unprofitable firms with high labour costs (and high labour share) could decide to outsource labour-intensive tasks or engage in vertical FDI. Similarly, low

labour costs might be one important drivers of firms' competitiveness, increasing their operation in international markets. We tackle possible endogeneity bias using an instrumental variable (IV) approach, as explained in Section 4.2.

3. Data and Descriptive Statistics

We estimate equation [2] using a large dataset of manufacturing companies from six EU countries (Austria, France, Germany, Hungary, Italy, and Spain), which combines information from the EFIGE survey and the Amadeus balance sheet data set. The EFIGE survey was conducted in 2010 and covers a large dimension of company characteristics for the period between 2007 and 2009 (R&D and innovation, ownership structure, management practices, workforce profile, international activities, financing and banking relationships, market structure and pricing behaviour)¹. This information is then linked to the Amadeus balance sheets data. In the latest release of Amadeus-EFIGE linked data, balance sheets data span from 2001 to 2014. In the light of the nature of the data, the analysis developed below is a cross-sectional regression, which relates the average labour share between 2008 and 2014 against a set of firm characteristics. Explanatory variables exploiting information from the survey are taken at the initial year (2008), whilst those variables that are derived from balance sheets data are taken as yearly averages for the period 2008-14.

Our firm-level labour share variable (LS_i) is defined as the percentage ratio of the cost of employees to value added, as reported in the balance sheet². At the firm level, total labour costs can exceed the amount of value added in periods of crisis (i.e., when sales are very low) so that their percentage ratio can exceed 100. We treat these observations as outliers, adopting several trimming criteria and assessing the robustness of our results to the sample composition, as well as to various forms of attrition (detailed below). The impact of capital-augmenting technological progress is captured by a measure of Total Factor Productivity (TFP), provided by the EFIGE dataset and constructed following the Levinsohn and Petrin (2003) procedure. We approximate capital intensity (k_i) as the ratio of the book value of total stock of fixed assets over value added. In Amadeus, the stock

¹ Country-specific samples in EFIGE were selected by means of a stratification procedure on the basis of firm's size, sector of production (2-digit NACE rev. 1) and region of location (NUTS 2).

² A detailed list of the variable is reported in Table A1 in the Appendix.

of fixed assets can be decomposed into tangible (machinery, equipment, etc.) and intangible assets (R&D, software, etc.). We exploit this dichotomy to investigate the role of capital asset composition and possible heterogeneity in the complementarity/substitutability between capital and labour (TAN_K and INT_K). Capital investment and value added are taken at current prices³.

Our data set provides detailed information to capture the impact of factors related to companies' internationalisation strategies, mark-ups and labour characteristics (included in the vector Z in equation [2]). The extent of firms' effort in internationalisation activities is assessed looking at various dimensions, i.e. whether the company is running at least part of its production activity in another country via direct investments (FDI), whether it exports regularly abroad from the home country (EXP), and whether it imports material inputs from abroad to implement production activities. Following the industry-by-country literature (Bournakis et al., 2016), the latter can be considered as a broad indicator of off-shoring activities (denoted as OFFB)⁴. However, we also use a narrower indicator (OFFN) that refers to those firms that declared to import materials from abroad and were running at least part of their production activity in another country through contracts and arm's length agreements with local firms. All these characteristics are described by binary indicators.

We capture the extent of the firm's ability to charge a mark-up over costs by constructing a firm-level measure of the price-cost margin from balance sheet data, defined as the difference between sales and variable costs (i.e., costs for materials and employees) over sales (MARGIN). Due to the importance of heterogeneity in labour composition in shaping the drivers of the labour share, we have also constructed a variable measuring the percentage of unskilled workers on the total workforce of the firm (UNSKILLED). One drawback of the EFIGE survey is that this category of workers is defined only in relation of the group of blue collars, implying that unskilled white collars are not accounted for by our metric.

³ The unavailability of information on the name of the sector of each firm has inhibited us to convert balance sheets variables into constant price values by means of industry deflators (which is the standard practice). However, as long as industry and country dummies (which are instead available) are used in the regression analysis, the estimation bias associated with the use of current prices values should be minimal.

⁴ Since Feenstra and Hanson (1996) onwards, purchases of intermediate material inputs, extracted from Input-Output tables, have been used in industry-by-country analyses to measure the extent of off-shoring activities (see Crinò, 2012).

Considering the factors discussed above, we can re-write equation [2] as follows (benchmark model):

$$\ln LS_i^{08-14} = b_1 \ln TFP_i^{08-14} + b_2 \ln TAN_K_i^{08-14} + b_3 \ln INT_K_i^{08-14} + b_4 \ln MARGIN_i^{08-14} + b_5 \ln UNSKILLED_i^{08} + b_6 FDI_i^{08} + b_7 EXP_i^{08} + b_8 OFFB_i^{08} + a_n X_i^{08} + g_c + d_j + J_r + e_i \quad [3]$$

where i denotes firms, c countries, j sectors and r regions. X is a vector of additional firm-level controls and ε is the error term. g_c , d_j and J_r represent country, sector (2-digit NACE classification) and region dummies (NUTS2), respectively. All variables that are expressed as percentage ratios are taken in natural logs.

