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Labour Markets, Trade and Technological Progress. A Meta-Study

Abstract

Theoretical models, supported by empirical evidence, suggest that technological progress and trade are two essential factors to explain recent labor market developments in many OECD countries; technology can make jobs obsolete, and import competition can drive firms out of business. Both causes are often mentioned in tandem, but their relative contribution is unclear. This meta-analysis disentangles the interplay between technology and trade regarding recent labor market developments. Using a sample of some 623 technology and 1094 trade elasticities from 91 studies, our meta-analysis first reveals that despite small publication selection, technology and trade benefit both wages and employment in a statistically significant and economically meaningful way. Nevertheless, the multivariate meta-regression analysis indicates that this conclusion is conditional on several research dimensions. In the most prominent outcome, we document that the skill-bias impact from technology is concentrated on employment, where high-skilled workers benefit relatively more compared to low-skilled ones. In contrast, trade effects expand over both wages and employment, but mainly benefit high-skilled workers. Taken together, the current analysis sheds light into how globalization favors especially high-skilled workers in industrialized labor markets.

JEL-Codes: F160, J310, O110.

Keywords: labor market, trade, technological progress, meta-study.

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1. Introduction

Since the 1980s, it became evident that in industrialized countries, employment of low-skilled workers relative to high-skilled ones declined. Also, the wage of unskilled workers compared to high-skilled labor fell (Katz et al., 1995). These stylized facts initiated a debate on the causes of these developments. Two possible explanations characterize the discussion: international trade and domestic technological progress.[4]

Trade-related explanations stress the growth of import competition from low-wage economies, causing unemployment in import-competing sectors and decreasing wages. Domestic technological growth often has similar effects. If automation replaces workers, the consequences are similar to trade effects and empirically look the same. This raises the question of what factor is the most important.

In the 1980s and 1990s, the dominant explanation was that automation was the main cause. Labor market data, mainly in the US and EU countries demonstrated increasing demand for high-skilled workers, primarily motivated by the introduction of computers and the deepening of capital in production (Jorgenson et al., 2008). Trade only had a smaller impact as exports from low-wage countries were too small relative to GDP to explain the labor market developments (see Krugman, 2008 for a reflection on these developments in the 1990s). The consensus – with qualifications – was that although trade was growing; automation was the main cause of the labor markets' changes in the 1980s and 1990s.[5]

In the early 2000s, stimulated by the Chinese membership of the WTO and the subsequent steep increase in imports from China, the discussion revisited the role of trade on labor market developments. Import competition became more important as an explanation for the transformation of employment. In a seminal paper, Autor et al. (2013) take a closer look at the 1990-2007 period and note that, especially after 2001, imports from China to the US, and also to other industrialized countries increased enormously. Acemoglu et al. (2016) also conclude that import competition is a major source of labor market disruptions, compared to domestic technological progress as a cause. In addition, the technology argument is not supported by

[4] There are many surveys of the discussion that took place during the 1990s on the effects of globalization and technological change on labor markets; see for instance Lawrence & Slaughter (1993), Wood (1995), Krugman, Cooper & Srinivasan (1995), Sachs & Shatz (1996), Bernard & Wagner (1997), Borjas, Freeman & Katz (1997). This discussion is summarized in Helpman (2018).

[5] Although there was some consensus on the most important cause of the changes on labor markets, there was debate as to what model is best suited to analyse the developments, see for instance the discussion between Krugman (2000) and Leamer (2000). This discussion is evaluated in Feenstra (2016).

evidence. Gordon (2016) extensively documents that for the US, technological progress has substantially slowed down from a peak in the 1950s to 2014. This slowdown in productivity growth has also been documented for other industrialized countries (see e.g., Cette et al., 2016). Studies like these changed the view on what drives labor market developments, and motivated a shift in the consensus from technology to trade.

In line with the theoretical debate, a growing body of evidence emerged that investigates the labor market effects of automation and trade. The current meta-study takes stock of the extant literature, synthesizes the evidence base and assesses the validity of competing theoretical arguments. Our main analysis builds on elasticities, which measure the responsiveness of labor demand, reflected on either wages or employment, on various measures of technology and trade. The collected samples comprise 644 technology and 1073 trade elasticities from 91 primary studies. Based on those and following Stanley and Doucouliagos (2012), we estimate multivariate weighted least squares meta-regression models (WLS-MRA), which is the most reliable and unbiased methodology to evaluate the empirical evidence in an empirically robust and economically meaningful way.

The current meta-study confirms that publication selection is a major issue (Stanley & Doucouliagos, 2014). Publication selection is the tendency to report significant results, which are in line with the conventional theory. Therefore, our analysis controls for publication bias.

In general, we document uniform positive effects from trade and technology on both wages and employment. The key outcome of our analysis sheds further light on the skill-biased nature of globalization. We reveal that technology benefits the employment of high-skilled workers relatively more compared to low- and medium-skilled ones. In contrast, the skill-biased nature of trade expands on both wages and employment. Specifically, we conclude that trade benefits the wages and the employment of high-skilled workers more compared to the low-skilled ones. Furthermore, we find that the differential effects of trade and automation also depend on various other dimensions, such as the period of analysis, the geography, the sector, the spatial unit and various methodological choices.

The remainder of the paper is organized as follows. Section 2 briefly discusses the theoretical background of the various channels linking trade and technology with labor market developments, which motivates the empirical part of the current meta-analysis. Section 3 explains the way we summarized the literature, separated into the selection of the primary

studies and the functional forms of the estimated equations from where we extracted the technology and trade elasticities. In Section 4, we explore the total variation in the collected samples disaggregated into its main categories while we also provide preliminary evidence of publication selection. Section 5 discusses the empirical setting of the multivariate meta-regression analysis and reports the empirical outcomes. Finally, Section 6 concludes.

2. Labor market effects from trade and technological progress: theoretical approaches.

Trade theory traditionally relies on the Stolper-Samuelson (S-S) theorem to explain relative factor price movements. The theorem states that a relative price increase benefits the production factor that is intensively used in producing that commodity. If this production factor is high-skilled labor, then a price increase in high-skilled intensive products raises the real wage of high-skilled workers and reduces the real wage of low-skilled workers; wage adjustments are larger than price ones, which is the so-called *magnification effect* (see Jones, 1965). In principle, this theorem explains the change in the skilled workers' real wage premium in industrialized countries. The flip side of this reasoning is that a wage premium for low-skilled workers develops in low-skilled-worker-abundant countries.

According to the Heckscher-Ohlin-Samuelson (HOS) model, these price changes also have consequences for the relative factor use; sectors economize on the production factors that have become more expensive. In industrialized countries, the share of high-skilled relative to low-skilled workers should decline, and the opposite should happen in low-skilled abundant countries. However, the reverse happened in many countries; high-skilled workers' employment relative to low-skilled ones increased in the 1980s, despite higher relative wages, pointing towards a higher demand for skilled labor. A possible explanation for this phenomenon is that because of technological advances, the demand for high-skilled workers increased because production became more skill-intensive. Feenstra (2016, p.99), however, forcefully points out that in the late 1990s, developments of relative employment of high- versus low-skilled workers are consistent with what one would expect from trade theory; a relative decline of high-skilled employment. Therefore, the combined evidence concerning relative employment developments in the 1980s and 1990s is mixed. On the one hand, it points towards

a higher demand for skilled workers due to technological progress. On the other hand, it is consistent with trade-related development, as Feenstra (2016) pointed out[6].

For the HOS model to work, however, the embodied factor supplies in trade flows should be substantial enough to have economy-wide effects. For industrialized countries, this implies that the low-skilled labor embodied in imports should be considerable. Borjas et al. (1997) and Krugman (2000) found that in the 1980s and 1990s, the import flows were too small to explain developments in the US labor market. Berman et al. (1998) refer to similar findings and indicate the importance of technological innovations as an alternative explanation for the labor market developments. Together, the evidence does not point to trade as the primary explanation. During the 1980s and early 1990s, the consensus developed that technological change was the main driver to explain relative changes in high-skilled workers' position versus low-skilled ones in labor markets.

The reasoning behind technological change and developments in labor markets is straightforward. A typical effect of technological change in most high-income countries is that when occupations become more skill-intensive, there is an increased demand for higher skilled workers. If demand increases more rapidly than the supply of high-skilled workers, high-skilled workers' relative wages increase. Furthermore, technological progress might make low-skilled jobs obsolete. Therefore, the wages of skilled workers increase as well as the share of skilled employment. This reasoning depends on the type of technological progress (see Helpman, 2009 for a survey)[7]. The discussion between Krugman (2000) and Leamer (2000) on the different consequences of factor-related versus sector-biased technological progress is a case in point. Leamer (2000) assumes the small country case where prices are fixed and the sector bias of technological progress determines relative wages, whereas Krugman (2000) discusses the

[6] Helpman (2018) evaluates the role of modern developments in trade theory on increasing income inequality. These models are based on the concepts of assignment and matching between firms and workers (see Costinot and Vogel, 2010). Trade re-shuffles workers and improves matching. In skill-abundant countries, this benefits skilled workers.

[7] Technological progress is *high-skill augmenting* if it makes high-skilled workers more productive. This is comparable to an increase of high-skilled workers at the old level of technology, similarly, for *low-skill augmenting* technological progress. If technological progress augments both factors equally, it is *neutral technological progress*. Depending on which type is stronger, it can change relative factor rewards. Technological progress can also replace production factors (*process innovation*). For example, a reorganization of the production process can economize on low-skilled workers while keeping output constant. Technological progress can also have a *sector* dimension, benefiting one sector (including all factors of production) more than other sectors. The consequences for each type of production factor thus depend on the type of technological progress.

large country case, where prices change and only the factor bias of technological change matters. Empirically it is challenging to differentiate between these two cases.

Furthermore, it is not easy to distinguish offshoring from automation. The theoretical model of Grossman and Rossi-Hansberg (2008) illustrates this. In this model, offshoring of low-skilled activities has three effects: first, it decreases production costs and lowers prices as it is low-skilled worker saving and more low-skilled workers become available on the labor market; the model also predicts a productivity-enhancing effect because, overall, the remaining tasks are higher skill intense. The first two effects are similar to the ones discussed above concerning trade and technological progress. The third effect is a new element in their model. According to this, offshoring acts like a low-skilled biased technical change that makes workers more productive and increases wages. However, the excess supply of workers acts in the opposite direction. Wright (2014) finds a small net reduction in employment due to offshoring (see also Hummels et al., 2018).

Overall, technological progress can add, reverse, or substitute for the effects of trade on factor markets, which explains to some extent the conflicting evidence on the relative importance of trade versus technological progress (see also Jones, 1965). The conclusion of Feenstra (2016, p.90) is, therefore, something to be expected. After reviewing the evidence for the 1980s and 1990s, he concludes that estimates are '*quite sensitive to the data used and the specification of the regression.*' However, the literature favors technology above trade as the primary driver of adverse labor market developments in the 1980s and early 1990s.

The focus of the literature changed when the first empirical evidence became available on the impact of China joining the WTO in 2001. The seminal article of Autor et al. (2013) analyses the consequences of the China shock on the US labor market. They found that an increase in import exposure of $1000 per worker over a decade reduces manufacturing employment (working population) by 0.596 percentage points. Between 1990 and 2000, the import penetration changed by $1140 per worker and between 2000 and 2007 by $1839 per worker. In the first period, manufacturing employment fell by 0.68 percentage points and in the second period by 1.1 percentage points. Acemoglu et al. (2016), using a different methodology, found that between 1999 and 2011, job losses in the US amounted to 2.4 million. They estimated that if import penetration from China had not increased after 1999, the number of manufacturing jobs would have been 560.000 larger (p.144). Dauth et al. (2014) find similar but smaller effects

for Germany. Again, as the review of Hummels et al. (2018) points out, the trade effects are difficult to disentangle from technology.

As briefly discussed, the evidence is mixed and changes over time. This illustrates the usefulness of conducting a meta-study, to resolve the theoretical conundrum and the conflicting empirical evidence. The following section describes how we construct a representative sample of the evidence base. The subsequent analysis evaluates the sample, and reveals whether technology and/or trade impose significant labor market outcomes beyond publication selection. Furthermore, we establish 'best practice estimates' and identify how various aspects of study design shape the reported outcomes.

3. Labor market effects from trade and technological progress: systematizing the empirical evidence

The current section discusses the process of summarizing the literature. First, we outline the selection of studies, based on a set of pre-determined criteria (section 3.1). Second, in section 3.2, we describe the functional forms that are used in the primary studies where we extract the labor market elasticities from technology and trade.

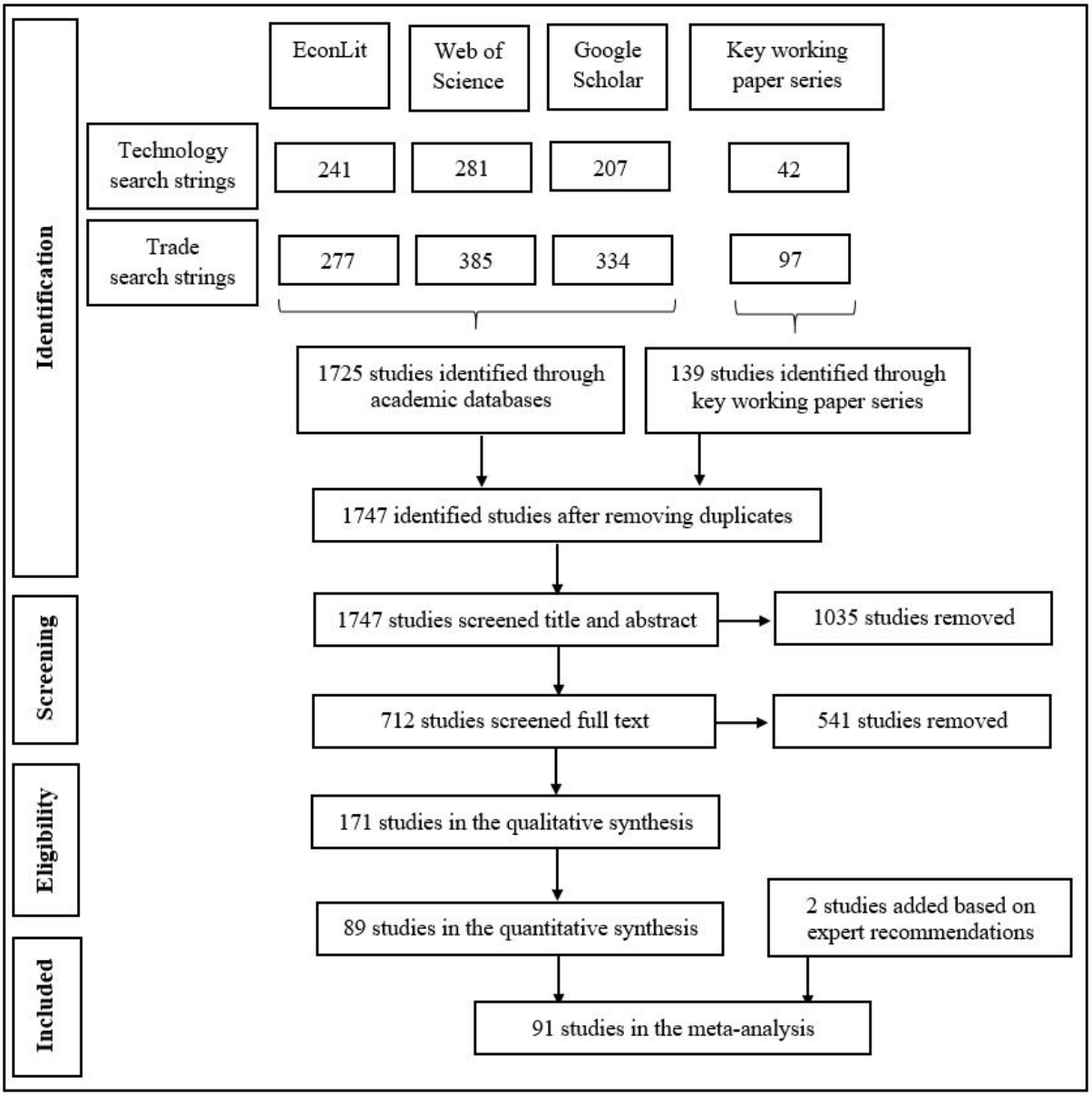
3.1 Selection of studies

Figure 1 illustrates four phases of our literature search (Appendix A for a detailed outline of the search strategy). We follow the PRISMA flow diagram methodology and the recommended reporting guidelines as suggested in the *Meta-Analysis of Economics Research Network's* (MAER-Net), (see Moher et al., 2009 and Havranek et al., 2020, for further descriptions).[8]

In the identification stage, we conducted a full-text search of multiple search queries (Appendix A1 – Table A1.1) encompassing an extensive vector of relevant terms in three cross-disciplinary databases (EconLit, Web of Science and Google Scholar). To overcome the concerns of literature searches such as academic databases' biases towards studies published in peer-reviewed journals, we added two steps (Petticrew & Roberts, 2008). First, we used snowballing techniques by scanning relevant literature reviews (Klein et al., 2003; Ugur et al., 2018).

[8] The PRISMA flow diagram shows the details of information flow in each stage of literature search in meta-analysis, including the number of studies identified, screened and deemed eligible. Furthermore, the current meta-analysis complies with the most recent revision of MAER-Net reporting guidelines, obtained from: https://www.maer-net.org/post/revision-of-reporting-guidelines.

Figure 1. Overview of the literature search



Secondly, we extended our search to reputable working paper series (among others, NBER, IZA, CESifo) and the grey literature (departmental working paper series) following notifications on our search queries on the most recently available studies. We concluded the identification stage of the literature search January 2022 with a total of 1747 primary studies.

In the second stage, we screened the selected studies as follows. First, inspection of the titles and abstracts verified that the selected studies were empirically investigating the labor market effects (employment or wages) of technology, trade or both in a high-income economy.[9] Next,

[9] High-income countries are determined based on their gross national income (*Country and Lending Groups taxonomy*, The World Bank), which defines high-income countries as those with per capita GNI more than $12.056.

a full-text search established that the estimated elasticities were based on well-established econometric techniques determining correlation or causation and that the authors reported all the necessary information (detailed empirical model, estimated effect, measures of precision, number of observations etc.).

In the third phase, we considered the eligibility of the selected studies based on our pre-determined selection criteria (Appendix A1 - Table A1.2). After removing duplicates and adding 2 additional studies based on recommendations from external experts, we finalized the list of 91 primary studies, which formed the basis of our quantitative analysis. Out of the 91 selected studies (Appendix A2), 73 are published in peer-reviewed journals, including *The Quarterly Journal of Economics, American Economic Review, Review of Economics and Statistics* and *Journal of Political Economy*. In addition, 17 studies are working papers, while 1 is a book chapter.[10] Publication years span from 1991 to 2022 with the median study published in 2013. So, half of the studies are published within the last 10 years, indicating that our meta-analysis covers an active research area.

To minimize selection bias and to use all the available information, we followed standard meta-analytic recommendations and extracted the maximum possible number of estimates from each study (Doucouliagos & Stanley, 2009).[11] On average, we collected 19 estimates from each primary study, referring to a period of analysis from 1974 to 2020 and a large selection of industrialized countries (the majority referring to the US, the UK, Germany and Sweden, possibly reflecting data availability).

The current study draws on a comprehensive set of (semi-) elasticities, obtained from double-log models (Section 3.2 for a detailed discussion on the identification of the elasticities). Elasticities are typical measures of economic effects and capture the percentage change in either employment or wages, stimulated by a percentage change in the technology or trade practice. Elasticities are directly comparable; therefore, they are standard measures in meta-analyses (Doucouliagos & Stanley, 2009; Melo et al., 2009). Nevertheless, to increase the degrees of freedom for the multivariate MRA, we also include semi-elasticities, which might raise

[10] To test whether leading journals report more precise estimates and thus they should only be included in the meta-analysis, we followed Stanley and Doucouliagos (2012) and regressed the precision of the collected elasticities on the indicator of journal quality used in the MRA (results are reported in Appendix B – Table B1). We found no evidence that journal quality is an important conditioning factor of the precision of the estimates, thus validating our choice to include elasticities from working papers and the grey literature.

[11] On the downside, multiple estimates from the same data are not independent from each other, biasing results (Weichselbaumer & Winter-Ebmer, 2005). To correct for this, we cluster the standard errors by primary study.

comparability concerns. Sensitivity analyses (Appendices D2 and D3) illustrate the robustness of the main results across different samples, while in Appendix F, we construct partial correlation coefficients, which ensure perfect comparability and re-iterate the core analysis.

3.2 Identifying the labor market elasticities from technology and trade

This section discusses the functional forms of the empirical specifications in the primary studies whose parameters are the extracted labor market elasticities from technology and trade. Empirical evidence at the firm level typically follows a labor demand approach (Hijzen, 2005). This reflects a partial equilibrium framework, where labor supply is assumed to be perfectly elastic and the representative firm decides on the optimal labor demand (L_D) for a given level of output and wages, by minimizing a quasi-fixed cost function (Eq. 1).[12]

$$C_w = L_D(w, x, z) \tag{1}$$

Firm-level costs (C_w) are a function of factor prices, such as wages (w), output and fixed input quantities (x) as well as a vector of demand shifters such as technological capital and international trade (z). Applying Shephard's lemma, and assuming labor mobility across firms and firm-specific capital, gives the conditional factor demand in log-linear form (Eq. 2):

$$LnL_{it} = \alpha_0 + \beta_1 lnY_{it} + \beta_2\, lnw_{it} + \beta_3 lnK_{it} + \beta_4 lnTechn_{it} + \beta_5 lnTrade_{it} + X'_{it}\gamma + \varepsilon_{it} \tag{2}$$

where LnL_{it} is the logarithm of total employment, lnY_{it} is the logarithm of output, lnw_{it} is the logarithm of the wage rate, lnK_{it} is a measure of capital, $lnTechn_{it}$ represents a cluster of technology variables reflecting inputs, such as R&D expenditure or R&D personnel, or a proxy of output, such as patents, see also Blechinger et al., (1998). Furthermore, $lnTrade_{it}$ includes imports or exports of final products, or intermediates. X_{it} is the vector of control variables, consistent with Mincerian wage equations (Mincer, 1974). Coefficients β_4 and β_5 reflect the conditional labor demand elasticities from technology and trade respectively, since they depend on a certain level of output (Crino, 2009). Winkler (2010) notes that Eq. (2) only considers the

[12] Alternatively, by assuming that firms minimize their costs for the production of output, a similar (ordinary) labor demand equation is derived from maximizing profits from a constant elasticity of substitution (CES) production function, augmented with some exogenous technology and trade measures (see Van Reenen, 1997) for the detailed derivation). The main difference between the conditional and the ordinary labor demands is that price effects in the former just capture substitution effects, while in the latter they also capture the effect on the optimal output level (Aguirregabiria & Alonso-Borrego, 2001)

productivity and substitution effects from technology and trade. To allow for scale effects, the authors often drop output; thereby estimating the unconditional labour demand equation.