The vector X_i includes a set of standard control variables. The survey was conducted in the middle of the great crisis induced by the Lehman Brothers' failure, hence we need to identify those firms that suffered most during the downturn. To this aim, following Cette et al. (2016) we include as a control variable the average rate of change in firm value added between 2008 and 2014 (CRISIS). Given that the cost of labour is significantly less responsive to business cycle than output, the coefficient for this variable is expected to be negative, i.e., firms with a negative rate of change in output (value added) should have on average a larger labour share. The firms' age profile is accounted for by a binary (dummy) variable indicating whether the firm is aged 20 years and above (OLD)⁵. Firm's size is controlled for by means of a dummy variable for those companies with less than 250 employees, i.e. small and medium-sized enterprises (SMEs). We also account for the affiliation of the company to business groups and, more specifically, use a binary variable for those belonging to a national group (GROUP). Also, we control for the nature of management style using a dummy for companies run by some members of the control family (FAMILY). To discriminate firms in relation to their technological abilities, we adopt a dummy for those that carried out some forms of product/process innovation between 2007 and 2009 (INNOV). This control is useful to single out the effect of innovation on the dynamics of the labour share from the effect of internationalization, given that the former factor is often found to be a driver of the latter (see Altomonte et al., 2013).

⁵ EFIGE dataset classifies firms along three age categories (aged less than 6; between 7 and 20; more than 20).

Karaborbounis and Neiman (2014) point out that the main source of variation in the dynamics of the labour share is the industry dimension. Industry-specific characteristics (related to technology and factors intensities) are also crucial in understanding the effects of internationalisation patterns, which are the focus of our analysis. For these reasons, we also present results by dividing companies in broad industrial sectors, following the Pavitt taxonomy (see Pavitt, 1984), directly provided by EFIGE. This classifies firms into four groups (Scale intensive, High-Tech, Specialised suppliers, Traditional) based on the nature of innovation activities performed by the firm (formal/informal); their source (internal/external); their aim (cost reduction, new product development, etc.); and the method used for their protection (patent, secrecy, etc.).

Table 1 reports the main summary statistics for the total sample of manufacturing firms and for each Pavitt category. The average ratio of labour costs to firm value added is 78%. Despite the wide variation across firms in this variable (the standard deviation is 18.6), this characteristic does not seem to be related to the technological capabilities of the companies. High-tech companies (also noted as science based) show an appreciable lower labour share, but this value may be influenced by the low number of observations sampled for this category of firms. As expected, high-tech firms are the least capital intensive and the most productive ones, with TFP about 5% higher than the overall sample (0.60 vs 0.57). The ratio of the stock of intangible assets to value added is particularly high for firms within the specialized suppliers group, followed by the high-tech firms (0.32 and 0.13 respectively).

The battery of indicators on international operations reveals a large heterogeneity across firms in the mode of accessing foreign markets. A large proportion of firms are involved in trade activities, as 70% declares exports from the country of origin, whilst 54% declares imports of material inputs from abroad (OFFB, 54%). Much lower is the share of firms involved in international production chains, as only 5% produce abroad with their own establishment whereas 4% outsources abroad some material segment of the production process. Interestingly, high-tech companies and specialized suppliers are the most active along both dimensions of internationalisation (trade and production abroad).

Table 1- Summary statistics

	TOTAL		Economies of scale	High-tech	Specialized suppliers	Traditional industries
	Mean	SD	Mean			
LS	78.2	18.6	77.7	74.5	78.4	79.1
TFP	0.57	0.59	0.57	0.60	0.54	0.57
INT_K	0.13	3.69	0.10	0.13	0.32	0.08
TAN_K	2.10	94.35	5.50	0.70	0.78	1.02
FDI	0.05	0.21	0.05	0.10	0.07	0.03
EXP	0.70	0.46	0.67	0.83	0.84	0.65
OFFB	0.54	0.50	0.56	0.65	0.63	0.48
OFFN	0.04	0.18	0.03	0.05	0.04	0.03
MARGIN	28.3	12.9	28.6	29.7	26.9	28.6
UNSKILLED	20.6	27.0	18.7	13.5	18.4	23.2
OLD	0.59	0.49	0.61	0.58	0.60	0.59
CRISIS	-3.95	22.1	-5.34	0.65	-2.35	-4.35
SMEs	0.92	0.27	0.87	0.82	0.92	0.95
GROUP	0.15	0.36	0.19	0.21	0.14	0.13
FAMILY	0.60	0.49	0.54	0.50	0.57	0.66
INNOV	0.66	0.47	0.66	0.80	0.72	0.62
# obs	7,454		1,883	305	1,389	3,678

Source: our elaborations from EFIGE database. SD=standard deviation

The profit margin is rather homogenous across different types of firms. On average, firms in our sample are able to charge 28% over variable costs. Conversely, a larger heterogeneity can be found in the skill endowment. Indeed, the proportion of unskilled workers (unskilled blue collars) on the total workforce is on average around 20%, ranging between 23% in traditional firms to 13% in high-tech companies.

Table 1 also reveals that EU manufacturing firms are rather old (59% are aged 20 and over), are mainly independent (as only 15% is affiliated to a national group), have a small or medium dimension (92%), and are prevalently family managed (60%). The crisis affected considerably EU manufacturing firms as, on average, they lost about 4% of value added yearly between 2008 and 2014. Despite this, companies in the sample have been quite active in innovation activities, broadly intended, and 66% of them introduced a new product or a new production mode in the period under scrutiny⁶.

⁶ In comparison to this average pattern, high-tech companies are bigger in size, are more affiliated to national groups and obviously do more innovation.

4. Results

4.1 Benchmark Model

Table 2 presents our initial set of results relative to the estimation of our benchmark model (equation 3). All specifications are estimated using Ordinary Least Squares (OLS) under the assumption of exogenous regressors. All estimates report heteroskedasticity robust standard errors. Our empirical investigation begins with the estimation of a restricted version of eq. [3], which includes only technological factors (column 1). This first set of results is based on the full sample, while from column (2) onwards we trim the sample to eliminate outliers (this is done by trimming firms at the top 5% and at the bottom 1% of the labour share distribution) and then use relative sample weights from column (3) on.

Results from column (1) show that the impact of TFP is negative and statistically significant, consistent with previous evidence (Bassanini and Manfredi, 2012; Bentolila and Saint-Paul, 2003; Lawless and Whelan, 2011). The size of the effect is sensibly reduced when controlling for outliers in column (2), but it still supports the hypothesis of a negative impact of technological progress on the labour share. Recent technological developments have been increasingly capital augmenting, a fact that is also documented by the negative and significant coefficient on the capital-output ratio. The decline in the relative price of investment goods, together with advances in ICT, has been considered among the main forces driving these trends (Karaborbonis and Neiman 2014). While tangible capital decreases the labour share, increasing investments in intangible assets such as goodwill, brand development and training, move the labour share in the opposite direction. Although the estimated effect is affected by the trimming and the use of weights (columns 2 and 3), results become more stable once additional controls are added to the specification (columns 4-6). With the exception of O'Mahony et al. (2017) who find similar results using cross-industry cross-country data, intangible assets are not usually included in the analysis of the labour share. This is a surprising fact given that these investments are complementary to the new technologies and they are playing an important role within economies, especially in explaining productivity growth (Corrado et al., 2005, 2009, 2014; Roth and Thum, 2013; Niebel et al., 2016). Investments in intangible assets require highly skilled workers who command higher wages and therefore increase the labour share.

Our TFP indicator describes how much technology contributes to output growth and it is computed as a production residual, once the contributions of all factors inputs have been correctly measured. Therefore, TFP also captures variations in cyclical input utilization and omitted variables, among others factors. This explains why its role further decreases when extending our specification to the full model, which includes the impact of globalisation, profit margin, the structure of the labour market and other control variables – columns 4, 5 and 6. Globalisation, as captured by FDI, EXP, OFFB and OFFN, has a consistent negative and significant impact on the labour share. It should be observed that the measures of narrow and broad off-shoring (OFFN and OFFB) capture distinct effects of the international fragmentation of production, being significant and negative either taken individually or together. This is consistent with Bournakis et al. (2016). Since a larger number of firms are involved in broad off-shoring, the estimation of the effect of this variable is more precise than for narrow off-shoring (OFFN); for this reason, the remainder of the sectoral analysis is developed using OFFB (see Sub-section 4.3).

Table 2 - Technology, internationalization and market concentration

	(1)	(2)	(3)	(4)	(5)	(6)
TFP	-0.335*** (0.019)	-0.158*** (0.008)	-0.158*** (0.008)	-0.133*** (0.008)	-0.134*** (0.008)	-0.133*** (0.008)
TAN_K	-0.011** (0.005)	-0.037*** (0.003)	-0.039*** (0.003)	-0.038*** (0.003)	-0.038*** (0.003)	-0.038*** (0.003)
INT_K	0.013*** (0.003)	0.002 (0.001)	0.003* (0.002)	0.004** (0.002)	0.004** (0.002)	0.004** (0.002)
MARGIN				-0.120*** (0.007)	-0.120*** (0.007)	-0.119*** (0.007)
UNSKILLED				-0.004** (0.002)	-0.004** (0.002)	-0.004*** (0.002)
FDI				-0.053*** (0.015)	-0.049*** (0.015)	-0.053*** (0.015)
EXP				-0.036*** (0.007)	-0.036*** (0.007)	-0.045*** (0.006)
OFFB				-0.031*** (0.006)	-0.029*** (0.006)	
OFFN					-0.037** (0.018)	-0.047*** (0.018)
<i>Controls</i>						
OLD				0.015*** (0.006)	0.015** (0.006)	0.015** (0.006)
CRISIS				-1.854*** (0.234)	-1.860*** (0.235)	-1.892*** (0.236)
SMEs				-0.010 (0.012)	-0.011 (0.012)	-0.008 (0.012)
GROUP				-0.020** (0.008)	-0.020** (0.008)	-0.022*** (0.008)
FAMILY				-0.003 (0.006)	-0.003 (0.006)	-0.003 (0.006)
INNOV				-0.005 (0.006)	-0.004 (0.006)	-0.007 (0.006)
Constant	4.245*** (0.174)	4.343*** (0.069)	4.378*** (0.063)	8.433*** (0.461)	8.441*** (0.463)	8.497*** (0.466)
Trimming	No	Yes	Yes	Yes	Yes	Yes
Weights	No	No	Yes	Yes	Yes	Yes
Observations	8,327	7,868	7,868	7,362	7,362	7,362
R-squared	0.233	0.196	0.200	0.309	0.310	0.307

Notes: Robust standard errors in brackets, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Our results show that increasing international trade has contributed to the decline of the labour share, hence providing support to Elsby et al. (2013). However, the negative link between globalisation and the labour share, often discussed in the media and policy circles, has not always found widespread consensus in the economic literature. For example, Haskel et al. (2012) show that US wages are not strongly correlated to US imports from low-wage countries. Looking at a global sample of countries, Guerriero and Sen (2012) conclude that trade openness (measured as the sum of import and export over value added) has a positive impact on the labour share, although the size of the effect is remarkably lower for developed countries. In addition, Autor et al. (2017) claim that the decrease of the labour share has also been observed in non-traded sectors (wholesale, retail and utilities), which suggests that there are factors other than trade driving the declining trend. These observations imply that further analysis is needed to understand the mechanisms through which trade operates, an issue that we address in Sections 4.3 and 4.4.