Equation (2) is a standard version of employment, but often variants are estimated (Hijzen, 2005). First, industry-level studies drop the notion of the representative firm. Industries differ with respect to technology adoption or trade dependence. Second, the supply of labor is not perfectly elastic. A shock in labor demand, due to technology or trade, will be reflected in: changes in the relative output, the relative wages or labor utilization. The elasticity with respect to each channel depends on the flexibility of the labor market; in case wages and output do not fully adjust to clear the labor market, a demand shock will be reflected via a change in labor utilization.

On the empirical front, applied economists often use a translog functional form. This further departs from the standard labor demand approach, since labor demand is substituted by the cost share of labor, derived from a GDP function, as the dependent variable (Berman et al., 1994, and Feenstra, 2016). Such models (Eq. 3) observe relative labor demand changes after wages and employment have adjusted.[13]

$$LnWSH_{it} = \alpha_0 + \beta_1 lnY_{it} + \beta_2\, lnw_{it} + \beta_3 lnK_{it} + \beta_4 lnTechn_{it} + \beta_5 lnTrade_{it} + X'_{it}\gamma + \varepsilon_{it} \quad (3)$$

Where $LnWSH_{it}$ is the logarithm of the wage share of some category of workers (i.e., low-, medium- or high-skilled) in the total wage bill, while all the other variables are similar to Eq. (2). In the above setting, $\beta_4 > 0$ ($\beta_5 > 0$) is tantamount to technology (trade) shifting outwards the relative labor demand for the investigated group of workers.

Utilizing the translog framework, both changes in the factor prices and/or factor quantities explain changes in the wage share. So, applications with the wage share as the dependent variable are often used in more flexible labor markets (like the US) where wages are considered the main adjustment mechanism. In contrast, authors often switch to relative employment as the dependent variable in more rigid labor markets (like Continental European countries), as in Eq. (4) (Strauss-Kahn, 2004). The latter approach has the additional merit of solving potential wage endogeneity concerns (Piva et al., 2005).

[13] In many cases, authors differentiate between wages for unskilled, semi-skilled and skilled workers, which results in a system of labor demand equations, one for each type of labor (see f.i., Ekholm & Hakkala, 2006).

$$LnEmplSh_{it} = \alpha_0 + \beta_1 lnY_{it} + \beta_2\, lnw_{it} + \beta_3 lnK_{it} + \beta_4 lnTechn_{it} + \beta_5 lnTrade_{it} + X'_{it}\gamma + \\ + \varepsilon_{it} \quad (4)$$

Where $LnEmplSh_{it}$ is the logarithm of the employment share of some category of workers (i.e., the high-skilled ones) and all the other regressors are similar to Eq. (2). Like before, technology and trade benefit the relative labor demand of the investigated category of workers if the estimated parameters β_4 and β_5 are positive.

Finally, Feenstra & Hanson (1999) estimate the long-run wage effects from structural variables such as technology or trade through the inspiring *mandated wage regressions* framework, which exploits the industry-specific zero-profit conditions. This two-stage methodology starts by regressing the chosen approximations of technological capital and outsourcing (structural variables) on industry prices and productivity. Notably, the latter are treated as endogenous, thereby allowing for a large-open economy setting. In the second stage[14], the components of the price and productivity changes are regressed against the factor shares, resulting in a price regression where the estimated coefficients reflect the changes in factor prices (such as wages), assuming that the structural variables were the only sources of changes in value added and productivity. Such mandated wage regressions are estimated for each structural variable separately.

Having described the selection of the primary studies and the identification of the extracted elasticities, the following section offers two bodies of preliminary evidence. Section 4.1 disentangles the overall variation in our samples into its two main components: *sampling error* and *excess heterogeneity*. Section 4.2 evaluates the presence of publication selection.

4. What explains the differences in the elasticities of technology and trade

4.1 Summary statistics

Table 1 presents some (unweighted) descriptive statistics. In fact, we assume the absence of excess heterogeneity between the collected estimates, besides the one due to sampling error. Figure 2 illustrates the probability density functions of the labor market elasticities from technology and trade.

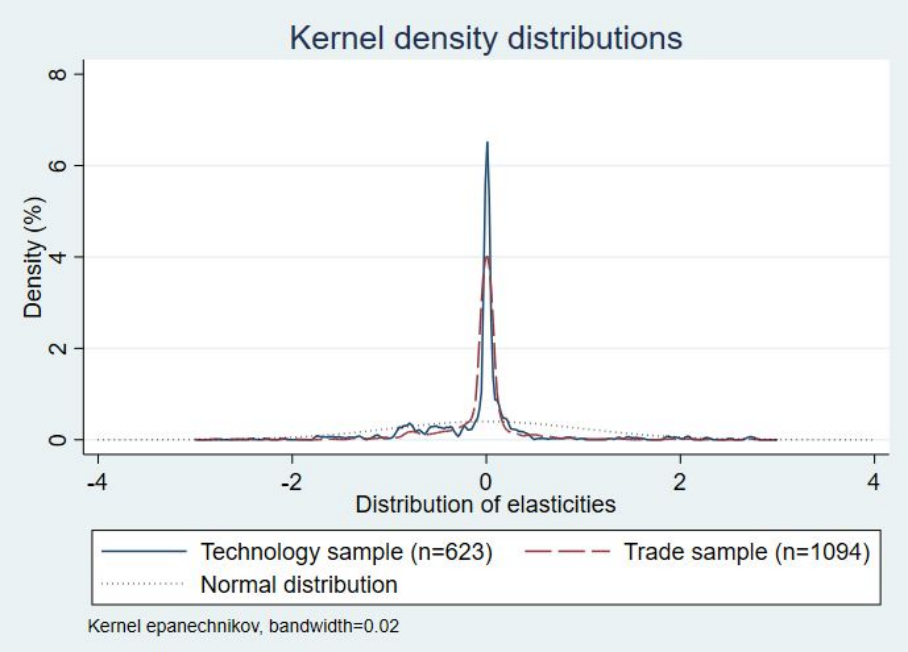
[14] The second stage regression is a modified version of the price regression (Baldwin & Hilton, 1984; Leamer, 1994, 2010), where the change in industry prices is regressed against the cost share of each factor. Nevertheless, Feenstra & Hanson (1999) argue that -once fully specified- the price regression turns into an identity; therefore, it is unable to predict any changes in the factor prices besides the ones that actually materialized (see Feenstra & Hanson, 1999 for a detailed discussion).

Table 1. Summary statistics

	Obs. (1)	Mean (2)	St. Dev. (3)	Iqr (4)	Skewn. (5)	Kurt. (6)	I^2 (7)	Q-test (8)
Technology elasticities	623	-0.021	0.815	0.157	1.855	18.21	100%	0.000***
• Wage elasticities	231	-0.211	0.912	0.797	-0.282	8.236	100%	0.000***
• Employment elasticities	392	0.091	0.732	0.088	4.673	29.42	100%	0.000***
Trade elasticities	1094	0.003	7.203	0.105	-7.521	183.7	99.9%	0.000***
• Wage elasticities	459	0.128	10.63	0.066	-5.789	92.35	99.9%	0.000***
• Employment elasticities	635	-0.088	2803	0.208	6.367	86.39	100%	0.000***

Note: Column 4 reports the interquartile range (the difference between the 75th and the 25th percentile). Column 7 reports the percentage of the between-estimate heterogeneity, besides the one attributed to sampling error. Column 8 reports the p-value for the χ^2 Cochran's test under the null hypothesis of no between-estimate heterogeneity. $*$ for $p < 0.1$, $**$ for $p < 0.05$ and $***$ for $p < 0.0$

Figure 2. Kernel density distributions



Interestingly, preliminary comparisons reveal differential labor market effects from technology and trade. Specifically, Table 1 (Column 2) illustrates that technology imposes negative effects on average (-0.021) as opposed to positive ones from trade (0.003); nevertheless, both effects are small, based on the partitions suggested by Doucouliagos (2011)[15].

[15] Doucouliagos (2011) suggests that effects smaller than +/- 0.07 can be regarded as small, effects between +/- 0.07 and +/- 0.33 are moderate, while effects larger than +/- 0.33 indicate strong association.

Once we distinguish between employment and wage elasticities, we conclude that the overall negative impact of technology includes two opposing components; a negative wage elasticity (-0.211) and a much smaller in absolute value positive employment elasticity (0.091). Regarding trade, the average positive impact includes a positive effect on wages (0.128) and a negative – as well as smaller in absolute value- effect on employment (-0.088).

Furthermore, the collected technology and trade elasticities exhibit substantial dispersion, as verified by their large standard deviations compared to the average effects, the very high Kurtosis values and the heavy tails in the kernel density distributions (Figure 2). Nevertheless, the kernel density distributions exhibit high peaks around zero, which is called the genuine effect[16] (Fisher, 1932; Pearson, 1904). Taken together, the skewness coefficients from Table 1 and the kernel density figure reveal strongly asymmetrical distributions, both positive and negative. This corroborates our expectations that the theory predicts results of both signs, which are also observed in the empirical findings.

More detailed, weighted analysis of the underlying parameters of interest, using the inverse of the variance as the optimal weights (Hedges & Olkin, 1985) is reported in the last two columns of Table 1 (weighted averages based on fixed and random effects models are reported in Appendix B – Table B2). The very high I^2 coefficient illustrates that excess heterogeneity explains almost the entirety of the overall variation. Similarly, Cochran's Q test always rejects the null hypothesis of within-estimate homogeneity. Taken together, the above highlight the importance of excess heterogeneity (Higgins et al., 2003) and the minimal role of sampling error in the economics literature (Disdier & Head, 2008). Therefore, a research-driven meta-analysis should provide evidence based on multivariate meta-regression models, controlling for the precision of the estimates and augmented with multiple moderator variables, reflecting the numerous sources of variation (Stanley & Doucouliagos, 2012). In the remainder of this section, we discuss the coded sources of variation, together with some simple averages. These will be used in the analysis that will uncover the impact from heterogeneity, which is the focus of Section 5.2.

[16] The term *genuine* or *overall* effect comes from R.A. Fisher and Karl Pearson who independently developed statistical methods to summarize the average effect from multiple tests, where simple hypothesis testing investigates the null hypothesis that the overall effect is zero (Stanley & Doucouliagos, 2012). However, rejecting the above null hypothesis is not sufficient evidence of a genuine effect; instead, it implies either publication bias or excess heterogeneity. The value added of the current multivariate meta-regression analysis (Section 5.2) lies in ascertaining the presence of a genuine effect once we control for publication selection and use a comprehensive set of moderator variables to approximate excess heterogeneity.

To account for the excess heterogeneity in our samples, we code a series of characteristics of the estimated elasticities. The so-called moderator variables distinguish between the *methodological* (Table 2) and the *structural* (Table 3) dimensions of the study design. The former include the data, estimation and publication characteristics like -among others- the functional form of the econometric model, the estimation technique or the data aggregation while the latter mainly refers to the country, the period or the spatial unit of the analysis[17].

Columns 1-2 show statistics related to technology, whereas Columns 3-4 present those for trade.[18] There are several noteworthy outcomes. Regarding technology, we first show that product innovation tends to impose positive effects on average as opposed to negative ones from process innovation. Somewhat surprisingly, trade in intermediates seems to benefit wages and employment in the industrialized countries, even though it is mostly related to vertical specialization patterns. This potentially reflects earlier findings associating trade in intermediates with employment growth in the US (Amiti & Wei, 2009). In contrast, the negative average wage and employment elasticities of trade in final goods are in line with the job destruction outcomes (Biscourp & Kramarz, 2007).

Furthermore, Table 2 offers preliminary evidence on the skill-biased nature of technological innovations (Autor et al., 2003). As verified by Figure 3, the average elasticities are negative for low- and medium- skilled workers, and positive for high-skilled ones. A similar pattern is largely visible on trade elasticities (Figure 4, small discrepancies on the mean values are explained by the exclusion of values outside the boxplots in the Figures, for better illustration). The positive effects from trade seem to be concentrated on high-skilled labor. As a result, the preliminary analysis reveals considerable overlap in the skill-biased nature of technology and trade.

[17] Besides the discussed characteristics of the primary study, the labor market effects from automation and trade also depend on country-specific conditions, such as GDP per capita, unemployment or employment protection regulation. Although the impact from such factors is included in the multiple fixed effects we are using, we augment our multivariate MRA models with relevant variables, thus increasing the value added of the current meta-study (Stanley & Doucouliagos, 2012). Nevertheless, some of the collected elasticities refer to multiple countries or go back over 40 years, resulting in many missing observations in the additional variables, which decreases the sample size and threatens the validity of the analysis. Furthermore, the added variables are typically collectively insignificant. As such, they are eliminated in the general-to-specific approach (see Section 5.1 for details). Those models are not reported for brevity.

[18] The tables also show the structure of the moderator variables. The continuous variables included in the regression analysis (number of explanatory variables, the ten-year recursive impact factor, publication year and number of years in the dataset) refer to the entire sample and therefore are omitted for brevity.

Table 2. Methodological heterogeneity

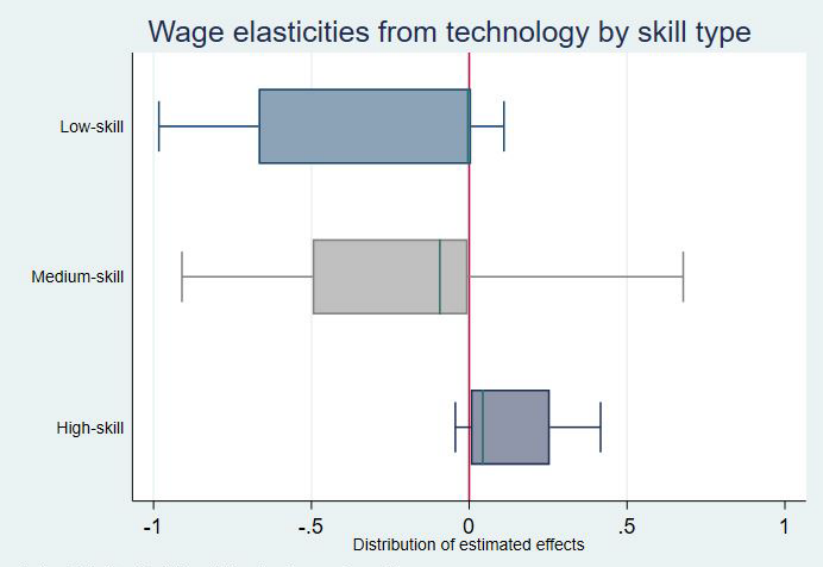
Variable	Description	Technology effects (N = 623)		Trade effects (N = 1094)	
		Wage	Employment	Wage	Employment
		Mean (st. dev.) (1)	Mean (st. dev.) (2)	Mean (st. dev.) (3)	Mean (st. dev.) (4)
Panel A - Data characteristics					
Nature of innovation *(reference category: process innovation)*					
Product	The technology variable refers to product innovation	0.066 (0.81)	0.194 (0.78)	n.a.	n.a.
Process	The technology variable refers to process innovation	-0.422 (0.93)	-0.095 (0.53)	n.a.	n.a.
Nature of trade policy *(reference category: trade in final goods)*					
Intermediates	The trade variable refers to trade in intermediate products	n.a.	n.a.	0.322 (14.6)	0.035 (3.69)
Final	The trade variable refers to trade in final products	n.a.	n.a.	-0.092 (0.65)	-0.258 (0.95)
Data aggregation *(reference category: worker-level)*					
Industry	The effects are estimated at the industry level	0.078 (1.04)	-0.010 (0.57)	0.055 (17.7)	-0.040 (3.30)
Firm	The effects are estimated at the firm level	0.056 (0.13)	0.224 (0.88)	3.341 (8.24)	-0.130 (0.62)
Worker	The effects are estimated at the worker level	-0.400 (0.80)	0.006 (0.15)	-0.044 (0.55)	-1.759 (3.36)
Sectoral impact *(reference category: economy-wide)*					
Manufacturing	The estimates refer to the manufacturing sector	0.001 (0.58)	0.174 (0.80)	0.171 (2.36)	-0.225 (2.63)
Services	The estimates refer to the services sector	0.092 (0.09)	0.042 (0.14)	0.001 (0.05)	0.007 (0.21)
Economy-wide	The estimates refer to the entire economy (no sectoral disaggregation)	-0.445 (1.13)	-0.057 (0.53)	0.178 (24.6)	0.634 (6.81)
Skill-level of the workforce *(reference category: varied)*					
Low	The estimates refer to low-skilled workers	-0.205 (0.49)	-0.204 (0.67)	0.829 (7.30)	-0.864 (3.02)
Medium	The estimates refer to medium-skilled workers	-0.220 (0.34)	-0.266 (0.28)	-0.588 (13.0)	-0.940 (3.30)
High	The estimates refer to high-skilled workers	0.371 (0.78)	0.565 (1.12)	0.292 (19.7)	1.311 (6.73)
Varied	The estimates refer to workers of various skill levels	-0.603 (1.04)	0.091 (0.67)	-0.076 (0.63)	-0.189 (0.88)
Panel B - Estimation characteristics					
Estimated model *(reference category: technology only or trade only)*					
Technology	The estimated model includes only technology measures	-0.156 (0.86)	0.008 (0.12)		

Trade	The estimated model includes only trade measures			0.174 (2.44)	-0.194 (1.91)
Both	The estimated model includes both technology and trade measures	-0.226 (0.92)	0.207 (1.09)	0.101 (17.0)	0.110 (4.01)
Type of analysis *(reference category: cross-sectional)*					
Time series	The estimates are based on time-series analysis	-0.130 (0.96)	0.133 (0.68)	0.208 (2.15)	-0.091 (0.48)
Cross-sectional	The estimates are based on cross-sectional analysis	-0.264 (0.87)	-0.036 (0.81)	-0.28 (20.8)	-0.089 (8.31)
Time dependence *(reference category: contemporaneous)*					
Lagged	The estimates are based on lagged explanatory variables	0.051 (0.06)	0.030 (0.10)	-0.005 (0.14)	-0.046 (0.52)
Contemporaneous	The explanatory and dependent variables are contemporaneous	-0.143 (0.99)	0.191 (0.84)	0.262 (2.41)	-0.103 (0.47)
Form of the dependent variable *(reference category: first-differenced dependent variable)*					
Level	The dependent variable is in levels	0.061 (0.75)	0.205 (0.85)	0.225 (12.0)	0.060 (2.71)
First-differences	The dependent variable is first differenced	-0.786 (0.94)	-0.050 (0.46)	-0.189 (1.02)	-0.237 (2.89)
Estimation method *(reference category: non-endogenous)*					
Endogeneity	The endogenous nature of technology and trade is addressed	-0.101 (0.77)	0.084 (0.59)	-0.039 (17.2)	-0.011 (3.61)
Non-endogenous	The endogenous nature of technology and trade is not addressed	-0.244 (0.95)	0.096 (0.79)	0.259 (2.54)	-0.200 (0.90)
Type of labor demand *(reference category: absolute)*					
Relative	The dependent variable is in shares	0.077 (0.73)	-0.088 (0.58)	0.082 (21.2)	-0.007 (4.70)
Absolute	The dependent variable is not in shares	-0.447 (0.97)	0.165 (0.75)	0.167 (2.20)	-0.107 (2.26)
Type of employment *(reference category: number of workers)*					
Hours	Employment is measured in terms of hours worked	n.a.	-0.131 (0.70)	n.a.	0.950 (12.2)
Workers	Employment is measured in terms of the number of workers	n.a.	0.139 (0.71)	n.a.	-0.117 (2.05)
Inclusiveness of the estimated model *(reference category: non comprehensive)*					
Comprehensive	The estimated model includes any of the following: capital, output, value-added, lagged dependent variable or fixed effects	-0.113 (0.92)	0.129 (0.77)	0.138 (10.9)	-0.091 (2.88)
Non comprehensive	The estimated model omits important variables or fixed effects	-0.951 (0.36)	-0.164 (0.28)	-0.029 (0.16)	-0.145 (0.71)
Panel C - Publication characteristics					
Type of primary study *(reference category: working paper)*					
Peer reviewed	The primary study is published in peer-reviewed journal	-0.403 (0.92)	0.107 (0.74)	0.166 (2.35)	-0.133 (2.32)
Working paper	The primary study is a working paper	0.102 (0.79)	0.033 (0.61)	0.105 (18.3)	0.062 (4.11)

Table 3. Structural heterogeneity

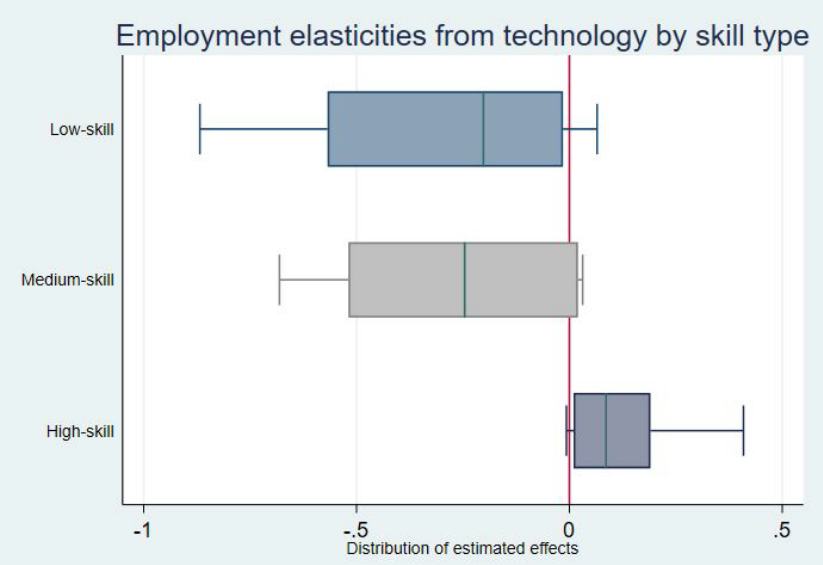
Variable	Description	Technology effects (N = 623)		Trade effects (N = 1094)	
		Wage	Employment	Wage	Employment
		Mean (st. dev.) (1)	Mean (st. dev.) (2)	Mean (st. dev.) (3)	Mean (st. dev.) (4)
Panel A – Domestic country characteristics					
Spatial unit of analysis *(reference category: national-level)*					
Local	The effects are estimated at the regional level	-1.16 (0.91)	-0.142 (0.79)	-0.592 (1.52)	-1.482 (2.61)
National	The effects are estimated at the national level	0.038 (0.73)	0.158 (0.24)	0.205 (11.2)	-0.045 (2.80)
Geography classification *(reference category: US, UK, Canada or Japan)*					
Europe	The estimates refer to European economies	0.058 (0.76)	0.065 (0.43)	0.014 (12.5)	-0.091 (2.56)
US-UK-Canada-Japan	The estimates refer to the US, the UK, Canada or Japan	-0.464 (0.97)	0.118 (0.95)	0.429 (3.42)	-0.096 (3.27)
Panel B – Destination country characteristics					
Development status of the trade partner *(reference category: not specified trade partner)*					
Developed	The trade effects refer to trade with developed countries	n.a.	1.495 (0.05)	0.130 (6.19)	-0.028 (1.97)
Developing	The trade effects refer to trade with developing countries	-0.901 (1.05)	0.440 (1.68)	0.362 (18.2)	-0.347 (6.29)
Not specified	The development status of the trade partner is not specified	-0.048 (0.79)	0.019 (0.36)	0.010 (0.43)	-0.031 (0.44)
Panel C – Time characteristics					
Midpoint of the analysis *(reference category: before 2001)*					
After 2001	The midpoint of the dataset is after 2001	-0.124 (0.44)	0.066 (0.43)	-0.090 (0.78)	-0.084 (2.88)
Before 2001	The midpoint of the dataset is before 2001	-0.236 (1.01)	0.107 (0.87)	0.221 (12.7)	-0.102 (2.81)

Figure 3. Technology elasticities by skill type



(a) Wage elasticities

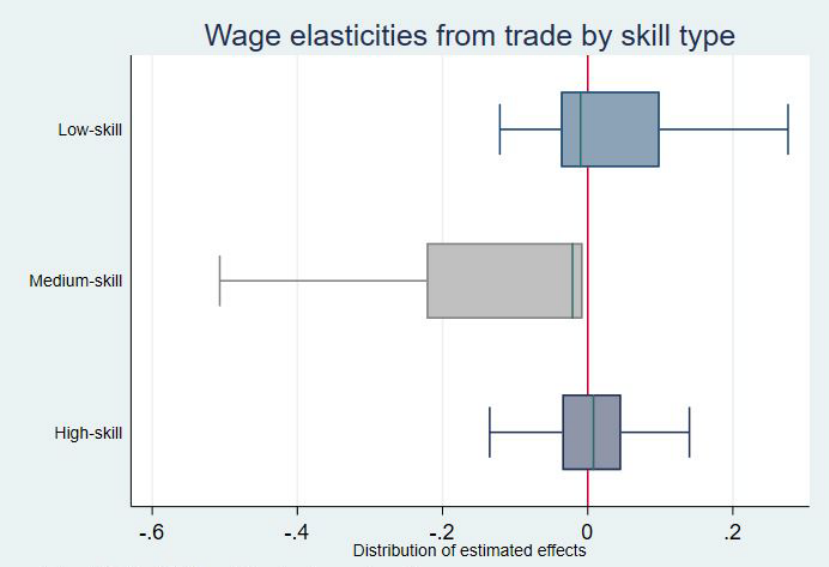
Note: Authors' derivation. Values outside the boxplot are excluded for better illustration.



(b) Employment elasticities

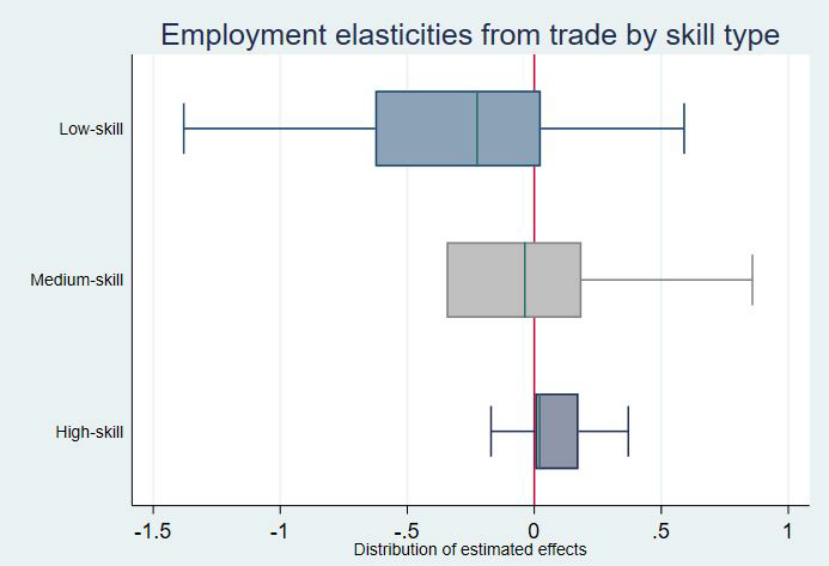
Note: Authors' derivation. Values outside the boxplot are excluded for better illustration.

Figure 4. Trade elasticities by skill type



(a) Wage elasticities

Note: Authors' derivation. Values outside the boxplot are excluded for better illustration.



(b) Employment elasticities

Note: Authors' derivation. Values outside the boxplot are excluded for better illustration.

Regarding the estimation characteristics (Table 2 - Panel B), we conclude that -on average- the reported wage and employment elasticities from both technology and trade are positive when the dependent variable is in levels and negative when first-differenced. First differentiation deals with the omitted variable bias by removing the unobserved, time-invariant component of the error term (Wooldridge, 2015). In contrast, they are often associated with attenuation bias (Ugur et al., 2018). The different outcomes with respect to levels and first differences indicate that the unobserved, time-invariant component of the error term tends to bias the reported elasticities upwards.

Finally, the publication type (Table 2 - Panel C) influences both the sign and the size of the reported elasticities. First, estimates from peer-reviewed journals tend to be larger in absolute value compared to those reported in working papers. Nevertheless, the preliminary analysis indicates both negative and positive elasticities reported in peer-reviewed journals, as opposed to only positive ones published on working papers. This indicates that publication bias is less concerning in our samples.

Regarding the various categories of structural heterogeneity (Table 3), the analysis highlights the importance of geography (Table 3 – Panel A). First, regional effects are on average negative in all the collected samples, potentially reflecting that technology and trade tend to disfavor employment and wages at the regional level. In contrast, at the national-level the evidence tends to be positive, with the notable exception of the employment elasticities from trade. However, these national effects are much smaller in absolute value than regional ones; technology and trade effects tend to be more harmful at the regional level.

Second, -with the exception of wage effects from technology- the average effects from technology and trade point to the same direction even in countries with very different characteristics, such as the relatively rigid European labor markets and more flexible ones, like the UK, the US, Canada or Japan (Geishecker, 2008). Beyond the similarity in the direction of the effects, the average elasticities tend to be larger in the more flexible labor markets. This is consistent with the wage elasticities, since wages are expected to be the main adjustment mechanism in more flexible labor markets.

Finally, Table 3 – Panel C, reveals similarities in the evolution of the estimated effects over time. The technology elasticities –either negative (wage) or positive (employment)- seem to increase in absolute value over time. The same happens in the employment effects from trade.

Nevertheless, the average wage elasticities from trade are negative till the early 2000s, when they turn positive.

The data presented in this section indicate many sources of heterogeneity in the collected estimates. Section 5.2 reports the outcomes from the multivariate meta-regression analysis, which is more robust evidence regarding the above preliminary trends.

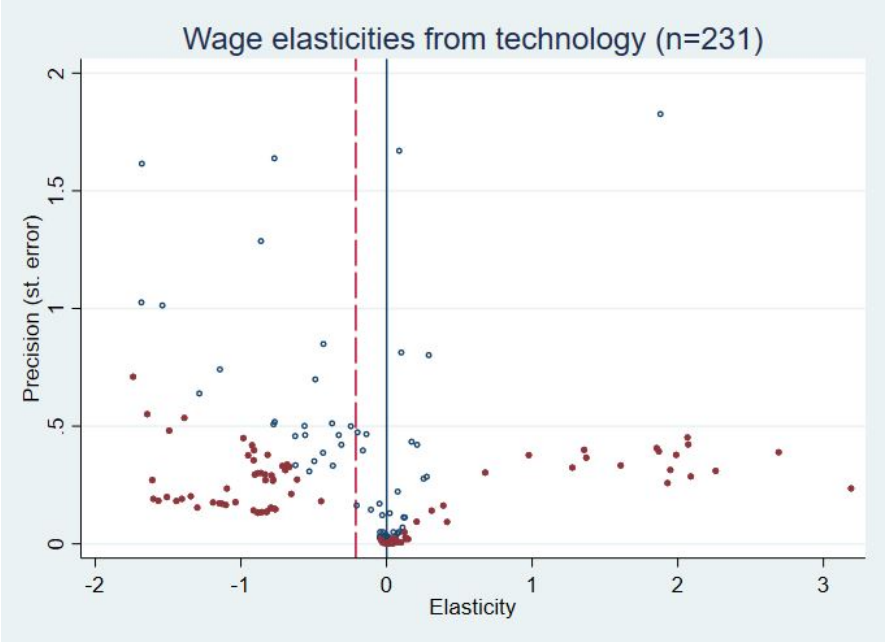
4.2 Publication bias

A well-known problem in the economics literature is possible publication selection (Doucouliagos & Stanley, 2013). This reflects the referees' or authors' tendency to report significant results consistent with theory while suppressing unfavorable outcomes (Stanley, 2008). Within our context, publication bias is less concerning, since both positive and negative labor market effects from technology and trade are theoretically possible and thus reported. Nevertheless, publication bias is a possible threat to the statistical inference and should be taken on board (Stanley & Doucouliagos, 2012).

The current study analyzes publication bias as follows. First, we display suggestive evidence employing funnel plots, which are scatter diagrams of the empirical estimates against their corresponding measure of precision (st. error). The basic idea is straightforward. High precision elasticities with low st. error (in the bottom part of the graphs) should reflect the weighted average (solid vertical line) and be concentrated around it. In contrast, less precise estimates (in the top part of the graphs) are expected to be relatively equally spread around the weighted means, providing an overall funnel shape reflecting the absence of a systematic relationship between the estimated effect and its' standard error. Second, we perform the funnel asymmetry test (Egger et al., 1997) using weighted MRA models to analyze the relationship between the empirical estimates and their st. errors.

Figure 5 illustrates the funnel plots for the wage (Panel a) and the employment (Panel b) elasticities from technology, while Figure 6 presents similar evidence for two trade samples. Simple inspection reveals that in all samples there is considerable variation in the evidence base, with both positive and negative reported effects. Notably, although there is a tendency for more precise estimates to concentrate around the weighted averages, this is not always the case. As a result, we cannot offer conclusive evidence as to the presence of publication selection by simply eyeballing the scatterplots.

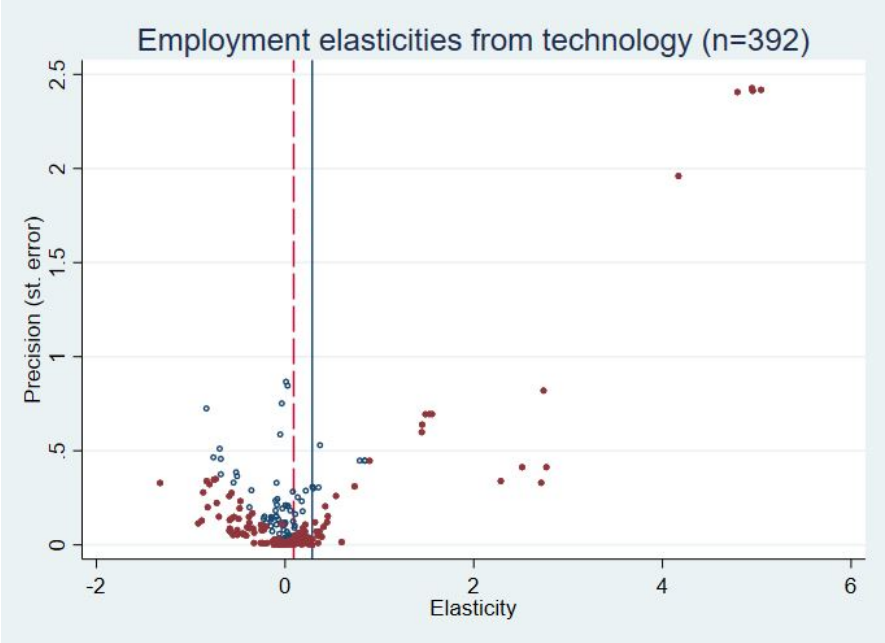
Figure 5. Funnel plots of technology elasticities



(a) Wage elasticities

Source: Authors' calculations

Note: Hollow circles are statistically insignificant elasticities, while full circles are statistically significant. The solid blue line indicates the weighted mean (0.001) (fixed effects estimator) and the dashed line indicates the unweighted mean (-0.211)

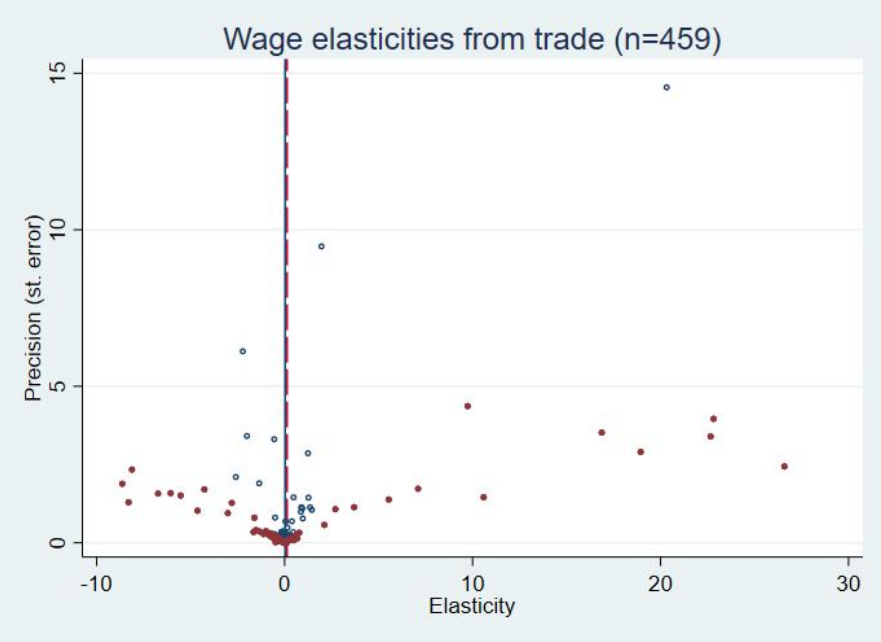


(b) Employment elasticities

Source: Authors' calculations

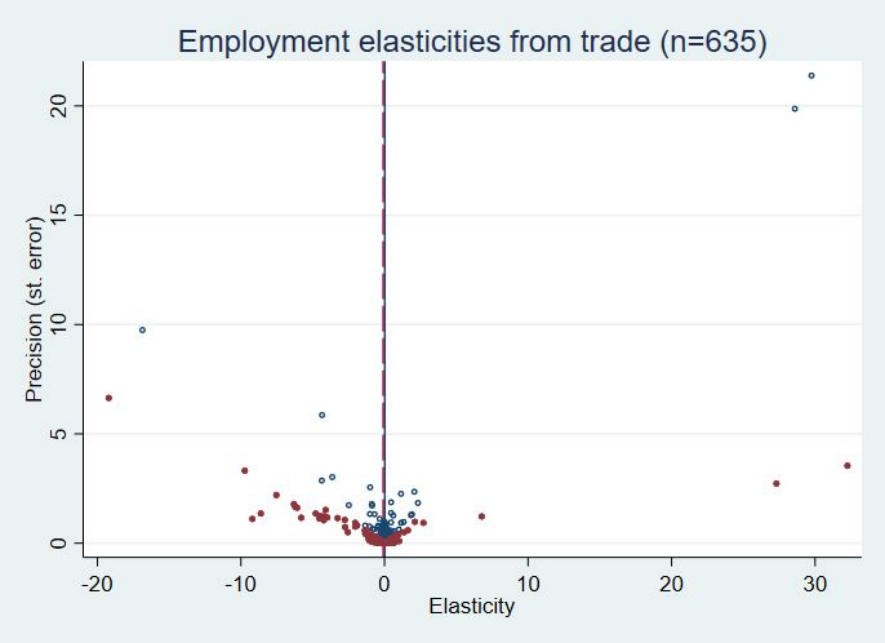
Note: Hollow circles are statistically insignificant elasticities, while full circles are statistically significant. The solid blue line indicates the weighted mean (0.287) (fixed effects estimator) and the dashed line indicates the unweighted mean (0.091)

Figure 6. Funnel plots of trade elasticities



(a) Wage elasticities

Source: Authors' calculations
Note: Hollow circles are statistically insignificant elasticities, while full circles are statistically significant. The solid blue line indicates the weighted mean (0.025) (fixed effects estimator) and the dashed line indicates the unweighted mean (0.128)



(b) Employment elasticities

Source: Authors' calculations
Note: Hollow circles are statistically insignificant elasticities, while full circles are statistically significant. The solid blue line indicates the weighted mean (0.020) (fixed effects estimator) and the dashed line indicates the unweighted mean (-0.088)

More robust evidence is obtained by performing the funnel asymmetry test (Eq. 5) which determines publication selection by a regression of the elasticities (e_i) against their corresponding st. errors (SE_{ei}).

$$e_i = \beta_0 + \beta_1 SE_{ei} + u_i \quad (5)$$

Based on Eq. (5), we use the *funnel asymmetry* and *precision effect* tests (FAT-PET). Egger et al. (1997) argue that a conventional t-test of β_1 is the funnel asymmetry test (FAT) which ascertains the presence, the direction and the magnitude of publication selection. Publication bias is considered to be modest if $|\widehat{\beta_1}| < 1$, substantial if $1 < |\widehat{\beta_1}| < 2$ and severe if $|\widehat{\beta_1}| > 2$ (see also Doucouliagos & Stanley, 2013). Furthermore, testing for $\beta_0 = 0$ is the precision effect test (PET), which tests for a statistically significant genuine effect, after controlling for publication selection. Based on this, Doucouliagos (2011) suggests that when $\beta_0 < 0.07$, the estimated genuine effect is small.

However, Eq. (5) is heteroscedastic, since the explanatory variable is a sample estimate of the standard deviation of the dependent variable (Havranek & Irsova, 2011). Thus, we estimate Eq. (5) using weighted least squares (WLS). Stanley & Doucouliagos (2012) indicate that the inverse variance ($1/SE_{ei}^2$) is the optimal weight for the st. errors.[19] Furthermore, to account for within-study dependence, arising from the inter-dependence between the multiple estimates collected per primary study, we estimate Eq. (5) using robust st. errors, clustered by primary study.

The outcomes of simple FAT-PET-MRA models are reported in Appendix C (Table C1). This preliminary evidence indicates that publication bias is not a major concern for our analysis. Furthermore, the univariate models fail to establish significant genuine effects, once we account for publication selection. Nevertheless, Stanley (2008) stresses the various statistical problems of the FAT-PET meta-regression framework, which tends to be too conservative in estimating the genuine effect, therefore prone to committing Type I error. As a result, the test outcomes should be interpreted with some caution. Furthermore, Stanley & Doucouliagos (2012) argue that univariate FAT-PET-MRA tests should be expanded to allow for greater complexity,

[19] Similarly, weighting Eq. (5) with the inverse of the st. error is equal to dividing it with SE_{ei}, thus transforming it to: $t_i = \beta_0(1/SE_{ei}) + \beta_1 + \varepsilon i$ where the dependent variable is the t-statistic of each estimated effect and $\varepsilon_i = u_i/SE_{ei}$. The transformed equation can be estimated by ordinary least squares.

reflecting the variation in the literature and large-sample misspecification biases. Therefore, in what follows, we discuss how we use the coded sources of variation to build the multivariate MRA models (Section 5.1) and investigate the presence of publication selection and genuine effects based on the outcomes (Section 5.2).

5. Multivariate meta-regression analysis

5.1 Empirical strategy

The current meta-analysis applies multivariate meta-regression models to investigate the labor market effects of technology and trade. Specifically, we add to the univariate Eq. 5 the sources of methodological and structural variation that are discussed in Section 4.1. Following Stanley & Doucouliagos (2012), we replace the genuine effect (β_0) with the term ($\beta_0 + \sum \beta_k Z_{ki}$) to model both excess heterogeneity (Z) and large sample or misspecification biases. Furthermore, we substitute the univariate term for publication selection ($\beta_1 SE_i$) with a multivariate one ($\beta_1 SE_i + \sum(\delta_j K_{ji}) SE_i$), resulting in the following equation (Eq. 6):

$$e_i = \beta_0 + \sum \beta_k Z_{ki} + \beta_1 SE_i + \sum(\delta_j K_{ji}) SE_i + \varepsilon_i \qquad (6)$$

The K_{ji} variables reflect the observed aspects of the quality of the estimation method that affect the propensity to report an estimate. A main advantage of Eq. (6) is that the *Z*- and *K*-variables can be employed to control for the effects of research quality both on the magnitude of the actual empirical effect (*Z*) and the preference that an estimate is reported and published (*K*) in the first place. Based on the wide set of explanatory variables and the number of observations in the technology and trade samples, it is practical to limit the number of K-variables (Stanley & Doucouliagos, 2012). We assume that *K*-variables reflect publication quality (*peer-reviewed journal, publication year and 10-year impact factor*). Furthermore, based on the discussion in Section 4.1, we split the moderator variables (Z) into two parts, reflecting the methodological (*M*) and the structural (*S*) variation. Equation (7) reports the model that is estimated.

$$e_i = \beta_0 + \beta_1 SE_i + \sum \beta_k M_{ki} + \sum \beta_n S_{ni} + \sum(\delta_m K_{mi}) SE_i + \gamma' p_i + \theta' c_j y_t + \lambda' c_j + \\ + \mu' y_t + \varepsilon_i \qquad (7)$$

Where the dependent variable (e_i) is the collected elasticity, SE_i is the corresponding st. error, M_{ki} is the vector of the k variables reflecting methodological heterogeneity and S_{ni} is the vector including the n aspects of structural variation. In addition, we include primary study

fixed effects (p_i) which control for study-invariant measures and country by midpoint ($c_j y_t$) fixed effects which control for unobserved heterogeneity related to the country and the average period of analysis, while the latter are also used independently (c_j and y_t). Finally, ε_i stands for the error term.

Similarly, as in Section 4.2, the multivariate meta-regression model (Eq. 7) also suffers from heteroscedasticity. We use weighted least squares (WLS) with the inverse variance as the analytic weights to deal with this.[20] This strategy reduces the effects of (implausibly) large elasticities, which typically have large st. errors. To account for within study dependence, we estimate Eq. (8) using robust st. errors, clustered by primary study.