Next to globalisation, studies have also documented that the decrease of the labour share has been driven by an increase in market concentration. Evidence for the US shows that, in several industries, the bulk of value added is produced by few 'superstar firms', which are able to increase revenues without increasing labour costs, hence enjoying higher profits (Barkai, 2016; Autor et al., 2017). We assess the role of market concentration by including in our specification a firm-level measure of profit margin (MARGIN), described in Section 3. Results in columns (4) – (6) of Table 2 show that the impact of this variable is always negative, statistically significant and quantitatively important: a 1% increase in profit margin reduces the share by approximately 0.12%.

Lastly, we consider the role of the skill composition of the labour force, by including the percentage share of low-skilled workers on total employment. As expected, an increase of low-skilled workers decreases the labour share, although the effect is of modest size (a 1% increase in the proportion of the low-skilled reduces the labour share by 0.004%). This effect is almost tautological as, compared to the medium and high skilled, low-skilled workers are on average paid a lower wage.

The bottom part of Table 2 presents coefficient estimates for our set of control variables. These show that the labour share moves anti-cyclically, being higher in firms that have experienced a reduction in value added (CRISIS); and mature firms (OLD) distribute relatively more to labour. Other

controls tend to show a negative sign although, except for firms belonging to national groups (GROUP), they are not statistically significant. Results for the control variables are generally consistent across the different specifications hence they are not shown in the remainder of the paper to simplify our discussion.

Overall results in this section are consistent with the mainstream view of technology, globalisation and concentration having a negative impact on the labour share. However, they also open further questions. As discussed above, it is unclear which is the main channel through which globalisation operates. We further investigate these issues below (Section 4.3).

4.2 Endogeneity Issues

The key identification assumption used thus far is that firms make their occupational choices, in terms of numbers of employees or wages paid, in reaction to internalisation operations. Put it in other words, the direction of causality would go from internationalisation to the labour share. However, one may question that the decision of a company to be active abroad could reflect the extent of labour costs over value added. For instance, in certain industries, only firms with a relatively low share of labour costs would be competitive and be able to export their products. Also, as the literature on offshoring shows, firms may decide to fragment the production, relocating abroad some tasks or purchasing intermediate inputs on international markets, for cost-saving reasons (Bournakis et al., 2016).

In this section, we address these endogeneity concerns by implementing a two-stage-least square (2SLS) analysis in which we predict the effect of internationalization operations on the labour share by means of two exogenous variables, which capture: i) the propensity of the firms located in the same region and industry to be active abroad with the same strategy of the company under assessment (i.e., the proportion of firms with FDI in the same industry/region is used to instrument the dummy indicating whether the firm has production branches abroad); and ii) the propensity of the firms in the same region and industry to undertake R&D activities⁷. The rationale behind this identification strategy is that a firm is more likely to be active abroad when there are certain

⁷ These are proportions at sector-by-region level from which we exclude the firm object of observation.

contextual conditions that enable internationalization, such as the institutional setting or localised sources of competitive advantage. Once one has controlled for the effect of localized sources of internationalisation (competitive advantage), the proportion of firms doing R&D should capture the extent of local competitive pressure. As a result, the higher the number of companies doing R&D in the same region/sector, the less competitive is the company under consideration, and consequently the lower its probability of being active abroad. Earlier works based on EFIGE data have followed similar identification strategies⁸.

The instrumental variable analysis is performed on the benchmark specification shown in Table 2 (columns 4 and 6). In the first step, each endogenous variable is regressed on the pair of external instruments discussed above, along with the entire set of exogenous covariates. For the sake of brevity, Table 3 shows only the coefficients obtained for the external variables in the first step of the regression, and the second-stage parameters (i.e., all remaining control variables are included but not reported).

The first-step results show that our external instruments predict the firm propensity to internationalize. The region-by-industry proportion of firms that are active abroad is particularly effective to predict whether the firm has foreign branches or imports material intermediates through arm-length contracts, FDI and OFFN (1.015 and 1.036). As expected, a high proportion of firms doing R&D weakens the individual firm's attitude to operate abroad. The Angrist-Pischke multivariate F statistic indicates that our external instruments are valid. Moreover, the Hansen J-test of over-identification, reported at the bottom of Table 3, illustrates that these instruments are orthogonal to the labour share in all specifications⁹.

The results obtained in the second step generally support the evidence illustrated in Table 2. Indeed, by accounting for the possible simultaneity between the labour share and international activities, the impact of internationalisation on the dependent variable is found to be larger. This may

⁸ Altomonte et al. (2013) use the proportion of firms benefiting from R&D public support at sector-by-country level, as well as the average share of R&D expenses over sales, to predict the innovation capability of the firm, and through this channel, the firm propensity to operate in international markets. Aristei et al. (2016) and Altomonte et al. (2016) use similar identification strategies.

⁹ Our set of estimates is not affected by under-identification problems as Kleibergen Paap rk LM test ranges from 83.6 to 221.9.

be due to the fact that the use of external instruments helps eliminating the effect of some omitted factors that are correlated with both the labour share and internationalisation variables, hence producing a downward bias in the OLS coefficient. This shows that reverse causality does not drive our results and least-squares estimates in Table 2 are conservative about the extent (and significance) of the impact of globalization on the labour share. Hence, in the rest of the paper we relax the assumption of endogeneity of the internationalisation variables and carry out our analysis using OLS.

Table 3 – Instrumental Variable regressions

	(1)	(2)	(3)	(4)	(5)
	2SLS - First-step				
		FDI	EXP	OFFB	OFFN
% of firms active abroad with the same strategy		1.015*** (0.050)	0.714*** (0.027)	0.786*** (0.028)	1.036*** (0.042)
% of firms active abroad with the same strategy		-0.041*** (0.013)	-0.187*** (0.028)	-0.262*** (0.030)	-0.016** (0.007)
Angrist-Pische F test statistics [p-value]		211.6 [0.000]	345.4 [0.000]	398.4 [0.000]	319.8 [0.000]
	OLS	2SLS - Second-step			
TFP	-0.133*** (0.008)	-0.134*** (0.011)	-0.134*** (0.011)	-0.131*** (0.011)	-0.133*** (0.011)
TAN_K	-0.038*** (0.003)	0.004*** (0.001)	0.004*** (0.001)	0.004** (0.001)	0.004*** (0.001)
INT_K	0.004** (0.002)	-0.036*** (0.003)	-0.035*** (0.003)	-0.035*** (0.003)	-0.036*** (0.003)
MARGIN	-0.120*** (0.007)	-0.122*** (0.008)	-0.120*** (0.008)	-0.122*** (0.008)	-0.120*** (0.008)
UNSKILLED	-0.004** (0.002)	-0.003* (0.002)	-0.002 (0.002)	-0.003 (0.002)	-0.003* (0.002)
FDI	-0.053*** (0.015)	-0.135** (0.057)	-0.044*** (0.014)	-0.047*** (0.014)	-0.045*** (0.014)
EXP	-0.036*** (0.007)	-0.032*** (0.006)	-0.089*** (0.027)	-0.032*** (0.009)	-0.042*** (0.006)
OFFB	-0.031*** (0.006)	-0.031*** (0.006)	-0.019** (0.009)	-0.041* (0.023)	
OFFN					-0.096* (0.055)
<i>Controls</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>
Kleibergen Paap rk LM test [p-value]		120.2 [0.000]	221.9 [0.000]	198.1 [0.000]	83.6 [0.000]
Craig-Donald W F test		228.0	202.0	197.6	245.3
Hansen J over-identification test [p-value]		0.30 [0.58]	0.95 [0.33]	0.20 [0.66]	0.29 [0.59]
Observations	7,362	7,362	7,362	7,362	7,362
R-squared	0.309	0.193	0.189	0.198	0.193

Notes: Robust standard errors in brackets, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Trimmed sample (1-95% of the labour distribution). Relative weights applied.

4.3 Technology, Globalisation and Market Structure: Assessing Complementarities

Our search for the identification of the main channels through which globalisation impacts on the labour share focuses on the investigation of possible complementarities between our proxies for

internationalization strategies and the factors that the literature has identified as the main drivers of the LS decline, i.e. the proportion of unskilled workers (UNSKILLED), capital-specific technological change (TFP), , market power (MARGIN). Hence, we extend the specification of our benchmark model by including different sets of interaction. We discuss here the main implications of this exercise, while presenting all results in Tables A2-A4 in the Appendix.

One of the most common arguments is that internationalisation is particularly harmful to low-skilled workers, whose jobs and wages suffer from increasing competitive pressure from labour-abundant countries (Feenstra and Hason, 1999). However, in our model the interaction between globalisation variables and the proportion of unskilled workers is never statistically significant (Table A2). This outcome rejects the hypothesis that trade has particularly harmful effects on the unskilled. Although surprising, this result is not entirely new. For example, the European Commission (2007) finds that the openness indicator is not significant for low-skilled workers. Jaumotte and Tytell (2007) show that, although off-shoring has a negative effect overall, it does not significantly impact the labour share of the low skilled, while showing a negative effect on the high skilled. A possible reason for this outcome is that, in the latest wave of globalisation, developed countries might have increased the import of skilled products and the off-shoring of skilled occupation; therefore, the labour share of a wide range of skills might be experiencing the negative impact of globalisation.

Another possible channel through which trade might affect the labour share is via differences in firms' productivity. Bockerman and Maliranta (2012) propose a productivity-related interpretation of the decline of the labour share, looking at the impact of micro-level mechanisms. Their results imply that the increase in trade has shifted valued added away from high-labour share plants and towards high-productivity, low-labour share companies. We assess the presence of this channel in our analysis by interacting the globalisation proxies with TFP. Our estimates reveal that only the interaction of TFP with FDI is statistically significant (Table A3). However, the sign is positive, hence not consistent with the structural mechanisms described above. Following Bournakis et al. (2016) and Bloom et al. (2016), a possible explanation for this result is that FDI, by transferring unskilled-labour intensive activities abroad, allow more resources in the home country to be directed towards high-tech, knowledge

intensive productions, which pay higher wages. Hence, companies would share part of the gains from globalisation with labour.