The most meaningful way to report meta-analytic results (Stanley & Doucouliagos, 2012) is to start from an all-inclusive WLS model, that is, a general-to-specific approach (backwards selection) and report results of more parsimonious models, where all variables are significant at least to the 10% level. The merit of backwards selection is that "... *model construction proceeds from a general model to a more structured, in an ordered and statistically valid fashion, and in this way avoids the worst of data mining*" (Charemza & Deadman, 1997, p.78). In our case, this is particularly appropriate given the multitude of the moderator variables, which explodes the number of possible MRA models well above the number of observations. The resulting Type I error implies that some research dimensions in the all-inclusive models might be statistically significant even if the results are only based on random noise (Sala-i-Martin, 1997). Furthermore, even when there are sufficient degrees of freedom, such all-inclusive MRA models often suffer from multicollinearity and low statistical power, which undermine their predictive power.

A common methodological debate in meta-analysis refers to the treatment of outliers, which might bias the meta-regression outcomes. Despite the extreme values, outliers reflect important information; therefore, we report the meta-regression outcomes for the entire samples in the main results. To verify that outliers do not drive the reported outcomes, Appendix D1 reports the MRA results excluding the outliers. First, we filter out extreme values by trimming the first

[20] Alternatively, the inverse st. error is also suggested as an analytic weight, which would transform Eq. (7) into: $t_i = \beta_1 + \beta_0 \left(\frac{1}{SE_i}\right) + \sum \beta_k \; M_{ki} \left(\frac{1}{SE_i}\right) + \sum \beta_n \, Sni(\frac{1}{(SE_i)}) + \sum \delta_m \, K_{mi} + \gamma' p_i \; + \theta' c_j y_t + \lambda' c_j \; + \mu' y_t + v_i$
However, simulations indicate that the variance performs better as the analytic weight in WLS-MRA models (Stanley & Doucouliagos, 2012).

and the last 5 percentiles from the distributions of the collected elasticities and secondly, we winsorize the first (last) 20 percentiles of each distribution with the value of the 20th (80th) percentile. The main difference between the two methods is that the latter retains the same number of estimates, while the former eliminates 46 technology and 55 trade elasticities.

As a sensitivity analysis, we compare the abovementioned preferred approach with random (REE) and fixed effects (FEE) meta regression models (reported in Appendix E). Note, however, that Moreno et al. (2009) and Stanley et al. (2010) illustrate that both REE and FEE models are biased in the presence of publication selection. Furthermore, our dataset lacks a clear panel structure, further justifying our choice for the cluster-robust WLS-MRA models as our preferred analysis.

Equation (7) provides a flexible framework to account for the vast heterogeneity in the collected samples and potential publication selection. Nevertheless, the relationship between the standard error and the propensity to report an estimate might not be linear. Instead, simulations have indicated the appropriateness of a squared term (SE_i^2) as a corrected estimate in a multivariate MRA. The resulting *precision effect test corrected for st. error* (PEESE) is obtained from substituting the SE_i with its squared term, as in Eq. (8), which will be estimated using the inverse variance as the analytic weight:

$$e_i = \beta_0 + \beta_1 SE_i^2 + \sum \beta_k M_{ki} + \sum \beta_n S_{ni} + \sum (\delta_m K_{mi}) SE_i^2 + \gamma' p_i + \theta' c_j y_t + \lambda' c_j + \\ + \mu' y_t + \varepsilon_i \quad (8)$$

In what follows, we report the empirical results from estimating Eq. (7) and (8) for the labor market elasticities from technology and trade.

5.2 Results

The current section reports the outcomes from our empirical analysis distinguishing between the wage and employment elasticities from technology and trade. For each of the four sub-samples (wage or employment elasticities from technology and trade), we report the outcomes from the WLS-MRA models (Eq. 7), first with the entire set of moderator variables; then the WLS-MRA general-to-specific model, which is our preferred estimation and finally we estimate the PEESE model (Eq. 8). To illustrate the growing importance of trade with China, we complement the trade analysis with WLS-MRA models restricting trade only with China.

As outlined above, the discussion is predominantly based on the WLS general-to-specific models, which typically replicate the outcomes of the all-inclusive ones.

Wage elasticities from technology

Table 4 reports the estimation results for the technology elasticities. Regarding the wage elasticities (Columns 1-3), the model with all the moderator variables (Column 1) and the more parsimonious general-to-specific model (Column 2) provide similar outcomes, verifying the robustness of our analysis to alternative model specifications. In more detail, Column 2 indicates the significance of 10 Z- and 2 K-variables as well as the coefficient of the $SE(\beta_1)$ and the intercept (β_0).

As explained above we have to deal with possible publication biases. The average multivariate publication bias is calculated from the average estimated value of: $\beta_1 SE + \sum(\gamma_i K_i)SE$, as opposed to $\beta_1 SE$ for the univariate MRA. Using an F-test, we verify the joint significance of the 2 K-variables (*publication year* and *10-year impact factor* each one interacted with the st. error) and the coefficient of the st. error ($F_{3,20} = 24.03$, $p < 0.00001$).

Plugging in the estimated beta coefficients and the average value of the st. error (0.234), we conclude that the average publication selection in the wage elasticities from automation equals -0.214. This contrasts the evidence from the univariate MRA (Appendix C) which indicated the absence of publication selection in the sample of wage elasticities from technology (assuming significance of the regression coefficient, calculating $\beta_1 SE$ would result on an average publication bias of 0.013), which highlights the importance of the multivariate MRA. Subtracting the calculated publication bias from the average wage elasticity from technology (-0.211 - Table 1), yields an overall effect equal to zero (0.003); thus, providing evidence that the negative average wage elasticity is due to the impact from publication bias. Once we properly account for it, the average wage elasticity becomes marginally positive.

Along similar lines, the genuine effect is a multivariate combination of the 10 significant Z-variables (*manufacturing, services, technology and trade, time series, levels, endogeneity, 10-year impact factor, trade with developing countries, after 2001* and *data span*). An F-test ($F_{6,21}$= 64088.92, $p < 0.00001$) verifies the presence of genuine systematic patterns in the reported wage elasticities from automation. Assuming that all the Z-dummy variables are equal

to zero[21] and substituting the continuous ones with their sample means, we estimate a genuine wage effect equal to 0.440, which is more robust evidence that the average wage elasticity is positive and large (Doucouliagos, 2011), once we control for publication bias.

The PET is often biased downward when there is a genuine effect (Stanley, 2008). As a result, we focus on the PEESE test (Column 3) for a less biased, corrected estimate of the actual effect. Column 3 reports almost identical results with Column 2 (only 2 Z- and 1 K-variables differ ether in sign or significance). In particular, 10 Z-variables are significant determinants of the genuine effect ($F_{6,20} = 2900.02$, $p < 0.00001$). Following the same concept as before (setting all Z-dummy variables are equal to zero and replacing the continuous ones with their sample means), in line with our expectations we conclude on a larger (0.738) genuine effect. Reassuringly, -once again- the multivariate nature of our analysis converts the negative unweighted average wage elasticity into positive.

The estimated genuine effect from the PET allows for the calculation of '*best practice*' estimates. Given their controversial nature (Doucouliagos & Stanley, 2009), identifying the 'best practice' estimates requires some professional judgement. First, we filter out publication selection by setting $SE = 0$. Then, we can safely argue that robust econometric techniques are based on time series analysis, after 2001 with first differenced dependent variables, which account for unobserved heterogeneity. Furthermore, the estimated model should include both measures of technology and trade, while the estimation technique should address the endogenous nature of technology. Translating the above choices into appropriate values for the respective significant Z-dummy variables and substituting the two continuous ones (*10-year impact factor* and *dataspan*) with their sample means, yields an overall wage elasticity of -0.104. The negative outcome indicates that our subjective judgement on what constitutes 'best practice' transforms the positive genuine effect into negative. This is by no means a limitation of the analysis. Instead, it clearly indicates the strong impact from the increased variation in the literature (reflecting for instance the period of the analysis, or the numerous methodological choices regarding the estimated model). Furthermore, the best practice estimate is sensitive to the choice of the reference category in the applied dummy structure. As such, we place more emphasis on the genuine effect, as verified by both the multivariate PET and the PEESE tests.

[21] This implies that the estimated elasticity is at the macroeconomic level, before 2001. Also, the estimated econometric model does not include a trade measure, it is based on cross-sectional analysis with a first-differenced dependent variable, while the estimation method is not controlling for endogeneity.

Table 4. Labor market effects from technology (Dependent variable: e_i)

	Wage elasticities			Employment elasticities		
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS**	**WLS general to specific**	**PEESE**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
FAT – PET – PEESE tests						
Intercept (β_0) (PET) or (γ_0) (PEESE)	-1.815 [3.622]	0.551** [0.161]	0.678** [0.188]	0.751 [0.523]	0.706* [0.358]	0.231* [0.131]
St. error (β_1) or st. error^2(γ_1) (FAT)	-1.807 [1.640]	-1.474** [0.567]	2.018 [1.848]	-1.540 [1.645]	-1.296 [0.951]	0.780 [0.625]
Type of innovation (ref. process innovation)						
Product innovation	0.005 [0.003]	*omitted*	*omitted*	0.001** [0.0003]	0.001** [0.0005]	0.001** [0.0003]
Data aggregation (ref. worker-level)						
Industry-level	0.200** [0.086]	*omitted*	*omitted*	0.100 [0.105]	0.167** [0.078]	0.190** [0.063]
Firm-level	0.925 [2.126]	*omitted*	*omitted*	0.982*** [0.137]	1.117*** [0.066]	1.128*** [0.061]
Sectoral Ievel (ref. economy-wide)						
Manufacturing	-0.277** [0.086]	-0.225* [0.111]	-0.790*** [0.108]	0.227 [0.151]	0.221 [0.139]	0.200 [0.128]
Services	-0.270*** [0.086]	-0.218* [0.112]	-0.783*** [0.108]	0.076** [0.017]	0.068** [0.013]	0.038*** [0.005]
Skill-level (ref. varied skill)						
Low-skill	-0.003 [0.004]	*omitted*	*omitted*	0.061* [0.033]	0.050** [0.023]	0.012 [0.023]
Medium-skill	-0.002 [0.004]	*omitted*	*omitted*	0.069** [0.028]	0.060** [0.018]	0.029 [0.017]
High-skill	-0.001 [0.002]	*omitted*	*omitted*	0.195*** [0.021]	0.187*** [0.014]	0.160*** [0.005]

Other methodological aspects						
Technology and trade *(ref. only technology)*	-0.008** [0.003]	-0.008** [0.002]	-0.017** [0.002]	0.009 [0.026]	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	-0.010 [0.007]	-0.010* [0.005]	-0.008*** [0.0004]	-0.142*** [0.016]	-0.146*** [0.008]	-0.160*** [0.00007]
Lagged independent variable *(ref. contemporaneous ind. var.)*	0.001 [0.001]	*omitted*	*omitted*	-0.007 [0.015]	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	-0.445** [0.122]	-0.391*** [0.086]	-0.872*** [0.108]	0.148*** [0.016]	0.152*** [0.006]	0.161*** [0.00006]
Controlling for endogeneity *(ref. no IV approach)*	-0.015** [0.005]	-0.019** [0.005]	-0.040*** [0.105]	0.029 [0.019]	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	2.864 [4.528]	*omitted*	*omitted*			
Hours worked *(ref. number of workers)*				-0.0001*** [$8.55*10^{-8}$]	0.0001*** [$6.80*10^{-11}$]	0.0001*** [$6.43*10^{-11}$]
Publication characteristics (K-)						
Peer reviewed paper *(ref. working paper)*	1.546 [2.130]	*omitted*	*omitted*	-0.782** [0.250]	-0.848** [0.406]	-0.307* [0.176]
Peer reviewed paper * st. error	0.155 [1.577]	*omitted*	*omitted*	0.534 [1.639]	*omitted*	*omitted*
Publication year	-0.781 [0.766]	-0.127 [0.389]	-0.934** [0.349]	0.602*** [0.133]	0.676*** [0.021]	0.650*** [0.022]
Publication year * st. error	-1.896*** [0.375]	-2.045*** [0.423]	-1.070* [0.597]	-1.355** [0.580]	-1.282** [0.565]	-2.682 [2.712]
10-Year impact factor	-2.031 [3.048]	1.130** [0.478]	0.713 [0.424]	0.244 [0.829]	*omitted*	*omitted*
10-Year impact factor * st. error	-4.030** [1.765]	-3.764** [1.407]	-2.793 [3.919]	0.881 [1.169]	*omitted*	*omitted*
Geography (ref. US-UK-Canada-Japan)						
Europe	-0.375 [0.456]	*omitted*	*omitted*	-0.0008 [0.005]	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)						

Regional – level analysis	0.114 [0.113]	*omitted*	*omitted*	0.492** [0.217]	0.474** [0.173]	0.769*** [0.155]
Development status (ref. not-specified)						
Developed	*omitted*	*omitted*	*omitted*	0.580 [0.358]	0.888*** [0.202]	0.547*** [0.050]
Developing	0.557*** [0.071]	0.575*** [0.063]	1.014*** [0.050]	0.198** [0.079]	0.211** [0.072]	0.325*** [0.044]
Time (ref. midpoint before 2001)						
After 2001	-0.307** [0.080]	-0.279*** [0.047]	-0.330*** [0.077]	0.025 [0.075]	*omitted*	*omitted*
Other controls						
Dataspan	-0.349*** [0.011]	-0.349*** [0.008]	-0.385*** [0.010]	0.241*** [0.005]	0.240*** [0.006]	0.252*** [0.0006]
Number of RHS variables	$1.1*10^{-6}$ [0.00006]	*omitted*	*omitted*	0.0008 [0.005]	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	-0.049 [0.059]	*omitted*	*omitted*	-0.095** [0.045]	-0.098** [0.038]	-0.118 [0.092]
Observations	231	231	231	392	392	392
Adjusted R^2	0.626	0.622	0.480	0.985	0.985	0.985
Primary study fixed effects	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes
Country by Midpoint fixed effects	yes	yes	yes	yes	yes	yes

Note: Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the collected elasticities. Columns 2 and 5 are based on the respective WLS-MRA models (Columns 1 and 4), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories is significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Besides the central findings discussed so far, our multivariate regression analysis reveals how the complex structure in economics research potentially shapes the reported wage elasticities from technology. First, we uncover that the average positive wage elasticity, calculated for economy-wide studies, decreases by a magnitude of 0.225 for the manufacturing and 0.218 for the service sector. This conclusion supports the relevant arguments that possible negative effects from automation at the sectoral level are often compensated by positive effects on other sectors (inter-sectoral linkages – Blechinger et al., 1998) which tend to increase the economy-wide wage elasticities from automation.

Notably, our regression analysis highlights the evolution patterns of the wage effects from technology. In particular, more recent wage elasticities from technology are typically lower by an order of 0.279. Furthermore, the inclusion of trade measures in the estimated model tends to decrease the wage elasticity from technology by an order of 0.008. Nevertheless, when the trade measure refers to trade with developing countries, the wage elasticity from automation tends to be larger by an order of 0.575. Assuming that more recent estimations include measures of both technology and trade, the above effects uncover the significant overlap between the effects from technology and trade, often discussed in the theory (Feenstra, 2016; Hummels et al. 2018).

Along similar lines, our WLS-MRA illustrates the importance of methodological choices; in that, the positive genuine effect decreases by 0.010 for time series analyses and by 0.391 in models where the dependent variable is in levels. In addition, less positive effects are reported in empirical models which address the endogenous nature of technology (-0.019) and estimations based on a larger number of years (-0.349), which reflect better data accessibility. The above characteristics are aspects of more robust and sophisticated modern econometric techniques. Similarly, elasticities published in high-quality journals (which are typically based on robust methodologies) tend to be larger (1.130 per 1 s.d. of the standardized 10-year impact factor included in the analysis). Taken together, the more detailed results provide new insights regarding the diverse impact from technical research choices on the reported elasticities.

Employment elasticities from technology

Table 4 (Columns 4-6) report the outcomes of our analysis on the employment elasticities from technology. Starting from the WLS-MRA model with all the coded sources of variation (Column 4), we estimate the general-to-specific model (Column 5), where 17 Z-variables are significant at least for $\alpha = 0.1$. First, we calculate publication selection based on the formula:

$\beta_1 SE + \sum(\gamma_i K_i)SE$. Given the joint significance of the relevant terms ($F_{2,36} = 2.68$, $p < 0.10$), the multivariate publication selection is equal to -0.193. Negative publication bias was the outcome of the univariate funnel asymmetry test ($\beta_1 SE$); albeit much larger in magnitude (-4.830) (Appendix C). Once we subtract the calculated publication bias from the unweighted mean (Table 1), we conclude on a positive average effect from technology on employment (0.284).

Once we account for publication selection, the genuine effect is a multivariate function of the intercept and all the significant Z-variables (*product innovation, industry- / firm-level data, services, low-/ medium- / high-skilled, time-series, levels, hours, peer-reviewed, publication year, regional, developed, developing, dataspan, including controls*). Given their joint significance ($F_{9,36} = 3.4 * 10^5$, $p < 0.00001$) and filtering out publication selection ($SE_i = 0$), the genuine effect is calculated by setting all the relevant dummy indicators equal to zero and using the mean sample values of the continuous ones (*dataspan, publication year*). As a result, the genuine effect is 0.496. Based on the PEESE test (Column 6) and after verifying the joint significance of all the Z-variables ($F_{9,36} = 4.1 * 10^5$, $p < 0.00001$), the same reasoning yields an average effect of: 0.306. Taken together, we provide robust evidence that the genuine effect of technology on employment is positive and often exceeds the limit for a strong association (Doucouliagos, 2011), even after accounting for publication selection and excess heterogeneity.

Based on Column 5, we estimate best practice estimates concerning the employment elasticities from technology. The calculations are subjective though and based on the significant covariates and our choices about what constitutes '*best practice*'. Here, we opt for the more direct firm-level effects, published in peer-reviewed journals. Also, the time-series analysis controls for the endogenous nature of technology, while the dependent variable is first-differenced and the estimated model includes important control variables. Translating those choices into the appropriate values for the respective binary indicators and substituting the continuous ones (*dataspan, publication year*) with their mean values, we calculate a best practice estimate equal to 0.796. As a result, our subjective argumentation on what constitutes '*best practice*', results in a larger positive impact from technology on employment compared to the calculated genuine effect (0.496).

Column 5 also indicates several noteworthy patterns regarding the effects from the various sources of heterogeneity. A key outcome highlights the skill-biased nature of technology on employment (Autor et al., 2003). In particular, the average positive effect from

technology, which is calculated for workers of various skill levels, is further increased for low-, medium- and high-skilled workers. Nevertheless, the estimated term for high-skilled workers (0.187) is much larger compared to the ones for low- (0.050) and medium-skilled workers (0.060)[22]. As a result, our analysis confirms that the beneficial employment effects from technology are mainly accrued to high-skilled labor.

Table 4 also indicates that methodological choices may also shape the overall employment elasticities from technology. First, industry- and firm-level estimates are typically larger from worker-level ones, by an order of 0.167 and 1.117 respectively. Similarly, elasticities for the service sector are larger from economy-wide ones by a magnitude of 0.068. Furthermore, time-series analyses tend to report lower employment elasticities from technology by an order of 0.146, while not first-differencing the estimated model increases the reported elasticities by a magnitude of 0.152.

Shifting to the various aspects of structural variation, the WLS-MRA illustrates that employment elasticities from technology published in peer-reviewed journals are lower by an order of 0.848 compared to those on working papers; thus adding to the discussion of publication selection. As to the evolution of the reported effects, the *publication year* variable points that the employment elasticities are more positive by 0.676 for every s.d. of the standardized variable. Regarding geography, the coefficient of our regional variable indicates that analyses at the regional level tend to report larger positive elasticities by a factor of 0.474. Similarly, studies comprising larger time periods tend to report larger positive outcomes by an order of 0.240 for every additional year in the dataset.

Taken together, the analysis so far points towards a number of noteworthy outcomes regarding the labor market effects from technology. First, we document that negative publication selection potentially contaminates both the wage and the employment elasticities literature. Once we account for publication selection, we conclude that –on average- automation benefits both wages and employment. Notably, we indicate that the skill-biased nature of technology is primarily displayed in employment, where high-skilled worker benefit disproportionally more, compared to low-skilled ones; the analysis did not trace any similar effect on wages. Furthermore, we revealed that the wage effects from technology are less positive in more recent

[22] Based on the estimated terms from Column 5, comparing the effects from technology on low- and high-skilled workers (0.546 and 0.683 respectively), we conclude that the differential impact from technology on skilled workers is almost 25% higher than the impact on unskilled ones.

studies; the opposite happens to the employment effects, which tend to increase over time. Finally, the analysis uncovered how several methodological choices (adopting an IV approach, performing a time-series analysis, using industry-level data etc.) shape the labor market effects from automation.

Wage elasticities from trade

Table 5 (Columns 1-4) reports the meta-regression results for the wage elasticities from trade. The discussion is based on the general-to-specific model (Column 2), which is very similar to the model that controls for all sources of variation (Column 1).

The general-to-specific WLS model indicates that all the K-variables are statistically insignificant; this is also the case for the β-coefficient of the st. error. As a result, we conclude on the absence of publication selection in our sample of the wage elasticities from trade, which challenges the negative and significant bias (-2.285) estimated from the univariate FAT (Appendix C). Furthermore, Column 2 points to the significance of 13 Z-variables, which are also jointly significant ($F_{11,33} = 7.7*10^6$, $p < 0.00001$). To calculate a plausible value for the genuine effect, we set all the dummy Z-variables equal to zero and substitute the continuous ones (*publication year, 10-year impact factor, dataspan*) with their average values. Utilizing also the intercept and the corresponding beta coefficients, we point towards a large positive genuine effect of 1.685, which is in line with the positive effect indicated from the univariate PET test (0.026). To verify the robustness of the multivariate analysis, we rely on the multivariate PEESE test (Column 3). Re-iterating the above calculations yields a similar genuine effect (0.916), which indicates strong association and is significant in all the conventional levels. In sum, the analysis so far found no evidence of publication selection in the wage elasticities from trade literature coupled with robust evidence of a positive genuine effect of trade on wages.

The multivariate analysis is particularly useful for calculating 'best practice' estimates. Like the technology samples, the above estimates are based on the significant variables in our preferred specification (Column 2) and some reasonable assessment. We assume that trade refers to both intermediate and final products, estimated for a firm in Europe, operating in the manufacturing sector. Moreover, we hypothesize that the estimate is obtained from a more recent study (after 2001), published on a peer- reviewed journal. To obtain a 'best practice' estimate, we convert the abovementioned choices into appropriate values in the dummy

structure of our control variables. Then, we filter out publication selection by setting the st. error equal to zero (SE_i = 0) and we substitute the significant continuous Z-variables (*publication year, 10-year impact factor, dataspan*) with their mean values. The above calculations provide a 'best practice' estimate equal to 0.775.

Interestingly, the multivariate MRA indicates how the multiple sources of variation shape the estimated genuine effect (1.685). In particular, we show that the positive average wage effects from trade are larger for high-skilled workers by a magnitude of 0.013, which indicates that workers above a skill threshold experience more beneficial effects on their wages because of trade. In addition, based on the negative estimated term for trade in intermediates (-0.002), our analysis points to smaller positive wage effects from vertical specialization (Hijzen, 2005). This outcome is complemented by the estimated term for the *developed* Z-variable (0.008), which shows that trade with developed countries (typically of the intra-industry type (Debaere et al., 2006)) results in larger positive average effects.

Furthermore, the reported elasticities are conditional on various methodological choices. First, in line with the literature indicating that firms engaging in international trade will likely benefit, we show that the wage effects at the firm level are larger compared to worker-level ones by a magnitude of 0.016. Regarding the sectoral level of analysis, the WLS-MRA (Column 2) challenges the popular opinion that the negative effects from trade are predominantly manifested in the manufacturing sector (Blechinger et al., 1998) Specifically, we show that wage elasticities in the manufacturing are larger by an order of 0.014 compared to economy-wide ones. Nevertheless, this outcome possibly reflects productivity effects and does not include the negative employment impact, which we ascertain in the analysis of the employment elasticities from trade.

The significant *dataspan* variable reveals that the wage elasticities based on large periods of analysis are lower on average by order of 0.408. Furthermore, the negative term for the *wage in shares* variable (-2.613) indicates that the wage elasticities are smaller when the authors investigate relative labor demand, thereby expressing the dependent variable as a share of the wages against the total wage bill.

Regarding the importance of publication quality, our analysis provides mixed evidence. First, we show that the wage elasticities extracted from studies published in peer-reviewed journals are typically less positive by order of 0.948. In contrast, the positive estimated term for the *10-*

year impact factor Z-variable (1.516), indicates that high-quality studies tend to report larger positive wage elasticities from trade. As to their evolution over time, our analysis indicates that the wage elasticities published after 2001 are typically less positive by an order of 0.716. This effect is partially mediated by the impact from the *publication year* variable, which shows that more recent elasticities are typically larger by order of 0.130. Finally, our analysis highlights the important role of geography. In particular, the positive effect of trade on wages is a bit smaller in the more rigid European labor markets by an order of 0.008, compared to the more flexible labor markets (like the US, the UK, Canada or Japan) where wages are expected to be the main adjustment mechanism.

To address the central role of China in global trade since the early 2000s, Column 4 estimates the general-to-specific model (Column 2) when China is the only trade partner. The limited number of observations (64) implies that the discussed findings should be taken with a grain of salt. Nevertheless, the insignificance of the β-coefficients for the st. error and all the K-variables indicates the absence of significant publication selection. Furthermore, utilizing the intercept and after verifying the joint significance of all the significant Z-variables ($F_{3,7} = 7.8*10^6$, $p < 0.00001$), we calculate a genuine effect of -0.031. Interestingly, we conclude that although trade benefits wages in the industrialized countries, trade with China results in negative effect, which is marginally below the limit for large effects (Doucouliagos, 2011).

The above caveat notwithstanding, it is worth noting that the analysis of the wage effects from trade with China largely verifies many of the outcomes discussed so far. In particular, trade with China corroborates the already established negative effects from trade in intermediates (-0.003) as well as the positive ones for the wage elasticities in the manufacturing sector (0.019) and the wages of high-skilled workers (0.003). Similarly, industry-level studies report larger elasticities by 1.917, which can reverse the negative genuine effect into positive. Regarding publication quality, Column 4 illustrates that the elasticities published in peer-reviewed journals are further decreased by 1.955, an effect partially mitigated by the positive impact for the outcomes reported in high-quality studies (0.466), as indicated by the *10-year impact factor* variable. As to the impact from time, our analysis shows that evidence after 2001 is typically lower (-0.088); however, this is contrasted by the positive term for the *publication year* variable (0.457), which points to larger wage elasticities in more recently published studies.

Employment elasticities from trade

Table 5 (Columns 5-8) reports the outcomes from our multivariate MRA regarding the employment elasticities from trade. The discussion is based on the general-to-specific model (Column 6), which almost replicates the sign and significance patterns of the comprehensive model (Column 5), indicating the significance of 10 Z- and 1 K-variable. The average publication bias is based on the joint significance of the coefficient for the st. error and the significant K-variable ($F_{2,40} = 6.2$, $p < 0.05$) and is equal to -0.049, significant at the 5% level. This contrasts the insignificant bias estimated in the univariate analysis (Appendix C). Subtracting the calculated bias from the average employment elasticity from trade (-0.088) results in a less negative average elasticity from trade on employment (-0.039).

To estimate a reasonable value for the genuine effect, we first verify the joint significance of the intercept and the 10 significant Z-variables ($F_{8,48} = 1.4*10^8$, $p < 0.00001$). Then, we substitute all the dummy Z-variables with zero and the two continuous ones (*publication year* and *dataspan*) with their mean values. Based on the above, the calculated effect is equal to 3.187. As such, the multivariate analysis points to a large positive genuine effect beyond publication selection, which contrasts the insignificant one from the univariate analysis (Appendix C). Given the downward bias of the PET test, we also estimate the genuine effect based on the PEESE results (Column 7). After verifying the joint significance of the relevant variables ($F_{8,40} = 2.3*10^8$, $p < 0.00001$), similar calculations yield a more conservative genuine effect: 1.193. Overall, our multivariate approach provides some evidence of negative publication selection, coupled with more robust evidence of a positive and strong (Doucouliagos, 2011) genuine effect once publication selection is accounted for.

Like before, we estimate best practice estimates concerning the employment elasticities from trade. Our calculations are based on the general-to-specific WLS model and refer to more recent (after 2001) estimates for the manufacturing sector, reported in peer-reviewed journals. Plugging the respective values into the corresponding dummy variables and substituting the continuous one (*publication year* and *dataspan*) with their mean values, we calculate a best practice estimate equal to 2.167; further verifying the positive employment effects from trade.

Table 5. Labor market effects from trade (Dependent variable: e_i)

	Wage elasticities				Employment elasticities			
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS general to specific - China**	**WLS**	**WLS general to specific**	**PEESE**	**WLS general to specific - China**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
FAT – PET – PEESE tests								
Intercept (β_0) (PET) or (γ_0) (PEESE)	2.064*	1.701**	0.899***	0.009	-13.987***	3.561**	1.339	-2.312
	[1.077]	[0.665]	[0.118]	[0.243]	[1.337]	[1.558]	[2.101]	[6.614]
St. error (β_1) (FAT) or (γ_1)	0.176	0.375	0.0006	-0.752	0.963	-0.058	-0.059	-5.068
	[0.318]	[0.310]	[0.002]	[0.982]	[0.750]	[0.314]	[0.211]	[3.248]
Type of trade (ref. trade in final goods)								
Trade in intermediates	-0.002**	-0.002***	-0.003***	-0.003**	-0.040	*omitted*	*omitted*	*omitted*
	[0.0008]	[0.0006]	[0.0006]	[0.0009]	[0.087]			
Data aggregation (ref. worker-level)								
Industry-level	-0.004	-0.009	-0.008	1.917*	10.793***	*omitted*	*omitted*	*omitted*
	[0.004]	[0.007]	[0.006]	[0.967]	[0.885]			
Firm-level	0.014*	0.016**	0.016***	*omitted*	11.139***	*omitted*	*omitted*	*omitted*
	[0.007]	[0.006]	[0.006]		[0.904]			
Sectoral Ievel (ref. economy-wide)								
Manufacturing	0.014**	0.014***	0.015***	0.019**	-0.149***	-0.121***	-0.088***	1.379*
	[0.003]	[0.001]	[0.00004]	[0.004]	[0.033]	[0.020]	[0.014]	[0.612]
Services	-0.002	-0.003	-0.0005	-0.037	-0.136**	-0.099	-0.060**	1.616**
	[0.010]	[0.009]	[0.009]	[0.049]	[0.036]	[0.019]	[0.018]	[0.633]
Skill-level (ref. varied skill)								
Low-skill	0.006	0.004	0.005	-0.0001	-0.003	-0.003*	-0.001	-0.085
	[0.004]	[0.001]	[0.004]	[0.003]	[0.002]	[0.001]	[0.001]	[0.048]
Medium-skill	0.007*	0.005	0.006*	*omitted*	-0.040**	-0.036**	-0.028*	*omitted*
	[0.004]	[0.003]	[0.002]		[0.019]	[0.016]	[0.0016]	
High-skill	0.015**	0.013**	0.013***	0.003**	-0.0006	0.002**	0.001*	0.175

	[0.005]	[0.004]	[0.004]	[0.001]	[0.0007]	[0.0006]	[0.0007]	[0.100]
Other methodological aspects								
Technology and trade *(ref. only trade)*	0.0001 [0.001]	*omitted*	*omitted*	*omitted*	-0.001 [0.002]	*omitted*	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	0.007 [0.008]	*omitted*	*omitted*	*omitted*	-0.322** [0.096]	*omitted*	*omitted*	*omitted*
Lagged independent variable *(ref. contemporaneous ind. var.)*	0.0009 [0.001]	*omitted*	*omitted*	*omitted*	-0.0005 [0.0006]	*omitted*	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	0.018 [0.048]	*omitted*	*omitted*	*omitted*	0.004 [0.003]	*omitted*	*omitted*	*omitted*
Controlling for endogeneity *(ref. no IV approach)*	0.007 [0.005]	*omitted*	*omitted*	*omitted*	0.007 [0.006]	*omitted*	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	-2.987** [1.269]	-2.613** [0.867]	-1.564*** [0.128]	*omitted*				
Hours worked *(ref. number of workers)*					0.272*** [0.043]	0.275*** [0.041]	0.199*** [0.037]	0.147 [0.159]
Publication characteristics (K-)								
Peer reviewed paper *(ref. working paper)*	-1.146** [0.530]	-0.948** [0.325]	-0.558*** [0.056]	-1.955* [0.988]	-0.180*** [0.042]	-0.970** [0.337]	-0.411*** [0.500]	1.386 [1.901]
Peer reviewed paper * st. error	0.275 [0.506]	*omitted*	*omitted*	*omitted*	-1.556* [0.970]	*omitted*	*omitted*	*omitted*
Publication year	0.114** [0.039]	0.130*** [0.005]	0.124*** [0.004]	0.457** [0.220]	0.181*** [0.038]	5.048** [2.214]	1.950 [2.985]	-1.293 [7.736]
Publication year * st. error	-0.011 [0.572]	*omitted*	*omitted*	*omitted*	1.195** [0.433]	1.148** [0.326]	*omitted*	5.603 [4.746]
10-Year impact factor	1.851* [0.991]	1.516** [0.598]	0.791*** [0.106]	0.466*** [0.032]	-0.567 [0.114]	*omitted*	*omitted*	*omitted*
10-Year impact factor * st. error	0.243 [0.433]	*omitted*	*omitted*	*omitted*	-0.769 [0.719]	*omitted*	*omitted*	*omitted*
Geography (ref. US-UK-Canada-Japan)								
Europe	-0.008** [0.003]	-0.008*** [0.002]	-0.011*** [0.0009]	-0.041 [0.084]	3.334*** [0.351]	*omitted*	*omitted*	*omitted*

Spatial unit (ref. national-level analysis)								
Regional – level analysis	0.018 [0.071]	*omitted*	*omitted*	*omitted*	2.829*** [0.264]	3.090*** [0.197]	2.780*** [0.021]	1.472* [0.709]
Development status (ref. not-specified)								
Developed	0.004 [0.003]	0.008** [0.004]	0.009* [0.005]	*omitted*	-0.022* [0.012]	*omitted*	*omitted*	*omitted*
Developing	-0.025 [0.018]	-0.023 [0.018]	-0.022 [0.018]	*omitted*	-0.026 [0.018]	*omitted*	*omitted*	*omitted*
Time (ref. midpoint before 2001)								
After 2001	-0.915 [0.576]	-0.716** [0.328]	-0.315*** [0.062]	-0.088*** [0.0005]	-0.109*** [0.020]	-0.128*** [0.016]	-0.098*** [0.0009]	0.262** [0.070]
Other controls								
Dataspan	-0.407*** [0.037]	-0.408*** [0.019]	-0.386*** [0.002]	-0.345** [0.059]	0.052*** [0.009]	0.058*** [0.008]	0.042*** [0.0008]	0.042 [0.028]
Number of RHS variables	0.0004 [0.0003]	*omitted*	*omitted*	*omitted*	-0.0004 [0.001]	*omitted*	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	0.015*** [0.003]	0.018*** [0.002]	0.017** [0.0002]	0.015** [0.002]	0.008 [0.035]	*omitted*	*omitted*	*omitted*
Observations	459	459	459	64	635	635	635	60
Adjusted R^2	0.904	0.906	0.905	0.621	0.992	0.992	0.991	0.767
Primary study fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes

Note: Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the collected elasticities. Columns 2 and 6 are based on the respective weighted-least-squares models (Columns 1 and 5), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Regarding more nuanced effects from the coded sources of variation, the current analysis advances the discussion regarding the skill-biased nature of globalization of production. A key outcome highlights that the positive genuine effect is decreased for low- (-0.003) and medium-skilled workers (-0.035), while it is marginally larger for high-skilled ones (0.002). Despite the small differences, the estimated terms add to the results from the analysis of the wage elasticities from trade and imply a more beneficial effect from trade on high-skilled workers.

Notably, the WLS-MRA illustrates how numerous aspects of the study design shape the average effect. First, we indicate that elasticities for the manufacturing sector are typically lower by 0.121. In addition, employment elasticities collected from studies published in peer-reviewed journals are less positive, as indicated by the estimated term (-0.970). Considering the methodological choices, Column 6 indicates that when employment is approximated by the hours worked as opposed to the number of workers, the average elasticity is larger by order of 0.275. Regarding the impact from geography, the significant *regional* coefficient, illustrates that regional level analyses typically report larger employment effects (3.090).

The analysis highlights the importance of the time dimension in two ways. Similar to the wage elasticities from trade, the employment ones referring to the period after 2001 are smaller (-0.128). Nevertheless, this is contrasted by the positive estimated term for *publication year* (5.048) which reveals that more recent studies tend to report larger employment elasticities. Finally, our analysis shows that elasticities based on longer time periods (*dataspan*) tend to be more positive by order of 0.058.

Similar to the wage sample, we address the elevated role of China in world trade by re-estimating the general-to-specific model (Column 6) when China is the only trade partner (Column 8). Note, however, the low number of observations (60). This limitation notwithstanding, the analysis shows the absence of publication selection. At the same time, we verify the joint significance of the relevant Z-variables ($F_{4,8} = 57211.12$, $p < 0.00001$) and use them to calculate a negative genuine effect (-1.031) beyond publication selection. However, the reported elasticities are conditional on a number of factors. Specifically, sectoral-level analyses typically report less negative elasticities by an order of 1.379 for the manufacturing and 1.616 for the service sector. Similarly, evidence after 2001 is less negative on average (0.262), which also holds for regional-level analyses (1.472).

Taken together, the multivariate analysis of the labor market effects from trade determined that only the literature of the employment elasticities is contaminated by publication selection.

Nevertheless, once we account for this bias, the PET and PEESE tests indicated that trade –on average- benefits both wages and employment. Therefore, our results imply that the beneficial effects from trade expand on both wages and employment. Nevertheless, the positive effects are reversed when industrialized countries trade with China. Interestingly, we also indicated that the skill-biased nature of the internationalization of production is reflected in both wages and employment. High-skilled workers enjoy larger positive wage and employment effects from trade compared to low- and medium-skilled ones. Furthermore, differential effects between wages and employment were uncovered for elasticities in the manufacturing sector. In contrast, our analysis concluded that both the wage and the employment elasticities in studies after 2001 tend to be smaller.

6. Conclusions and discussion

In the last four decades, high-income countries have experienced a relative decline in manufacturing employment, accompanied by a decline in the wage share of medium- and low-skilled employees. The explanations point towards domestic technological progress and international trade as the principal causes for these developments. However, theory stresses that there are winners and losers from globalization and automation. A meta-analysis helps to synthesize the evidence base, appraise competing claims in the theoretical literature and pinpoint what factors determine positive outcomes and what factors determine the negative effects. The present meta-study evaluates the labor market effects from technology and trade by analyzing a sample of 1717 elasticities extracted from 91 studies. The study design differs along many dimensions. Some studies focus on wages others on employment. Some studies differentiate between skill levels of the workforce, while the data aggregation often varies between industry- versus firm- or worker-level ones. We codify these aspects of heterogeneity into control variables. To offer a genuine understanding of contemporary and much debated topics in economics, we apply robust, multivariate MRA techniques in the form of weighted least squares models, which address both the within- and the between-study variation.

Our meta-analysis confirms the consensus that publication selection is a concern in the economics literature. In our case, we uncover significant negative publication bias in the samples of the wage and employment elasticities from technology and the sample of the employment elasticities from trade. At the same time, the analysis indicates that only the literature of wage elasticities from trade is not contaminated by publication selection. Nevertheless, we document significant, economically meaningful and often overlapping

genuine effects once we account for publication bias. On average, technology and trade benefit both wages and employment.

More importantly, our comprehensive approach provided robust evidence regarding how the granularity in the methodology and the study design influences the reported elasticities. Several results stand out. First, we uncover that the skill-bias effects from technology are concentrated on employment, where technology benefits high-skilled workers relatively more compared to low-skilled ones. Similarly, trade benefits the employment of high-skilled workers more than low-skilled ones. However, the differential impact from trade expands also on wages, where it benefits the wages of skilled workers relatively more compared to unskilled ones. Taken together, the analysis reveals both overlapping and unique effects from technology and trade, while they jointly contribute to the skill-biased nature of modern labor market developments.

Our analysis also indicates that the wage effects from technology decrease over time, while the employment ones are larger at the regional level. Considering trade, we reveal relatively similar evolution between the wage and the employment effects; both tend to be less positive after the early 2000s. Furthermore, we also uncover that employment elasticities from trade are on average larger at the regional level, implying more beneficial local effects, thus contrasting a popular view in the literature that globalization of production is stigmatized as the main culprit explaining the decay of local labor markets (Rodrik, 2018). Finally, we reveal that trade between developed countries benefits the wages in the industrialized countries.

The current work increases our understanding of which factors drive the labor market consequences of automation and trade.

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Online Appendix

Labor markets, trade and technological progress. A meta-study

Nikolaos Terzidis, Steven Brakman and Raquel Ortega-Argiles

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Appendix A. Literature search and selected studies

Appendix A1. Literature search

Figure 1 in the main text reports the outcomes of the literature search based on multiple search queries including a wide set of relevant terms (Table A1.1) to three multi-disciplinary databases (*EconLit, Web of Science* and *Google Scholar*). Six research terms were related to technology and 6 to international trade, combined with Boolean operators (AND, OR) and wild card symbols (*) to approximate alternative word endings. We confined the literature search to English studies published between 1970 and 2022.

Table A1.1 Search Terms

General terms	Technology	International Trade
employment, wages, elasticity, regression analysis	automation, computerization, innovation, research and development, technical change, robotization	Trade, outsourcing, offshoring, foreign direct investment (FDI), export (import) competition

Considering EconLit, each search string resulted in 19.000 studies on average. After inspecting the outcomes for the first two queries and realizing that no new records were retained from the second search string, we inspected the first 3.000 studies in each of the following queries, after which the relevance dropped sharply. Due to its inter-disciplinary nature, *Web of Science* provided on average 22.000 results for each research string. Similarly to the *EconLit* database, we inspected the first technology and trade queries in detail and then confined ourselves to the first 3.000 studies. Finally, *Google Scholar* generated many references (even exceeding 2.000.000 studies in the broader research string). Therefore, we restricted the identification stage to the first 3.000 studies by research query.

In the screening stage, we excluded several studies that failed to satisfy the inclusion criteria (Table A1.2). The latter are designed to ensure that equilibrium employment or wage effects in developed countries are obtained by means of robust regression analysis identifying causal effects. Notably, the dependent variable should be a continuous measure of employment or wages. We excluded studies on productivity, probability of losing one′s job or plant survival studies, where the independent variable is expressed in ratios (skilled-to-unskilled), studies based on dummy indicators of engaging in technological innovations or participating in the

Table A1.2. Selection Criteria

INCLUDED	NOT INCLUDED
• Studies on equilibrium employment or wage effects (in levels or changes) • Studies using robust econometric techniques (regression analysis establishing causation or correlation) • Studies where automation and/or trade are approximated by a continuous variable • Labor market effects in developed countries	• Studies on productivity, employment security (probability of becoming jobless), wage or employment differential (e.g. dependent variable is the skilled-to-unskilled wage or employment ratio), organizational change (decentralization, de-layering of managerial practices etc.) • Trade exposure measured in monetary terms (e.g. import prices) • Studies where automation and/or trade are approximated by a dummy or count variables (e.g. based on responses regarding the number of technologies adopted) • Estimates from interaction terms (e.g. outsourcing*high-skill dummy) • Studies based on non-parametric / descriptive / match sampling etc. techniques • Quantile or binary (probit and logit) regression outcomes • Effects on developing countries

international markets and estimates from interaction terms. Furthermore, we excluded studies based on the mean or matching sampling comparisons because they do not provide an immediate effect of technology and/or trade. In contrast, such studies mostly compare the characteristics of different firms/sectors due to differential exposure to technology and trade. Finally, we excluded estimates based on quantile regression analysis or binary regression outcomes (probit or logit).