Defining a clear mechanism for the way globalisation affects the labour share is quite difficult because international trade can produce different outcomes, operating in opposite directions. A dual impact of internationalization can be assumed in relation to market structure. For example, a first scenario would be that international trade increases competition, reducing concentration and increasing the labour share (Azmat et al., 2012). However, the digital revolution has promoted an increase in the market share of a limited number of highly innovative firms, which have been able to rapidly expand abroad, taking advantage of the Internet and the diffusion of network effects (Autor et al., 2017). Hence, an alternative scenario is that international trade would have consolidated, rather than challenged, anticompetitive behaviours, leading to a decline in the labour share. In our framework we evaluate the relative importance of the two scenarios by interacting the globalization proxies with our measure for market power (MARGIN). Again, our results show that only the interaction with FDI is statistically significant (Table A4). The coefficient is positively signed, providing support for the first scenario, i.e. firms' internationalization mitigates the negative effect of market concentration on the labour share, by increasing competitive pressure.

4.4 Labour Share Drivers across Industrial Sectors (Pavitt Taxonomy)

The importance of industry heterogeneity in understanding movements of the labour share has been highlighted in several contributions (Arpaia et al., 2009; Karaborbonies and Neuman, 2014; Growiec, 2012). For example, Bockerman and Maliranta (2012), show that the decline of the labour share has been particularly pronounced in high-tech industries in Finland. This is consistent with the structure of our sample. In fact, the summary statistics in Table 1 show that the labour share in high-tech firms is on average 3-4% lower than in other companies. Technological developments are likely to affect industries with different technology intensity. In a similar way, trade could have a larger impact on those industries, which are more exposed to international competition.

Here we investigate industry differences by estimating equation [3] for four large sectors, representing Pavitt's (1984) taxonomy. Results are presented in Table 4. The first column reports the

benchmark estimates from Table 2 for comparison purposes, while columns 2-5 show the estimated coefficient for each Pavitt group. One of the most interesting results is the one relative to the most innovative companies, belonging to high-tech industries, in column (3). Our estimates show that companies operating in high-tech sectors are particularly sheltered from the effect of international competition. In fact, except for OFFB, the other two globalisation variables have no statistically significant effects on the labour share. Technological progress also has a weaker effect in this sector, with the negative impact of TFP substantially lower compared to firms belonging to the other industry groups; also, we do not find evidence of significant effect of increasing capital-intensity. Given that high-tech firms employ a higher proportion of skilled workers, this result provides some support to the skill-biased technical change literature, and suggests that skilled workers are less affected by international trade, hence moderating previous conclusions on the negative impact of globalisation on all skill types. Another explanation could be that variables capturing the technological capabilities of high-tech firms and those reflecting their strategy of globalisation are highly correlated, implying that there is not sufficient variation in the data of this sub-sample of companies to identify the effect of both covariates¹⁰. The factor that mainly drives labour shares in high-tech is the profit margin. This is consistent with the idea that the high-tech sector has originated a higher concentration and 'superstar' phenomena, which goes along with larger profit and decreasing labour shares (Autor et al., 2017, Barkai, 2016).

Globalisation predominantly affects the labour share in scale intensive and traditional industries, where more production tasks can easily be transferred abroad or substituted with imports of intermediate goods. Next to the negative coefficient of all international trade variables, scale intensive and traditional industries are also characterised by a strong and negative impact of TFP and by capital-labour substitution. The forces shaping the negative link between internationalisation and labour share discussed in the previous sections, via technological progress (adoption of more capital-intensive production processes) and via wages adjustments (decrease of bargaining power of workers driven by the implicit or explicit threat exerted by the mobility of capital), might be operating in these industries.

¹⁰ The authors wish to thank a reviewer for suggesting this explanation.

Similar to high-tech companies, the labour share of firms belonging to the specialised suppliers group are also less affected by the internationalization of production activities, compared to companies operating in more traditional industries. In fact, only the coefficient of EXP is statistically significant and has the expected negative sign. These companies produce specialised products and, after the high-tech group, are the most innovative firms in our sample, as shown in Table 1. Hence, this result further supports the fact that the labour share is less affected by the internationalization of production when firms undertake innovative activities. As discussed above, the other possibility is that the development of innovation capabilities is a pre-requisite to internationalise.

Table 4 - Cross-sector heterogeneous effects – Pavitt classification

VARIABLES	(1) Total	(2) Scale intensive	(3) High-Tech	(4) Special. Suppliers	(5) Traditional
TFP	-0.133*** (0.008)	-0.202*** (0.022)	-0.091** (0.037)	-0.314*** (0.027)	-0.224*** (0.017)
TAN_K	-0.038*** (0.003)	-0.045*** (0.006)	-0.009 (0.014)	-0.057*** (0.006)	-0.050*** (0.004)
INT_K	0.004** (0.002)	-0.001 (0.003)	0.007 (0.008)	0.002 (0.003)	0.001 (0.002)
MARGIN	-0.120*** (0.007)	-0.121*** (0.016)	-0.168*** (0.036)	-0.091*** (0.015)	-0.107*** (0.010)
UNSKILLED	-0.004** (0.002)	-0.002 (0.003)	-0.005 (0.010)	-0.005 (0.004)	-0.004* (0.002)
FDI	-0.053*** (0.015)	-0.083*** (0.026)	0.028 (0.047)	-0.020 (0.026)	-0.072*** (0.027)
EXP	-0.036*** (0.007)	-0.025* (0.013)	0.027 (0.044)	-0.051*** (0.015)	-0.033*** (0.009)
OFFB	-0.031*** (0.006)	-0.052*** (0.013)	-0.086** (0.038)	-0.017 (0.014)	-0.029*** (0.008)
Constant	8.433*** (0.461)	9.399*** (0.649)	11.279*** (2.744)	6.047*** (0.627)	8.379*** (0.612)
<i>Controls</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>
Observations	7,362	1,852	301	1,370	3,642
R-squared	0.309	0.402	0.532	0.354	0.363

Notes: Robust standard errors in brackets, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Trimmed sample (1-95% of the labour share distribution). Relative weights applied.