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Appendix B. Preliminary evidence

Table B1 Relationship between the collected elasticities and journal quality

	Technology		Trade	
	Wage effects (1)	**Employment effects (2)**	**Wage effects (3)**	**Employment effects (4)**
Ten year impact factor	16231.94 [41653.14]	-2519794 [2458908]	-76780.46 [76839.82]	-32709.2 [26344.2]
Constant	557500.6 [505528.2]	$3.4*10^7$ [$3.2*10^7$]	1367618 [1289454]	488613.2 [327327.9]
N *[K]*	231 *[21]*	392 *[37]*	459 *[34]*	635 *[41]*
F-test (p-value)	0.700	0.312	0.325	0.222

Note: OLS regressions, dependent variable is the precision of the collected estimate, defined as its inverse st. error and the independent variable is the 10-year recursive impact factor of the primary study. N refers to the number of elasticities and K refers to the number of primary studies. Robust st. errors, clustered by primary study. * for p<0.1, ** for p<0.05 and *** for p<0.01

Table B2. Sample means and preliminary evidence on heterogeneity

			FEE	REE			
	Observ. (1)	**Unweighted Mean (2)**	**Weighted Mean (3)**	**Weighted Mean (4)**	T^2 **(5)**	I^2 **(6)**	**Q-test (p-val) (7)**
Panel A – Technology elasticities							
Entire sample	623	-0.021	0.282***	-0.038**	0.130	100%	0.000***
• Wage elasticities	231	-0.211	0.001***	-0.130**	0.423	100%	0.000***
• Employment elasticities	392	0.091	0.287***	-0.006	0.032	100%	0.000***
Panel B – Trade elasticities							
Entire sample	1094	0.003	0.023***	-0.027***	0.023	99.9%	0.000***
• Wage elasticities	459	0.128	0.025***	0.000	0.002	99.9%	0.000***
• Employment elasticities	635	-0.088	0.020***	-0.053***	0.048	100%	0.000***

Note: Column 2 repeats the unweighted means from Table 1 (main text), to facilitate comparisons. Column 3 reports the outcomes from estimating the WLS form of the univariate FAT-PET model without a constant, where the weight is the inverse variance (fixed effects estimator). Columns 4-7 report the outcomes of similar random effects models. Column 5 reports the variation of the true genuine effect, column 6 reports the percentage of the between-estimate heterogeneity, besides the one attributed to sampling error. Column 7 reports the χ^2 value for Cochran's Q-test under the null hypothesis of no between-estimate heterogeneity. Similar outcomes for columns 3-7 are also obtained by means of the *meta summarize* command, as well as from WLS regressions of the estimated effect on their st. errors without constant, weighted by the inverse variance, based on robust st. errors clustered by primary study. * for $p<0.1, ** for p<0.05 and *** for $p<0.01

Appendix C. Publication bias (univariate FAT-PET-PEESE analysis)

Table C1 reports the outcomes of the univariate FAT-PET and PEESE analysis. The former is based on the WLS estimations of Equation C1, while the latter is based on the estimation of Equation C2.

$$e_i = \beta_0 + \beta_1 SE_{ei} + u_i \quad \text{(C1)}$$

$$e_i = \beta_0 + \beta_1 SE_{ei}^2 + u_i \quad \text{(C2)}$$

Table C1. Univariate FAT-PET and PEESE analysis

	Technology		**Trade**	
	Wage	**Employment**	**Wage**	**Employment**
	(1)	**(2)**	**(3)**	**(4)**
Panel A – FAT-PET outcomes				
SE_i β_1 (FAT)	0.057	-39.273***	-3.351***	-1.827
	[0.932]	[9.194]	[0.807]	[3.748]
Intercept β_0 (PET)	0.0005	0.287***	0.026***	0.021
	[0.0003]	[0.0007]	[0.002]	[0.042]
N [K]	231 [21]	392 [37]	459 [34]	635 [41]
Panel B – PEESE outcomes				
Intercept γ_0 (PEESE)	-0.997	0.270	27.941***	-8.486
	[0.737]	[0.363]	[0.015]	[6.540]
N [K]	231 [21]	392 [37]	459 [34]	635 [41]

Note: The table reports the outcomes of weighted least squares estimations (WLS), using the inverse of the variance as the optimal weight. N refers to the number of observations (elasticities) and K refers to the number of primary studies. Robust st. errors, clustered by primary study are reported in brackets. * for p<0.1, ** for p<0.05 and *** for p<0.01.

The univariate FAT-PET analysis (Panel A) uncovers evidence of significant publication selection only in the sample of employment elasticities from technology (Column 2) and the sample of wage elasticities from trade (Column 3). In both cases, the literature is contaminated by negative publication selection. Nevertheless, once we account for this publication bias, the analysis reveals evidence of significant and positive genuine effects. The PEESE test (Panel B) verifies the above positive genuine effect only in the wage elasticities from trade literature. However, the above models potentially suffer from omitted variable bias; therefore, more solid conclusions are based on the multivariate analysis reported in the main text.

Appendix D. Robustness analysis

Appendix D1. Outlier analysis

Table D1.1. Labor market effects from technology (Dependent variable: e_i)

	Wage elasticities			Employment elasticities		
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS**	**WLS general to specific**	**PEESE**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
FAT – PET – PEESE tests						
Intercept (β_0) (PET) or (γ_0) (PEESE)	-2.198	0.421*	-0.317**	0.182	-0.298	-0.067
	[3.965]	[0.212]	[0.131]	[0.634]	[0.265]	[0.368]
St. error (β_1) or st. error^2(γ_1) (FAT)	-1.432	-1.936**	0.956	-0.091	-0.544	-3.995
	[1.840]	[0.824]	[0.795]	[1.689]	[0.740]	[3.462]
Type of innovation (ref. process innovation)						
Product innovation	0.001	*omitted*	*omitted*	0.004**	0.003**	0.003**
	[0.001]			[0.002]	[0.001]	[0.001]
Data aggregation (ref. worker-level)						
Industry-level	0.144	*omitted*	*omitted*	0.143	0.184**	0.184**
	[0.181]			[0.105]	[0.074]	[0.076]
Firm-level	0.982	*omitted*	*omitted*	0.937***	0.985***	1.013***
	[2.348]			[0.081]	[0.062]	[0.073]
Sectoral Ievel (ref. economy-wide)						
Manufacturing	-0.237	-0.287	-0.504***	0.241	0.243	0.240
	[0.155]	[0.200]	[0.028]	[0.163]	[0.161]	[0.162]
Services	-0.230	-0.279	-0.498***	0.101***	0.104***	0.101***
	[0.155]	[0.201]	[0.028]	[0.020]	[0.019]	[0.021]
Skill-level (ref. varied skill)						
Low-skill	-0.006**	*omitted*	*omitted*	0.086***	0.093***	0.084***
	[0.003]			[0.022]	[0.022]	[0.022]
Medium-skill	-0.004	*omitted*	*omitted*	0.104***	0.108***	0.100***

	[0.003]			[0.021]	[0.021]	[0.020]
High-skill	-0.006	*omitted*	*omitted*	0.224***	0.225***	0.225***
	[0.006]			[0.024]	[0.023]	[0.024]
Other methodological aspects						
Technology and trade	-0.009*	-0.009**	-0.010***	0.018	*omitted*	*omitted*
(ref. only technology)	[0.005]	[0.004]	[0.0007]	[0.017]		
Time series	-0.015	-0.013**	-0.007***	-4.147**	0.780***	0.548*
(ref. cross-sectional)	[0.011]	[0.005]	[0.0004]	[1.137]	[0.222]	[0.315]
Lagged independent variable	-0.009*	*omitted*	*omitted*	-0.014	*omitted*	*omitted*
(ref. contemporaneous ind. var.)	[0.005]			[0.019]		
Dependent variable in levels	-0.387*	-0.462**	-0.614***	0.042***	0.048***	0.051***
(ref. first-differenced dep. var)	[0.193]	[0.176]	[0.028]	[0.008]	[0.003]	[0.003]
Controlling for endogeneity	-0.002	-0.002	-0.007**	0.001	*omitted*	*omitted*
(ref. no IV approach)	[0.008]	[0.002]	[0.002]	[0.005]		
Wages in shares	2.383	*omitted*	*omitted*			
(ref. wages not in shares)	[4.930]					
Hours worked				0.0001***	0.0001***	0.0001***
(ref. number of workers)				[$5.2*10^{-10}$]	[$2.4*10^{-10}$]	[$3*10^{-10}$]
Publication characteristics (K-)						
Peer reviewed paper	1.886	*omitted*	*omitted*	-0.152	-0.771***	-0.765***
(ref. working paper)	[2.278]			[0.105]	[0.178]	[0.176]
Peer reviewed paper * st. error	-0.600	*omitted*	*omitted*	-1.402	*omitted*	*omitted*
	[2.044]			[1.327]		
Publication year	-0.767	-0.298	-0.973**	0.234*	0.614***	0.602***
	[0.835]	[0.405]	[0.330]	[0.118]	[0.030]	[0.029]
Publication year * st. error	-1.298	-1.427*	-8.012***	-1.256**	-1.212*	-5.996
	[0.905]	[0.724]	[0.783]	[0.570]	[0.659]	[5.072]
10-Year impact factor	-1.988	0.686	0.090	-7.952***	*omitted*	*omitted*
	[3.301]	[0.654]	[0.315]	[1.516]		
10-Year impact factor * st. error	-3.133	-3.485*	-21.261***	-2.068	*omitted*	*omitted*
	[2.828]	[1.973]	[4.107]	[3.192]		
Geography (ref. US-UK-Canada-Japan)						

Europe	0.005 [0.771]	*omitted*	*omitted*	0.003 [0.005]	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)						
Regional – level analysis	0.162 [0.707]	*omitted*	*omitted*	-0.591 [0.552]	-0.171 [0.208]	-0.486 [0.363]
Development status (ref. not-specified)						
Developed	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Developing	0.619** [0.159]	0.631*** [0.128]	0.873*** [0.038]	0.198** [0.078]	0.228** [0.065]	0.277*** [0.056]
Time (ref. midpoint before 2001)						
After 2001	-0.323** [0.093]	-0.292*** [0.044]	-0.320*** [0.043]	0.070 [0.069]	*omitted*	*omitted*
Other controls						
Dataspan	-0.355*** [0.019]	-0.354*** [0.014]	-0.358*** [0.003]	0.256*** [0.004]	0.256*** [0.005]	0.259*** [0.008]
Number of RHS variables	0.00006 [0.00006]	*omitted*	*omitted*	-0.0009 [0.002]	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	-0.062 [0.083]	*omitted*	*omitted*	-0.092** [0.027]	-0.099* [0.051]	-0.111 [0.080]
Observations	193	193	193	328	328	328
Adjusted R^2	0.613	0.634	0.576	0.623	0.624	0.619
Primary study fixed effects	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes
Country by Midpoint fixed effects	yes	yes	yes	yes	yes	yes

Note: The table replicates the main analysis, after trimming the first and the last 5 percentiles from the distribution of the elasticities and the st. errors, to remove unreasonable values in the estimated effects and their st. errors (outliers). Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the collected estimates. Columns 2 and 6 are based on the respective weighted-least-squares models (Columns 1 and 5), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table D1.2. Labor market effects from technology (Dependent variable: e_i)

	Wage elasticities			Employment elasticities		
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS**	**WLS general to specific**	**PEESE**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
FAT – PET – PEESE tests						
Intercept (β_0) (PET) or (γ_0) (PEESE)	-0.280	0.437*	0.410**	-0.078	0.125***	0.139**
	[3.095]	[0.212]	[0.154]	[0.144]	[0.032]	[0.030]
St. error (β_1) or st. error^2(γ_1) (FAT)	-1.037	-1.237*	-1.433	0.138	0.170	0.105
	[1.186]	[0.648]	[1.484]	[0.400]	[0.252]	[0.108]
Type of innovation (ref. process innovation)						
Product innovation	0.004	*omitted*	*omitted*	0.001***	0.001***	0.001***
	[0.004]			[0.0002]	[0.0002]	[0.0002]
Data aggregation (ref. worker-level)						
Industry-level	-0.027	*omitted*	*omitted*	-0.056	-0.021	-0.042*
	[0.099]			[0.048]	[0.029]	[0.025]
Firm-level	0.120	*omitted*	*omitted*	0.237***	0.239***	0.239***
	[1.796]			[0.041]	[0.024]	[0.023]
Sectoral Ievel (ref. economy-wide)						
Manufacturing	-0.288**	-0.268*	-0.680***	0.077	0.075	0.074
	[0.087]	[0.133]	[0.087]	[0.053]	[0.048]	[0.047]
Services	-0.281**	-0.259*	-0.673***	0.033***	0.031***	0.029***
	[0.087]	[0.133]	[0.087]	[0.003]	[0.004]	[0.002]
Skill-level (ref. varied-skill)						
Low-skill	-0.011	*omitted*	*omitted*	0.017	0.016	0.012
	[0.007]			[0.016]	[0.017]	[0.017]
Medium-skill	-0.008	*omitted*	*omitted*	0.033**	0.033**	0.027**
	[0.006]			[0.011]	[0.011]	[0.011]
High-skill	-0.009	*omitted*	*omitted*	0.140***	0.139***	0.137***
	[0.006]			[0.006]	[0.005]	[0.003]
Other methodological aspects						

Technology and trade *(ref. only technology)*	0.007** [0.003]	0.006** [0.002]	0.0007 [0.002]	0.014 [0.011]	*omitted*	*omitted*
Time series *(ref. cross – sectional)*	-0.015** [0.007]	-0.013** [0.006]	-0.008*** [0.0006]	-0.050*** [0.011]	-0.045*** [0.002]	-0.045*** [0.00001]
Lagged independent variable *(ref. contemporaneous)*	0.002 [0.001]	*omitted*	*omitted*	-0.007 [0.008]	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var.)*	-0.387** [0.116]	-0.392** [0.120]	-0.725*** [0.086]	0.052 [0.011]	0.046*** [0.001]	-0.045*** [0.00001]
Controlling for endogeneity *(ref. no-IV approach)*	-0.021** [0.005]	-0.025*** [0.005]	-0.040*** [0.002]	0.009 [0.007]	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	0.622 [3.766]	*omitted*	*omitted*			
Hours worked *(ref. number of workers)*				0.0001*** [$1.3*10^{-8}$]	0.0001*** [$3.5*10^{-12}$]	0.0001*** [$2.4*10^{-12}$]
Publication characteristics						
Peer reviewed paper *(ref. working paper)*	0.682 [1.819]	*omitted*	*omitted*	-0.193** [0.071]	-0.161*** [0.005]	-0.165*** [0.005]
Peer reviewed paper * st. error	-0.614 [1.267]	*omitted*	*omitted*	-0.251 [0.486]	*omitted*	*omitted*
Publication year	-0.120 [0.646]	0.088 [0.361]	-0.720** [0.326]	0.191*** [0.044]	0.187*** [0.015]	0.175*** [0.015]
Publication year * st. error	-1.010* [0.497]	-1.273** [0.583]	-0.433 [0.500]	-0.414** [0.185]	-0.378* [0.194]	-0.872* [0.474]
10-Year impact factor	-0.672 [2.565]	0.118 [0.485]	0.046 [0.357]	0.554** [0.177]	*omitted*	*omitted*
10-Year impact factor * st. error	-1.943 [1.678]	-1.843 [1.563]	-2.159 [3.202]	0.067 [0.432]	*omitted*	*omitted*
Geography (ref. non-OECD)						
Europe	0.085 [0.468]	*omitted*	*omitted*	0.007** [0.002]	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)						
Regional – level analysis	-0.057	*omitted*	*omitted*	0.081	0.068	0.078**

	[0.112]			[0.084]	[0.050]	[0.0313]
Development status (ref. not specified)						
Developed	*omitted*	*omitted*	*omitted*	0.021 [0.078]	-0.018 [0.052]	0.009 [0.009]
Developing	0.397*** [0.088]	0.405*** [0.089]	0.711*** [0.034]	0.041* [0.022]	0.055** [0.017]	0.065*** [0.008]
Time (ref. midpoint before 2001)						
After 2001	0.081 [0.050]	0.083** [0.022]	0.035 [0.052]	-0.020 [0.017]	*omitted*	*omitted*
Other controls						
Dataspan	0.038** [0.011]	0.036** [0.009]	0.009*** [0.007]	0.011*** [0.002]	0.012*** [0.001]	0.013*** [0.001]
Number of RHS variables	-0.0001 [0.0001]	*omitted*	*omitted*	-0.003 [0.004]	*omitted*	*omitted*
Including important controls and / or fixed effects *(ref. missing important controls)*	0.0002 [0.0005]	*omitted*	*omitted*	-0.007* [0.002]	-0.011* [0.006]	-0.014 [0.010]
Observations	231	231	231	392	392	392
Adjusted R^2	0.716	0.676	0.570	0.944	0.944	0.944
Primary study fixed effects	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	yes	yes	yes

Note: The table replicates the main analysis, after winsorizing the first and the last 20 percentiles from the wage and the employment samples, to remove unreasonable values (outliers). Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the collected estimates. Columns 2 and 5 are based on the respective WLS-MRA models (Columns 1 and 4), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories is significant for α=0.01. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table D1.3. Labor market effects from trade (Dependent variable: e_i)

	Wage elasticities				Employment elasticities			
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS general to specific - China**	**WLS**	**WLS general to specific**	**PEESE**	**WLS general to specific - China**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
FAT – PET – PEESE tests								
Intercept (β_0) (PET) or (γ_0) (PEESE)	1.331	1.792*	0.885***	-0.121	0.505	-0.105***	-0.122***	0.322
	[0.138]	[0.923]	[0.114]	[0.223]	[0.720]	[0.019]	[0.017]	[4.028]
St. error (β_1) (FAT) or (γ_1)	-0.032	0.430	0.054	-0.229	0.283	-0.141	-0.135	0.620
	[0.728]	[0.443]	[0.073]	[0.902]	[0.738]	[0.313]	[0.597]	[2.180]
Type of trade (ref. trade in final goods)								
Trade in intermediates	-0.002**	-0.003***	-0.003***	-0.003**	-0.058	*omitted*	*omitted*	*omitted*
	[0.0009]	[0.0006]	[0.0006]	[0.0008]	[0.064]			
Data aggregation (ref. worker-level)								
Industry-level	-0.002	-0.002	-0.002	-0.049**	-0.602	*omitted*	*omitted*	*omitted*
	[0.004]	[0.003]	[0.003]	[0.019]	[1.002]			
Firm-level	0.021	0.015	0.018	*omitted*	-0.302	*omitted*	*omitted*	*omitted*
	[0.020]	[0.019]	[0.019]		[0.987]			
Sectoral Ievel (ref. economy-wide)								
Manufacturing	0.016***	0.014***	0.015***	0.016**	-0.122***	-0.095***	-0.090***	-0.211***
	[0.004]	[0.002]	[0.00004]	[0.004]	[0.023]	[0.014]	[0.016]	[0.033]
Services	-0.0003	-0.003	-0.0004	-0.011	-0.091**	-0.071**	-0.065**	0.025
	[0.009]	[0.010]	[0.009]	[0.045]	[0.036]	[0.020]	[0.021]	[0.021]
Skill-level (ref. varied skill)								
Low-skill	0.005	0.004	0.004	-0.001	-0.015***	-0.015**	-0.015***	0.027
	[0.004]	[0.004]	[0.004]	[0.0009]	[0.0009]	[0.0008]	[0.0006]	[0.046]
Medium-skill	0.006	0.004	0.005	*omitted*	-0.048***	-0.043**	-0.042**	*omitted*
	[0.004]	[0.004]	[0.003]		[0.011]	[0.011]	[0.012]	
High-skill	0.014**	0.012**	0.012**	0.003**	-0.006***	-0.005**	-0.006***	0.307**
	[0.004]	[0.004]	[0.004]	[0.001]	[0.001]	[0.001]	[0.001]	[0.053]

Other methodological aspects								
Technology and trade *(ref. only trade)*	0.0005 [0.001]	*omitted*	*omitted*	*omitted*	-0.003 [0.002]	*omitted*	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	-0.007 [0.018]	*omitted*	*omitted*	*omitted*	-0.229** [0.067]	*omitted*	*omitted*	*omitted*
Lagged independent variable *(ref. contemporaneous ind. var.)*	0.0002 [0.0006]	*omitted*	*omitted*	*omitted*	0.002 [0.002]	*omitted*	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	-0.022 [0.039]	*omitted*	*omitted*	*omitted*	0.003 [0.004]	*omitted*	*omitted*	*omitted*
Controlling for endogeneity *(ref. no IV approach)*	0.004 [0.004]	*omitted*	*omitted*	*omitted*	-0.0002 [0.003]	*omitted*	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	-1.997 [1.337]	-2.657** [1.903]	-1.497*** [0.123]	0.131** [0.046]				
Hours worked *(ref. number of workers)*					-0.024 [0.019]	-0.058*** [0.001]	-0.082*** [0.019]	0.256 [1.836]
Publication characteristics (K-)								
Peer reviewed paper *(ref. working paper)*	-0.743 [0.575]	-1.002** [0.447]	-0.565*** [0.055]	*omitted*	0.172*** [0.030]	0.213*** [0.027]	0.227*** [0.027]	-0.344 [0.485]
Peer reviewed paper * st. error	0.345 [0.786]	*omitted*	*omitted*	*omitted*	-0.928 [0.928]	*omitted*	*omitted*	*omitted*
Publication year	0.160*** [0.037]	0.136*** [0.008]	0.129*** [0.003]	0.574** [0.202]	0.011 [0.041]	-0.123*** [0.023]	-0.136*** [0.020]	0.157 [3.278]
Publication year * st. error	-0.478 [0.440]	*omitted*	*omitted*	*omitted*	0.422 [0.363]	0.403 [0.307]	0.847 [1.414]	-5.051 [3.464]
10-Year impact factor	1.151 [1.051]	1.579* [0.835]	0.756*** [0.102]	0.449*** [0.029]	-0.401 [0.546]	*omitted*	*omitted*	*omitted*
10-Year impact factor * st. error	0.345 [0.466]	*omitted*	*omitted*	*omitted*	-1.224 [0.825]	*omitted*	*omitted*	*omitted*
Geography (ref. US-UK-Canada-Japan)								
Europe	-0.008** [0.002]	-0.008** [0.003]	-0.011*** [0.0009]	0.003 [0.076]	0.100 [0.074]	*omitted*	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)								

Regional – level analysis	-0.031 [0.063]	*omitted*	*omitted*	*omitted*	0.062 [0.071]	0.433*** [0.047]	0.470*** [0.034]	0.094 [1.854]
Development status (ref. not-specified)								
Developed	0.005* [0.003]	0.008** [0.004]	0.009* [0.005]	*omitted*	-0.015 [0.012]	*omitted*	*omitted*	*omitted*
Developing	-0.026 [0.019]	-0.025 [0.019]	-0.025 [0.019]	*omitted*	-0.019 [0.018]	*omitted*	*omitted*	*omitted*
Time (ref. midpoint before 2001)								
After 2001	-0.524 [0.599]	-0.759 [0.466]	-0.302*** [0.062]	-0.087*** [0.0004]	-0.077*** [0.018]	-0.091*** [0.014]	-0.092*** [0.019]	-0.023 [0.073]
Other controls								
Dataspan	-0.379*** [0.031]	-0.412*** [0.027]	-0.387*** [0.025]	-0.377** [0.054]	0.0533*** [0.009]	0.056*** [0.010]	0.058** [0.020]	0.071** [0.016]
Number of RHS variables	-0.0002 [0.0006]	*omitted*	*omitted*	*omitted*	0.001 [0.0009]	*omitted*	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	0.019** [0.006]	0.018*** [0.002]	0.017*** [0.0002]	0.017*** [0.002]	0.002 [0.018]	*omitted*	*omitted*	*omitted*
Observations	390	390	390	62	533	533	533	41
Adjusted R^2	0.325	0.331	0.326	0.644	0.541	0.504	0.501	0.864
Primary study fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes

Note: The table replicates the main analysis, after trimming the first and the last 5 percentiles from the distribution of the elasticities and the st. errors, to remove unreasonable values in the estimated effects and their st. errors (outliers). Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the collected estimates. Columns 2 and 6 are based on the respective weighted-least-squares models (Columns 1 and 5), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table D1.4. Labor market effects from trade (Dependent variable: e_i)

	Wage elasticities				Employment elasticities			
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS general to specific - China**	**WLS**	**WLS general to specific**	**PEESE**	**WLS general to specific - China**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
FAT – PET – PEESE tests								
Intercept (β_0) (PET) or (γ_0) (PEESE)	2.085*	1.944**	0.027**	0.087	-2.029**	0.689	0.158	1.177**
	[0.834]	[0.470]	[0.012]	[0.090]	[0.726]	[0.710]	[0.459]	[0.493]
St. error (β_1) (FAT) or (γ_1)	0.063	0.224	0.00008	-0.665	-0.057	0.086	-0.047	-1.134**
	[0.250]	[0.221]	[0.0001]	[0.366]	[0.345]	[0.210]	[0.047]	[0.264]
Type of trade (ref. trade in final goods)								
Trade in intermediates	-0.002**	-0.003***	-0.003***	-0.003**	-0.007	*omitted*	*omitted*	*omitted*
	[0.0007]	[0.0005]	[0.0005]	[0.003]	[0.077]			
Data aggregation (ref. worker-level)								
Industry-level	-0.003	-0.009	-0.008	-0.597	1.763**	*omitted*	*omitted*	*omitted*
	[0.004]	[0.007]	[0.006]	[0.361]	[0.477]			
Firm-level	0.013*	0.016**	0.016**	*omitted*	1.867**	*omitted*	*omitted*	*omitted*
	[0.005]	[0.006]	[0.006]		[0.494]			
Sectoral Ievel (ref. economy-wide)								
Manufacturing	0.014***	0.014***	0.015***	0.018**	-0.103***	-0.101***	-0.081***	0.137**
	[0.002]	[0.0009]	[0.0001]	[0.002]	[0.012]	[0.012]	[0.011]	[0.030]
Services	-0.0008	-0.002	-0.0006	-0.032	-0.084***	-0.089***	-0.066***	0.097**
	[0.009]	[0.009]	[0.009]	[0.018]	[0.017]	[0.014]	[0.014]	[0.031]
Skill-level (ref. varied skill)								
Low-skill	0.005	0.004	0.005	-0.0002	-0.002***	-0.001***	-0.0007	-0.041
	[0.003]	[0.004]	[0.004]	[0.0003]	[0.0004]	[0.0002]	[0.0005]	[0.023]
Medium-skill	0.007**	0.005	0.005*	*omitted*	-0.004	-0.004	-0.0007	*omitted*
	[0.003]	[0.003]	[0.003]		[0.008]	[0.008]	[0.007]	
High-skill	0.014**	0.012**	0.013**	0.003***	0.0008	0.002***	0.001***	0.059
	[0.004]	[0.003]	[0.004]	[0.00004]	[0.0009]	[0.0001]	[0.0001]	[0.038]

Other methodological aspects								
Technology and trade *(ref. only trade)*	0.0004 [0.001]	*omitted*	*omitted*	*omitted*	-0.001 [0.002]	*omitted*	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	0.009 [0.006]	*omitted*	*omitted*	*omitted*	-0.093 [0.077]	*omitted*	*omitted*	*omitted*
Lagged independent variable *(ref. contemporaneous ind. var.)*	0.0008 [0.001]	*omitted*	*omitted*	*omitted*	-0.0005 [0.0006]	*omitted*	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	0.011 [0.032]	*omitted*	*omitted*	*omitted*	0.004 [0.003]	*omitted*	*omitted*	*omitted*
Controlling for endogeneity *(ref. no IV approach)*	0.005 [0.0054]	*omitted*	*omitted*	*omitted*	0.008 [0.006]	*omitted*	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	-2.389** [0.971]	-2.261** [0.611]	-0.046*** [0.011]	-0.019 [0.019]				
Hours worked *(ref. number of workers)*					0.062** [0.022]	0.060 [0.037]	0.009 [0.009]	0.009 [0.008]
Publication characteristics (K-)								
Peer reviewed paper *(ref. working paper)*	-1.050** [0.410]	-0.961** [0.229]	-0.048*** [0.011]	0.615* [0.368]	0.009 [0.025]	-0.134 [0.146]	0.029 [0.109]	-0.107 [0.125]
Peer reviewed paper * st. error	0.218 [0.355]	*omitted*	*omitted*	*omitted*	-0.034 [0.423]	*omitted*	*omitted*	*omitted*
Publication year	-0.014 [0.026]	-0.003 [0.005]	0.010** [0.005]	-0.103 [0.082]	0.069** [0.028]	1.009 [1.013]	0.289 [0.650]	-1.760** [0.618]
Publication year * st. error	0.00005 [0.381]	*omitted*	*omitted*	*omitted*	0.511** [0.121]	0.596** [0.239]	*omitted*	1.446** [0.364]
10-Year impact factor	1.869** [0.764]	1.739*** [0.423]	0.002 [0.006]	-0.010 [0.012]	0.253 [0.403]	*omitted*	*omitted*	*omitted*
10-Year impact factor * st. error	0.294 [0.355]	*omitted*	*omitted*	*omitted*	-0.430 [0.378]	*omitted*	*omitted*	*omitted*
Geography (ref. US-UK-Canada-Japan)								
Europe	-0.009*** [0.002]	-0.009*** [0.001]	-0.011*** [0.0008]	-0.051 [0.031]	0.546** [0.207]	*omitted*	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)								

Regional – level analysis	-0.004 [0.050]	*omitted*	*omitted*	*omitted*	0.363*** [0.143]	0.483** [0.173]	0.253*** [0.012]	-0.067* [0.047]
Development status (ref. not-specified)								
Developed	0.004 [0.003]	0.008** [0.004]	0.008* [0.004]	*omitted*	-0.010 [0.007]	*omitted*	*omitted*	*omitted*
Developing	-0.010** [0.004]	-0.008** [0.004]	-0.007 [0.004]	*omitted*	-0.012 [0.010]	*omitted*	*omitted*	*omitted*
Time (ref. midpoint before 2001)								
After 2001	-1.029** [0.442]	-0.959** [0.230]	-0.016 [0.011]	-0.015*** [0.0001]	0.001 [0.011]	-0.007 [0.014]	0.013*** [0.0002]	0.026*** [0.001]
Other controls								
Dataspan	-0.027 [0.025]	-0.030** [0.014]	-0.016*** [0.002]	0.019 [0.022]	0.009* [0.004]	0.011 [0.007]	0.0004* [0.0003]	0.003 [0.013]
Number of RHS variables	0.0003 [0.0003]	*omitted*	*omitted*	*omitted*	-0.0007 [0.001]	*omitted*	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	0.014*** [0.003]	0.017*** [0.008]	0.016*** [0.0006]	0.015*** [0.0007]	0.0007 [0.021]	*omitted*	*omitted*	*omitted*
Observations	459	459	459	64	635	635	635	60
Adjusted R^2	0.925	0.926	0.926	0.567	0.997	0.996	0.996	0.912
Primary study fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes

Note: The table replicates the main analysis, after winsorizing the first and the last 20 percentiles from the wage and the employment samples, to remove unreasonable values (outliers). Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the collected estimates. Columns 2 and 5 are based on the respective WLS-MRA models (Columns 1 and 4), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories is significant for α=0.01. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Appendix D2. Estimation outcomes excluding semi-elasticities

Table D2.1. Labor market effects from technology (Dependent variable: e_i)

	Wage elasticities			Employment elasticities		
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS**	**WLS general to specific**	**PEESE**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
FAT – PET – PEESE tests						
Intercept (β_0) (PET) or (γ_0) (PEESE)	-0.203	0.418	0.110	0.033	0.367	0.484**
	[0.339]	[0.348]	[0.190]	[0.328]	[0.426]	[0.166]
St. error (β_1) or st. error^2(γ_1) (FAT)	-1.049	-0.963**	2.850	-0.583	-0.140	-0.498
	[1.602]	[1.141]	[1.895]	[2.099]	[1.611]	[0.508]
Type of innovation (ref. process innovation)						
Product innovation	0.006	*omitted*	*omitted*	0.003	0.001**	0.001**
	[0.003]			[0.006]	[0.0005]	[0.0004]
Data aggregation (ref. worker-level)						
Industry-level	0.011	*omitted*	*omitted*	-0.083	0.142*	0.062
	[0.405]			[0.062]	[0.080]	[0.158]
Firm-level	0.065	*omitted*	*omitted*	-0.052	0.413*	0.520**
	[0.088]			[0.070]	[0.224]	[0.249]
Sectoral Ievel (ref. economy-wide)						
Manufacturing	-0.009	-0.402	-0.048	-0.001	0.005	0.004
	[0.140]	[0.348]	[0.121]	[0.057]	[0.011]	[0.008]
Services	-0.002	-0.395	-0.042	-0.010	0.027	0.026***
	[0.141]	[0.348]	[0.120]	[0.052]	[0.030]	[0.006]
Skill-level (ref. varied skill)						
Low-skill	-0.001	*omitted*	*omitted*	0.082	-0.122	-0.118
	[0.004]			[0.058]	[0.332]	[0.275]
Medium-skill	-0.0001	*omitted*	*omitted*	0.082	-0.111	-0.106
	[0.004]			[0.067]	[0.325]	[0.275]
High-skill	0.001	*omitted*	*omitted*	0.082	0.013	0.016

	[0.003]			[0.100]	[0.339]	[0.277]
Other methodological aspects						
Technology and trade *(ref. only technology)*	0.138** [0.057]	-0.001 [0.087]	-0.006 [0.063]	0.206* [0.108]	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	-0.014** [0.004]	-0.012** [0.005]	-0.006*** [0.001]	-0.011 [0.024]	-0.159*** [0.014]	-0.160* [0.096]
Lagged independent variable *(ref. contemporaneous ind. var.)*	0.0009 [0.001]	*omitted*	*omitted*	-0.011 [0.025]	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	-0.026 [0.242]	-0.070* [0.039]	-0.129** [0.048]	0.021 [0.026]	0.160*** [0.011]	0.161* [0.096]
Controlling for endogeneity *(ref. no IV approach)*	0.008 [0.092]	-0.078 [0.067]	-0.007 [0.029]	0.019 [0.018]	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	0.120 [0.404]	*omitted*	*omitted*			
Hours worked *(ref. number of workers)*				0.072** [0.035]	0.0001*** [$6.8*10^{-8}$]	0.0001 [0.00006]
Publication characteristics (K-)						
Peer reviewed paper *(ref. working paper)*	0.119 [0.394]	*omitted*	*omitted*	0.095 [0.076]	-0.029 [0.297]	-0.196 [0.276]
Peer reviewed paper * st. error	-0.194 [1.202]	*omitted*	*omitted*	-0.208 [1.708]	*omitted*	*omitted*
Publication year	-0.083 [0.185]	-0.018 [0.038]	-0.036 [0.027]	-0.006 [0.053]	0.208 [0.414]	0.245 [0.368]
Publication year * st. error	-1.942*** [0.219]	-1.997*** [0.442]	4.131 [3.028]	1.328 [0.991]	0.052 [0.871]	0.153 [0.966]
10-Year impact factor	-0.002 [0.615]	-0.160 [0.112]	-0.177** [0.078]	0.059 [0.400]	*omitted*	*omitted*
10-Year impact factor * st. error	-2.077 [2.039]	-1.944 [2.044]	-14.543 [10.331]	-2.532 [2.751]	*omitted*	*omitted*
Geography (ref. US-UK-Canada-Japan)						
Europe	0.333** [0.104]	*omitted*	*omitted*	-0.032 [0.028]	*omitted*	*omitted*

Spatial unit (ref. national-level analysis)						
Regional – level analysis	*omitted*	*omitted*	*omitted*	-0.073 [0.070]	-0.392 [0.360]	-0.379** [0.151]
Development status (ref. not-specified)						
Developed	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Developing	*omitted*	*omitted*	*omitted*	-0.142 [0.215]	2.740* [1.491]	3.194*** [0.819]
Time (ref. midpoint before 2001)						
After 2001	-0.342*** [0.096]	0.211 [0.311]	2.842 [1.770]	0.073 [0.074]	*omitted*	*omitted*
Other controls						
Dataspan	-0.002 [0.002]	-0.002 [0.002]	-0.010*** [0.0001]	0.029** [0.012]	-0.004 [0.010]	0.023 [0.024]
Number of RHS variables	0.00002 [0.00006]	*omitted*	*omitted*	0.011** [0.004]	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	*omitted*	*omitted*	*omitted*	-0.105 [0.122]	-0.214 [0.255]	-0.209*** [0.022]
Observations	163	163	163	285	285	285
Adjusted R^2	0.481	0.409	0.318	0.992	0.994	0.995
Primary study fixed effects	yes	yes	yes	no	yes	yes
Country fixed effects	yes	yes	yes	no	no	yes
Midpoint fixed effects	yes	yes	yes	no	no	yes
Country by Midpoint fixed effects	yes	yes	yes	no	no	yes

Note: The table replicates the main analysis, after excluding the semi-elasticities (log-linear models). Robust st. errors, clustered by primary study are reported in brackets, with the exception of Column 6, where they are robust, but not clustered (to achieve convergence). All models are weighted by the inverse of the variance of the collected estimates. Columns 2 and 6 are based on the respective weighted-least-squares models (Columns 1 and 5), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table D2.2. Labor market effects from trade (Dependent variable: e_i)

	Wage elasticities			Employment elasticities		
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS**	**WLS general to specific**	**PEESE**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
FAT – PET – PEESE tests						
Intercept (β_0) (PET) or (γ_0) (PEESE)	-9.950**	3.825***	3.288***	-1.354**	0.068	-2.686*
	[2.594]	[0.411]	[0.082]	[0.611]	[1.579]	[1.407]
St. error (β_1) (FAT) or (γ_1)	0.122	0.635	0.002***	1.511*	0.332	0.083
	[0.474]	[0.477]	[0.0004]	[0.792]	[0.299]	[0.142]
Type of trade (ref. trade in final goods)						
Trade in intermediates	-0.002*	-0.003**	-0.004***	-0.217***	*omitted*	*omitted*
	[0.001]	[0.0008]	[0.0003]	[0.048]		
Data aggregation (ref. worker-level)						
Industry-level	-0.004	-0.010	0.009	0.712*	*omitted*	*omitted*
	[0.004]	[0.007]	[0.006]	[0.379]		
Firm-level	0.011*	0.015**	0.016**	0.848**	*omitted*	*omitted*
	[0.006]	[0.007]	[0.006]	[0.348]		
Sectoral Ievel (ref. economy-wide)						
Manufacturing	1.297***	3.389***	2.858***	-0.184***	-0.141***	-0.087***
	[0.151]	[0.397]	[0.054]	[0.041]	[0.024]	[0.015]
Services	1.268***	3.362***	2.834***	-0.157**	-0.121***	-0.059**
	[0.147]	[0.394]	[0.053]	[0.043]	[0.022]	[0.019]
Skill-level (ref. varied-skill)						
Low-skill	0.011**	0.007	0.008	-0.004*	-0.004**	-0.002
	[0.004]	[0.005]	[0.005]	[0.002]	[0.001]	[0.002]
Medium-skill	0.013**	0.006	0.008*	-0.047**	-0.041**	-0.027
	[0.004]	[0.004]	[0.004]	[0.019]	[0.015]	[0.017]
High-skill	0.020**	0.015**	0.016**	0.0008	0.002**	0.001
	[0.005]	[0.005]	[0.005]	[0.0007]	[0.0005]	[0.0008]
Other methodological aspects						

Technology and trade *(ref. only trade)*	-0.001 [0.002]	*omitted*	*omitted*	-0.001 [0.003]	*omitted*	*omitted*
Time series *(ref. cross – sectional)*	-0.010 [0.008]	*omitted*	*omitted*	-0.097 [0.063]	*omitted*	*omitted*
Lagged independent variable *(ref. contemporaneous)*	0.0009 [0.002]	*omitted*	*omitted*	-0.001 [0.001]	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var.)*	0.043 [0.048]	*omitted*	*omitted*	0.038*** [0.005]	*omitted*	*omitted*
Controlling for endogeneity *(ref. no-IV approach)*	0.017** [0.005]	*omitted*	*omitted*	0.008 [0.006]	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	-0.716*** [0.133]	-3.040*** [0.499]	-2.382*** [0.076]			
Hours worked *(ref. number of workers)*				-0.089** [0.043]	-0.581 [2.780]	4.185 [2.474]
Publication characteristics						
Peer reviewed paper *(ref. working paper)*	0.637** [0.168]	-3.293*** [0.391]	2.774*** [0.061]	0.132** [0.056]	0.531 [2.427]	-3.640*** [2.164]
Peer reviewed paper * st. error	0.985 [0.837]	*omitted*	*omitted*	-1.981** [0.887]	*omitted*	*omitted*
Publication year	-0.281*** [0.052]	1.847*** [0.219]	1.557*** [0.035]	-0.083** [0.024]	0.169 [2.234]	-3.638* [1.997]
Publication year * st. error	-0.292 [0.631]	*omitted*	*omitted*	1.503** [0.587]	1.470*** [0.344]	-0.105 [0.251]
10-Year impact factor	-0.715*** [0.152]	1.108*** [0.135]	0.932*** [0.031]	-1.423* [0.772]	*omitted*	*omitted*
10-Year impact factor * st. error	-0.268 [0.425]	*omitted*	*omitted*	-1.204 [0.764]	*omitted*	*omitted*
Geography (ref. non-OECD)						
Europe	1.347*** [0.231]	-0.047** [0.021]	-0.044** [0.021]	0.305** [0.126]	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)						
Regional – level analysis	1.565***	*omitted*	*omitted*	0.985**	0.754	2.581**

	[0.200]			[0.072]	[1.042]	[0.931]
Development status (ref. not specified)						
Developed	-0.003 [0.006]	0.012*** [0.003]	0.015*** [0.001]	-0.024* [0.012]	*omitted*	*omitted*
Developing	-0.038 [0.025]	-0.022 [0.024]	-0.020 [0.023]	-0.027 [0.017]	*omitted*	*omitted*
Time (ref. midpoint before 2001)						
After 2001	7.781** [2.251]	-5.690*** [0.662]	-4.814*** [0.117]	-0.002 [0.045]	-0.552 [3.473]	5.402* [3.092]
Other controls						
Dataspan	-0.573*** [0.111]	-0.004 [0.006]	-0.002 [0.006]	-0.514*** [0.025]	-0.508*** [0.015]	-0.561*** [0.0009]
Number of RHS variables	-0.00002 [0.0001]	*omitted*	*omitted*	0.0003 [0.001]	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	0.172 [0.138]	0.079* [0.041]	0.024*** [0.002]	-0.371 [0.228]	*omitted*	*omitted*
Observations	306	306	306	471	471	471
Adjusted R^2	0.904	0.905	0.905	0.993	0.992	0.993
Primary study fixed effects	no	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	no	no
Midpoint fixed effects	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	yes	no	no

Note: The table replicates the main analysis, after excluding the semi-elasticities (log-linear models). Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the collected estimates. Columns 2 and 5 are based on the respective weighted-least-squares models (Columns 1 and 4), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. In Columns 5 and 6 some categories of fixed effects are omitted to achieve convergence. The estimations for trade with China are not reported due to insufficient observations * for p<0.1, ** for p<0.05 and *** for p<0.01.