Consistent with the analysis in Section 4.3, we also investigate the presence of complementarities across different industries by adding interaction terms. For sake of brevity, these results are summarised in Table A5 in the Appendix, which reports only the specifications in which the interaction between internationalisation variables and UNSKILLED, TFP or MARGIN turn out to be statistically significant (complete results are available upon request). We find significant interactions only between globalisation variables and TFP. The mitigating impact of globalisation that we discussed above is confirmed for the scale intensive firms, which are involved in FDI, and for traditional firms importing material inputs (Table A5, col. 1 and 4). Conversely, highly productive specialised suppliers engaged in exporting activities (col. 2), or highly productive high-tech firms engaged in broad

offshoring activities (col. 3) experienced an additional (detrimental) effect of internationalisation operations on their labour share.

5. Summary and Final Remarks

This paper has presented a new firm-level analysis on the drivers of the labour share in six EU countries, focusing on the role of firms' internationalisation practices. In general, our results support the mainstream evidence that globalisation has a negative impact on the labour share. However, when we inspect differences across industries in relation to their technological capabilities (as proxied by Pavitt classification), we find that high-tech (or science-based) firms are the most sheltered from internationalisation forces, followed by firms within the specialised suppliers, where we find a modest negative impact of broad offshoring practices. Conversely, the labour share in scale intensive and, above all, traditional sectors suffers the most from increasing globalisation.

Our analysis offers other important insights, such as those concerning the role of intangible assets which, contrary to what emerges for tangible capital, have been found to raise the income share accruing to workers. Labour shares have also been found to be much lower in highly productive firms, in those with a low proportion of unskilled workers and with greater market power. The negative effect of market power is pervasive as it is confirmed in all specifications and in all industrial sectors. The increase in firm's profit share is already documented in Karaborbounis and Neuman (2014) and Rognlie (2015), among others. Barkai (2016) and Autor et al. (2017) show that the decline in the labour share is strongly associated with an increase in market concentration in the US. Our study documents a similar effect in European countries and hence it provides another important contribution to an issue that is attracting increasing attention in the discussion of the factors driving changes in functional income distribution.

The investigation of the possible interplay between the standard drivers of labour share and globalisation variables suggests that internationalization affects the labour share independently of the skill profile of the firms' labour force. Conversely, the negative effect of TFP and market power is mitigated by the firm's openness to international trade, particularly in firms engaged in FDI operations.

Lastly, our work has focused on differences across a large sample of firms, as the nature of our data prevents the analysis of time effects. Therefore, we are silent on issues such as the lagged impact of technology/globalisation strategies and/or the importance of cyclical factors. In addition, the EFIGE survey has been carried out at a particular point in time, that of the crisis of 2008-09, and although our results are consistent with the related research in the area, we cannot exclude that some of our conclusions might be time-specific. We suggest these issues as relevant avenues for future research.

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Appendix

Table A1. List of variables

Label	Type	Description
LS	percentage	Cost for employees / valued added
TFP	continuous	Total factor productivity
INT_K	continuous	Intangible asset stocks / value added
TAN_K	continuous	Tangible asset stocks / value added
FDI	binary	Company running at least part of its production activity in another country via direct investments (=1, 0 otherwise)
EXP	binary	Company exporting regularly abroad from the home country (=1, 0 otherwise)
OFFB	binary	Company importing material inputs (=1, 0 otherwise)
OFFN	binary	Company importing material inputs and running at least part of their production activity in another country through contracts and arm's length agreements with local firms (=1, 0 otherwise)
MARGIN	continuous	Sales minus variable costs (i.e. costs for employees and materials) /sales
UNSKILLED	Percentage	Percentage of unskilled (blue) collars on total workforce
OLD	Binary	Company aged 20 and over (=1, 0 otherwise)
CRISIS	continuous	Annual rate of change in firm value added
SMEs	binary	Company with less than 250 employees (=1, 0 otherwise)
GROUP	binary	Company belonging to a national group (=1, 0 otherwise)
FAMILY	binary	Company run by a member of the control family (=1, 0 otherwise)
INNOV	binary	Company undertaking product or process innovation (=1, 0 otherwise)
COUNTRY FE	binary	6 Country dummies
SECTOR FE	binary	11 anonymous sector dummies (2-digit NACE)
REGION FE	binary	149 anonymous sector dummies (NUTSII)

Source: our elaborations from EFIGE database

Table A2 - Firms' internationalization and heterogeneous skill labour structure

	(1)	(2)	(3)
TFP	-0.133*** (0.008)	-0.133*** (0.008)	-0.133*** (0.008)
TAN_K	-0.038*** (0.003)	-0.038*** (0.003)	-0.038*** (0.003)
INT_K	0.004** (0.002)	0.004** (0.002)	0.004** (0.002)
MARGIN	-0.120*** (0.007)	-0.120*** (0.007)	-0.120*** (0.007)
UNSKILLED	-0.004** (0.002)	-0.002 (0.003)	-0.004** (0.002)
FDI	-0.046** (0.019)	-0.053*** (0.015)	-0.053*** (0.015)
EXP	-0.036*** (0.007)	-0.032*** (0.009)	-0.036*** (0.007)
OFFB	-0.031*** (0.006)	-0.031*** (0.006)	-0.033*** (0.008)
FDI*UNSKILLED	-0.005 (0.009)		
EXP*UNSKILLED		-0.002 (0.003)	
OFFB*UNSKILLED			0.001 (0.003)
Constant	8.432*** (0.462)	8.434*** (0.462)	8.435*** (0.462)
<i>Controls</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>
Observations	7,362	7,362	7,362
R-squared	0.309	0.309	0.309

Notes: Robust standard errors in brackets, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Trimmed sample (1-95% of the labour share distribution). Relative weights applied.

Table A3 - TFP and globalisation

	(1)	(2)	(3)
TFP	-0.137*** (0.008)	-0.117*** (0.012)	-0.142*** (0.011)
TAN_K	-0.038*** (0.003)	-0.037*** (0.003)	-0.038*** (0.003)
INT_K	0.004** (0.002)	0.004** (0.002)	0.004** (0.002)
MARGIN	-0.120*** (0.007)	-0.120*** (0.007)	-0.120*** (0.007)
UNSKILLED	-0.004** (0.002)	-0.004** (0.002)	-0.004** (0.002)
FDI	-0.000 (0.025)	-0.054*** (0.015)	-0.052*** (0.015)
EXP	-0.036*** (0.007)	-0.049*** (0.011)	-0.036*** (0.007)
OFFB	-0.031*** (0.006)	-0.031*** (0.006)	-0.020* (0.011)
FDI*TFP	0.059** (0.024)		
EXP*TFP		-0.020 (0.013)	
OFFB*TFP			0.016 (0.012)
Constant	8.422*** (0.460)	8.447*** (0.463)	8.429*** (0.461)
<i>Controls</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>
Observations	7,362	7,362	7,362
R-squared	0.310	0.31	0.310

Notes: Robust standard errors in brackets, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Trimmed sample (1-95% of the labour share distribution). Relative weights applied.

Table A4 - Globalisation and market structure

	(1)	(2)	(3)
TFP	-0.133*** (0.008)	-0.133*** (0.008)	-0.133*** (0.008)
TAN_K	-0.038*** (0.003)	-0.038*** (0.003)	-0.038*** (0.003)
INT_K	0.004** (0.002)	0.004** (0.002)	0.004** (0.002)
MARGIN	-0.122*** (0.007)	-0.123*** (0.010)	-0.123*** (0.009)
UNSKILLED	-0.004** (0.002)	-0.004** (0.002)	-0.004** (0.002)
FDI	-0.226** (0.099)	-0.053*** (0.015)	-0.053*** (0.015)
EXP	-0.036*** (0.007)	-0.053 (0.041)	-0.036*** (0.007)
OFFB	-0.032*** (0.006)	-0.031*** (0.006)	-0.048 (0.042)
FDI*MARGIN	0.053* (0.031)		
EXP*MARGIN		0.005 (0.012)	
OFFB*MARGIN			0.005 (0.013)
Constant	8.442*** (0.461)	8.444*** (0.463)	8.438*** (0.461)
<i>Controls</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>
Observations	7,362	7,362	7,362
R-squared	0.310	0.309	0.309

Notes: Robust standard errors in brackets, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Trimmed sample (1-95% of the labour share distribution). Relative weights applied.

Table A5 – Interplay between globalisation and UNSKILLED, TFP and MARGIN by Pavitt groups

	(1)	(2)	(3)	(4)
	Scale intensive	Specialized suppliers	High-tech	Traditional
TFP	-0.207*** (0.022)	-0.229*** (0.045)	0.018 (0.059)	-0.241*** (0.017)
TAN_K	-0.001 (0.003)	0.002 (0.003)	0.006 (0.008)	0.001 (0.002)
INT_K	-0.046*** (0.006)	-0.056*** (0.006)	-0.010 (0.014)	-0.051*** (0.004)
MARGIN	-0.123*** (0.016)	-0.091*** (0.015)	-0.173*** (0.035)	-0.106*** (0.010)
UNSKILLED	-0.002 (0.003)	-0.005 (0.004)	-0.004 (0.010)	-0.004* (0.002)
FDI	-0.013 (0.038)	-0.024 (0.026)	0.019 (0.048)	-0.071** (0.027)
EXPORT	-0.025* (0.013)	-0.119*** (0.035)	0.031 (0.043)	-0.033*** (0.009)
OFFB	-0.051*** (0.013)	-0.018 (0.014)	-0.182*** (0.058)	-0.008 (0.015)
FDI*TFP	0.081** (0.037)			
EXP*TFP		-0.108** (0.048)		
OFFB*TFP			-0.144** (0.073)	0.030* (0.016)
Constant	9.385*** (0.647)	6.124*** (0.630)	11.559*** (2.715)	8.390*** (0.610)
<i>Controls</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>	<i>Included</i>
Observations	1,852	1,370	301	3,642
R-squared	0.403	0.357	0.544	0.365

Notes: Robust standard errors in brackets, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Trimmed sample (1-95% of the labour share distribution). Relative weights applied.