Appendix D3. Estimation outcomes excluding calculated elasticities and semi-elasticities

Table D3.1. Labor market effects from technology (Dependent variable: e_i)

	Wage elasticities			Employment elasticities		
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS**	**WLS general to specific**	**PEESE**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
FAT – PET – PEESE tests						
Intercept (β_0) (PET) or (γ_0) (PEESE)	0.605	0.206*	0.637***	-0.756***	0.221	0.453**
	[0.740]	[0.115]	[0.067]	[0.152]	[0.239]	[0.157]
St. error (β_1) or st. error^2(γ_1) (FAT)	-3.373***	-1.653**	-2.884	-1.618	-1.344	0.805
	[0.632]	[0.550]	[2.301]	[1.692]	[1.004]	[0.615]
Type of innovation (ref. process innovation)						
Product innovation	0.004	*omitted*	*omitted*	0.001**	0.001**	0.001**
	[0.004]			[0.0003]	[0.0005]	[0.0004]
Data aggregation (ref. worker-level)						
Industry-level	0.213**	*omitted*	*omitted*	-0.155	0.067	0.146**
	[0.079]			[0.141]	[0.126]	[0.067]
Firm-level	0.539	*omitted*	*omitted*	-0.360	0.601*	0.918***
	[1.027]			[0.298]	[0.345]	[0.117]
Sectoral Ievel (ref. economy-wide)						
Manufacturing	-0.287**	-0.212*	-0.752***	-0.227	0.221	0.200
	[0.081]	[0.106]	[0.117]	[0.152]	[0.140]	[0.130]
Services	1.031	0.134	-0.675**	0.078***	0.068***	0.038***
	[0.916]	[0.423]	[0.281]	[0.017]	[0.013]	[0.005]
Skill-level (ref. varied skill)						
Low-skill	-0.005	*omitted*	*omitted*	0.056	0.038	-0.020
	[0.004]			[0.054]	[0.038]	[0.015]
Medium-skill	-0.035	*omitted*	*omitted*	-0.114*	-0.093	-0.194***
	[0.045]			[0.065]	[0.071]	[0.017]
High-skill	0.003	*omitted*	*omitted*	0.197***	0.189***	0.166***

	[0.003]			[0.017]	[0.011]	[0.002]
Other methodological aspects						
Technology and trade *(ref. only technology)*	-0.007** [0.003]	-0.007** [0.002]	-0.016*** [0.003]	0.009 [0.025]	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	-0.006 [0.006]	-0.006 [0.006]	-0.009*** [0.0004]	-0.142*** [0.017]	-0.146*** [0.009]	-0.160*** [0.00006]
Lagged independent variable *(ref. contemporaneous ind. var.)*	0.001 [0.001]	*omitted*	*omitted*	-0.006 [0.016]	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	0.821 [0.942]	-0.015 [0.383]	-0.764** [0.279]	0.147*** [0.016]	0.151*** [0.006]	0.160* [0.000006]
Controlling for endogeneity *(ref. no IV approach)*	-0.012** [0.004]	-0.016** [0.004]	-0.041*** [0.001]	0.029 [0.019]	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	0.055 [0.308]	*omitted*	*omitted*			
Hours worked *(ref. number of workers)*				0.0001*** [$1.1*10^{-7}$]	0.0001*** [$6.5*10^{-8}$]	0.0001*** [$9.5*10^{-8}$]
Publication characteristics (K-)						
Peer reviewed paper *(ref. working paper)*	-0.967** [0.356]	*omitted*	*omitted*	0.731*** [0.083]	-0.241 [0.315]	-0.473** [0.170]
Peer reviewed paper * st. error	1.500* [0.761]	*omitted*	*omitted*	0.668 [1.670]	*omitted*	*omitted*
Publication year	-0.150** [0.038]	-0.283 [0.405]	-0.959** [0.299]	-0.398** [0.155]	0.290 [0.232]	0.473*** [0.070]
Publication year * st. error	-1.802*** [0.384]	-1.958*** [0.435]	-1.036* [0.581]	-1.331** [0.583]	-1.258** [0.569]	-2.579 [2.745]
10-Year impact factor	0.548*** [0.109]	0.770* [0.396]	0.731** [0.197]	-0.402** [0.172]	*omitted*	*omitted*
10-Year impact factor * st. error	-5.592** [1.431]	-4.997** [1.383]	-4.776 [4.845]	1.008 [1.444]	*omitted*	*omitted*
Geography (ref. US-UK-Canada-Japan)						
Europe	-0.635 [0.437]	*omitted*	*omitted*	-0.0008 [0.005]	*omitted*	*omitted*

Spatial unit (ref. national-level analysis)						
Regional – level analysis	0.102 [0.107]	*omitted*	*omitted*	0.504** [0.231]	0.472** [0.178]	0.773*** [0.157]
Development status (ref. not-specified)						
Developed	*omitted*	*omitted*	*omitted*	0.531 [0.482]	0.897*** [0.213]	0.542*** [0.047]
Developing	0.540*** [0.067]	0.562*** [0.061]	0.993*** [0.059]	0.199** [0.080]	0.211** [0.074]	0.325*** [0.049]
Time (ref. midpoint before 2001)						
After 2001	-0.311** [0.086]	-0.284*** [0.053]	-0.326** [0.079]	0.022 [0.080]	*omitted*	*omitted*
Other controls						
Dataspan	-0.348*** [0.010]	-0.348*** [0.008]	-0.382*** [0.011]	0.241*** [0.005]	0.241*** [0.005]	0.252*** [0.0006]
Number of RHS variables	0.00002 [0.00008]	*omitted*	*omitted*	0.001 [0.005]	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	-0.046 [0.060]	*omitted*	*omitted*	-0.096** [0.046]	-0.098** [0.038]	-0.118 [0.093]
Observations	153	153	153	355	355	355
Adjusted R^2	0.731	0.723	0.547	0.985	0.985	0.984
Primary study fixed effects	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes
Country by Midpoint fixed effects	yes	yes	yes	yes	yes	yes

Note: The table replicates the main analysis, after excluding calculated elasticities (semi-elasticities), based on log-log (log-linear) models. Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the collected estimates. Columns 2 and 6 are based on the respective weighted-least-squares models (Columns 1 and 5), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table D3.2. Labor market effects from trade (Dependent variable: e_i)

	Wage elasticities				Employment elasticities			
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS general to specific - China**	**WLS**	**WLS general to specific**	**PEESE**	**WLS general to specific - China**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
FAT – PET – PEESE tests								
Intercept (β_0) (PET) or (γ_0) (PEESE)	1.597**	1.893***	1.535***	0.009	-12.777***	-0.512***	-0.480***	-2.312
	[0.450]	[0.275]	[0.153]	[0.243]	[1.145]	[0.057]	[0.065]	[6.614]
St. error (β_1) (FAT) or (γ_1)	0.413	0.498	-0.700***	-0.752	0.866	0.010	-0.301	-5.068
	[0.612]	[0.399]	[0.689]	[0.982]	[0.825]	[0.297]	[0.205]	[3.249]
Type of trade (ref. trade in final goods)								
Trade in intermediates	-0.002**	-0.003***	-0.003***	-0.003**	-0.081	*omitted*	*omitted*	*omitted*
	[0.001]	[0.0006]	[0.0006]	[0.0008]	[0.078]			
Data aggregation (ref. worker-level)								
Industry-level	-0.004	-0.009	-0.008	1.917*	10.941***	*omitted*	*omitted*	*omitted*
	[0.004]	[0.007]	[0.006]	[0.967]	[0.991]			
Firm-level	0.013*	0.016**	0.016**	*omitted*	11.382***	*omitted*	*omitted*	*omitted*
	[0.007]	[0.007]	[0.006]		[1.067]			
Sectoral Ievel (ref. economy-wide)								
Manufacturing	0.015***	0.013***	0.015***	0.019**	-0.148***	-0.123***	-0.089***	1.379*
	[0.003]	[0.002]	[0.00005]	[0.004]	[0.034]	[0.019]	[0.013]	[0.612]
Services	-0.001	-0.003	-0.0004	-0.037	-0.134**	-0.101***	-0.062**	1.616**
	[0.010]	[0.010]	[0.009]	[0.049]	[0.039]	[0.018]	[0.018]	[0.634]
Skill-level (ref. varied-skill)								
Low-skill	0.006	0.004	0.005	-0.0001	-0.003	-0.003**	-0.001	-0.085
	[0.004]	[0.004]	[0.004]	[0.001]	[0.002]	[0.001]	[0.002]	[0.048]
Medium-skill	0.007*	0.004	0.006*	*omitted*	-0.047***	-0.044***	-0.035***	*omitted*
	[0.004]	[0.003]	[0.003]		[0.012]	[0.007]	[0.008]	
High-skill	0.015**	0.013**	0.013**	0.003**	0.0006	0.002**	0.001*	0.175
	[0.005]	[0.004]	[0.004]	[0.001]	[0.0006]	[0.0006]	[0.0007]	[0.100]

Other methodological aspects								
Technology and trade *(ref. only trade)*	-0.0001 [0.001]	*omitted*	*omitted*	*omitted*	-0.001 [0.002]	*omitted*	*omitted*	*omitted*
Time series *(ref. cross – sectional)*	0.007 [0.008]	*omitted*	*omitted*	*omitted*	-0.417** [0.163]	*omitted*	*omitted*	*omitted*
Lagged independent variable *(ref. contemporaneous)*	0.0008 [0.001]	*omitted*	*omitted*	*omitted*	-0.0005 [0.0006]	*omitted*	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var.)*	0.006 [0.051]	*omitted*	*omitted*	*omitted*	0.004 [0.003]	*omitted*	*omitted*	*omitted*
Controlling for endogeneity *(ref. no-IV approach)*	0.007 [0.005]	*omitted*	*omitted*	*omitted*	0.007 [0.006]	*omitted*	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	0.572*** [0.132]	0.670*** [0.108]	0.529*** [0.058]	0.105* [0.051]				
Hours worked *(ref. number of workers)*					0.273*** [0.044]	0.282*** [0.039]	0.239*** [0.044]	0.147 [0.160]
Publication characteristics								
Peer reviewed paper *(ref. working paper)*	-0.909*** [0.165]	-1.040*** [0.142]	-0.856*** [0.078]	-1.955*** [0.988]	-0.189*** [0.045]	-0.079** [0.023]	-0.050 [0.030]	1.386 [1.901]
Peer reviewed paper * st. error	0.008 [0.645]	*omitted*	*omitted*	*omitted*	-1.490 [1.057]	*omitted*	*omitted*	*omitted*
Publication year	0.129** [0.038]	0.133*** [0.003]	0.111*** [0.006]	0.457* [0.220]	0.160** [0.042]	0.746*** [0.088]	-0.641*** [0.095]	-1.293 [7.736]
Publication year * st. error	-0.151 [0.614]	*omitted*	*omitted*	*omitted*	1.215** [0.470]	1.148** [0.325]	0.553 [0.382]	5.604 [4.476]
10-Year impact factor	1.428** [0.405]	1.689*** [0.242]	1.370*** [0.136]	0.466*** [0.032]	1.730*** [0.237]	*omitted*	*omitted*	*omitted*
10-Year impact factor * st. error	0.304 [0.471]	*omitted*	*omitted*	*omitted*	-0.809 [0.917]	*omitted*	*omitted*	*omitted*
Geography (ref. non-OECD)								
Europe	-0.008** [0.003]	-0.007** [0.002]	-0.011*** [0.0009]	-0.041 [0.083]	3.575*** [0.470]	*omitted*	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)								

Regional – level analysis	0.004 [0.070]	*omitted*	*omitted*	*omitted*	2.814*** [0.325]	3.129*** [0.188]	2.773*** [0.025]	1.473* [0.709]
Development status (ref. not specified)								
Developed	0.004 [0.003]	0.008** [0.004]	0.009** [0.005]	*omitted*	-0.022* [0.012]	*omitted*	*omitted*	*omitted*
Developing	-0.025 [0.019]	-0.023 [0.018]	-0.022 [0.018]	*omitted*	-0.027 [0.018]	*omitted*	*omitted*	*omitted*
Time (ref. midpoint before 2001)								
After 2001	-0.680** [2.227]	-0.811*** [0.138]	-0.630*** [0.076]	-0.088*** [0.0005]	-0.109*** [0.024]	-0.131*** [0.014]	-0.099*** [0.001]	0.262** [0.070]
Other controls								
Dataspan	-0.398*** [0.037]	-0.416*** [0.024]	-0.373*** [0.013]	-0.345** [0.059]	0.052*** [0.010]	-0.060*** [0.008]	0.042*** [0.001]	0.042 [0.028]
Number of RHS variables	-0.0004 [0.0004]	*omitted*	*omitted*	*omitted*	0.0005 [0.001]	*omitted*	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	0.015 [0.004]	0.018*** [0.002]	0.016*** [0.002]	0.015*** [0.002]	0.0006 [0.024]	*omitted*	*omitted*	*omitted*
Observations	384	384	384	64	590	590	590	60
Adjusted R^2	0.910	0.912	0.912	0.621	0.993	0.992	0.992	0.767
Primary study fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes

Note: The table replicates the main analysis, after excluding calculated elasticities (semi-elasticities), based on log-log (log-linear) models. Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the collected estimates. Columns 2 and 5 are based on the respective weighted-least-squares models (Columns 1 and 4), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Appendix D4. Estimation outcomes excluding elasticities where the dependent variable is expressed in shares

Table D4.1. Labor market effects from technology (Dependent variable: e_i)

	Wage elasticities			Employment elasticities		
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS**	**WLS general to specific**	**PEESE**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
FAT – PET – PEESE tests						
Intercept (β_0) (PET) or (γ_0) (PEESE)	1.175*	3.909	9.666	-0.236	-0.503	-0.623***
	[0.602]	[2.661]	[10.820]	[0.600]	[0.525]	[0.147]
St. error (β_1) or st. error^2(γ_1) (FAT)	-4.059**	-2.181***	-2.623	-1.209	0.080	0.698
	[1.222]	[0.309]	[2.778]	[1.131]	[0.956]	[0.224]
Type of innovation (ref. process innovation)						
Product innovation	-0.0007	*omitted*	*omitted*	0.001**	0.001**	0.001**
	[0.004]			[0.0002]	[0.0004]	[0.0005]
Data aggregation (ref. worker-level)						
Industry-level	2.294	*omitted*	*omitted*	13.953	-1.024**	-1.164***
	[1.462]			[10.502]	[0.295]	[0.114]
Firm-level	1.526	*omitted*	*omitted*	0.043	-0.125*	-0.125*
	[1.695]			[0.067]	[0.072]	[0.061]
Sectoral Ievel (ref. economy-wide)						
Manufacturing	-0.295**	-0.185*	-0.769***	0.232	0.207	0.202
	[0.078]	[0.104]	[0.119]	[0.162]	[0.142]	[0.129]
Services	4.404	-2.765	-7.333	0.073***	0.045**	0.038***
	[3.161]	[2.403]	[8.060]	[0.018]	[0.016]	[0.005]
Skill-level (ref. varied skill)						
Low-skill	-0.005*	*omitted*	*omitted*	0.058	0.004	-0.010***
	[0.004]			[0.041]	[0.037]	[0.0004]
Medium-skill	0.107	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
	[0.202]					
High-skill	-0.005*	*omitted*	*omitted*	0.195***	0.170***	0.164***

	[0.003]			[0.017]	[0.015]	[0.0003]
Other methodological aspects						
Technology and trade *(ref. only technology)*	-0.007** [0.002]	-0.007** [0.002]	-0.016*** [0.003]	7.865 [6.905]	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	-0.006 [0.007]	-0.007 [0.006]	-0.008*** [0.0004]	7.441 [5.512]	-0.290** [0.108]	-0.308** [0.129]
Lagged independent variable *(ref. contemporaneous ind. var.)*	*omitted*	*omitted*	*omitted*	-0.023 [0.024]	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	4.192 [3.161]	-2.906 [2.354]	-7.422 [8.060]	7.440 [5.510]	0.292** [0.110]	0.308** [0.129]
Controlling for endogeneity *(ref. no IV approach)*	-0.010* [0.004]	-0.012** [0.003]	-0.041*** [0.001]	0.022 [0.019]	*omitted*	*omitted*
Hours worked *(ref. number of workers)*				0.0001*** [$8.6*10^{-8}$]	0.0001*** [$6.7*10^{-10}$]	0.0001*** [$7.8*10^{-10}$]
Publication characteristics (K-)						
Peer reviewed paper *(ref. working paper)*	-3.595 [2.111]	*omitted*	*omitted*	-14.147 [10.600]	0.708 [0.458]	0.839*** [0.087]
Peer reviewed paper * st. error	1.784 [1.272]	*omitted*	*omitted*	3.049** [1.198]	*omitted*	*omitted*
Publication year	0.688 [0.586]	-0.399 [0.442]	-0.977** [0.315]	-0.351* [0.181]	-0.041 [0.057]	-0.079*** [0.001]
Publication year * st. error	-1.554** [0.380]	-1.663*** [0.295]	-1.029* [0.572]	-0.471 [0.523]	-0695 [0.742]	-0.245 [0.721]
10-Year impact factor	3.933 [2.413]	8.242 [5.850]	18.700 [21.748]	-14.363 [9.476]	*omitted*	*omitted*
10-Year impact factor * st. error	-6.389** [1.887]	-5.781** [1.593]	-4.046 [4.845]	3.081 [2.155]	*omitted*	*omitted*
Geography (ref. US-UK-Canada-Japan)						
Europe	0.048 [0.095]	*omitted*	*omitted*	0.008* [0.004]	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)						
Regional – level analysis	2.162	*omitted*	*omitted*	-21.518	0.933**	1.101***

	[1.517]			[16.074]	[0.415]	[0.058]
Development status (ref. not-specified)						
Developed	*omitted*	*omitted*	*omitted*	-0.890 [0.899]	0.580** [0.216]	0.495*** [0.015]
Developing	0.559*** [0.067]	0.541*** [0.060]	1.004*** [0.058]	-8.128 [7.006]	-0.020 [0.164]	0.008 [0.016]
Time (ref. midpoint before 2001)						
After 2001	-0.311** [0.088]	-0.286*** [0.055]	-0.327** [0.081]	7.394 [5.407]	*omitted*	*omitted*
Other controls						
Dataspan	-0.347*** [0.010]	-0.347*** [0.007]	-0.383*** [0.011]	0.021* [0.012]	0.017 [0.015]	0.024*** [0.0001]
Number of RHS variables	$2.8*10^{-6}$ [0.00003]	*omitted*	*omitted*	-0.022 [0.021]	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	-0.043 [0.059]	*omitted*	*omitted*	-0.042** [0.018]	-0.006 [0.034]	0.006** [0.002]
Observations	124	124	124	276	276	276
Adjusted R^2	0.731	0.784	0.575	0.278	0.229	0.222
Primary study fixed effects	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes
Country by Midpoint fixed effects	yes	yes	yes	yes	yes	yes

Note: The table replicates the main analysis, after excluding elasticities expressed in shares. Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the collected estimates. Columns 2 and 6 are based on the respective weighted-least-squares models (Columns 1 and 5), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table D4.2. Labor market effects from trade (Dependent variable: e_i)

	Wage elasticities				Employment elasticities			
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS general to specific - China**	**WLS**	**WLS general to specific**	**PEESE**	**WLS general to specific - China**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
FAT – PET – PEESE tests								
Intercept (β_0) (PET) or (γ_0) (PEESE)	1.562**	1.893***	1.535***	0.009	-10.744***	-0.136***	-0.165***	-2.450
	[0.460]	[0.275]	[0.153]	[0.243]	[0.982]	[0.26]	[0.023]	[6.274]
St. error (β_1) (FAT) or (γ_1)	0.398	0.498	-0.700***	-0.752	0.976	0.077	-0.314	-5.054
	[0.606]	[0.401]	[0.689]	[0.982]	[0.817]	[0.325]	[0.208]	[3.314]
Type of trade (ref. trade in final goods)								
Trade in intermediates	-0.002**	-0.003***	-0.003***	-0.003**	-0.085	*omitted*	*omitted*	*omitted*
	[0.0009]	[0.0007]	[0.0006]	[0.0008]	[0.091]			
Data aggregation (ref. worker-level)								
Industry-level	-0.004	-0.009	-0.008	1.917*	11.303***	*omitted*	*omitted*	*omitted*
	[0.004]	[0.007]	[0.006]	[0.967]	[1.074]			
Firm-level	0.013*	0.016**	0.016**	*omitted*	11.805***	*omitted*	*omitted*	*omitted*
	[0.007]	[0.007]	[0.006]		[1.155]			
Sectoral Ievel (ref. economy-wide)								
Manufacturing	0.015***	0.013***	0.015***	0.019**	-0.157***	-0.131***	-0.089***	1.360**
	[0.003]	[0.002]	[0.00005]	[0.004]	[0.037]	[0.023]	[0.013]	[0.495]
Services	-0.001	-0.004	-0.0004	-0.037	-0.145**	-0.109***	-0.062**	1.597**
	[0.010]	[0.010]	[0.009]	[0.049]	[0.040]	[0.022]	[0.018]	[0.517]
Skill-level (ref. varied-skill)								
Low-skill	0.006	0.004	0.005	-0.0001	-0.003*	-0.003**	-0.001	-0.085
	[0.004]	[0.004]	[0.004]	[0.001]	[0.001]	[0.001]	[0.002]	[0.048]
Medium-skill	0.008*	0.004	0.006*	*omitted*	-0.049***	-0.046***	-0.035***	*omitted*
	[0.004]	[0.003]	[0.003]		[0.012]	[0.008]	[0.008]	
High-skill	0.015**	0.013**	0.013**	0.003**	0.0008	0.002**	0.001*	0.175
	[0.005]	[0.004]	[0.004]	[0.001]	[0.0006]	[0.0006]	[0.0008]	[0.101]

Other methodological aspects								
Technology and trade *(ref. only trade)*	-0.0004 [0.001]	*omitted*	*omitted*	*omitted*	-0.022** [0.010]	*omitted*	*omitted*	*omitted*
Time series *(ref. cross – sectional)*	0.007 [0.008]	*omitted*	*omitted*	*omitted*	-0.473** [0.170]	*omitted*	*omitted*	*omitted*
Lagged independent variable *(ref. contemporaneous)*	0.0007 [0.001]	*omitted*	*omitted*	*omitted*	-0.0006 [0.0006]	*omitted*	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var.)*	0.005 [0.050]	*omitted*	*omitted*	*omitted*	0.005 [0.003]	*omitted*	*omitted*	*omitted*
Controlling for endogeneity *(ref. no-IV approach)*	0.007 [0.006]	*omitted*	*omitted*	*omitted*	0.007 [0.005]	*omitted*	*omitted*	*omitted*
Hours worked *(ref. number of workers)*					0.299*** [0.050]	0.305*** [0.049]	0.241*** [0.045]	0.148 [0.161]
Publication characteristics								
Peer reviewed paper *(ref. working paper)*	-0.891*** [0.171]	-1.041*** [0.142]	-0.856*** [0.078]	-1.955*** [0.988]	-0.247*** [0.053]	-0.189*** [0.041]	-0.119 [0.041]	1.362 [1.762]
Peer reviewed paper * st. error	-0.005 [0.641]	*omitted*	*omitted*	*omitted*	-1.522 [1.031]	*omitted*	*omitted*	*omitted*
Publication year	0.129** [0.037]	0.133*** [0.013]	0.111*** [0.006]	0.457* [0.220]	0.154*** [0.040]	-0.234*** [0.032]	-0.187*** [0.032]	-1.329 [7.562]
Publication year * st. error	-0.141 [0.615]	*omitted*	*omitted*	*omitted*	1.452** [0.497]	1.337** [0.375]	0.577 [0.390]	5.590 [4.798]
10-Year impact factor	1.391** [0.415]	1.689*** [0.244]	1.370*** [0.136]	0.466*** [0.032]	5.850*** [0.760]	*omitted*	*omitted*	*omitted*
10-Year impact factor * st. error	0.308 [0.466]	*omitted*	*omitted*	*omitted*	-0.757 [0.896]	*omitted*	*omitted*	*omitted*
Geography (ref. non-OECD)								
Europe	-0.008** [0.003]	-0.007** [0.002]	-0.011*** [0.0009]	-0.041 [0.083]	3.818*** [0.492]	*omitted*	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)								
Regional – level analysis	0.001 [0.070]	*omitted*	*omitted*	*omitted*	2.668*** [0.276]	2.907*** [0.187]	2.538*** [0.021]	1.454** [0.593]

Development status (ref. not specified)								
Developed	0.004 [0.003]	0.008** [0.004]	0.009* [0.005]	*omitted*	-0.024* [0.012]	*omitted*	*omitted*	*omitted*
Developing	-0.025 [0.019]	-0.023 [0.018]	-0.022 [0.018]	*omitted*	-0.028 [0.019]	*omitted*	*omitted*	*omitted*
Time (ref. midpoint before 2001)								
After 2001	-0.659** [2.234]	-0.812*** [0.138]	-0.630*** [0.076]	-0.088*** [0.0005]	-0.125*** [0.025]	-0.140*** [0.018]	-0.099*** [0.001]	0.262** [0.071]
Other controls								
Dataspan	-0.397*** [0.038]	-0.416*** [0.024]	-0.373*** [0.013]	-0.345** [0.059]	0.057*** [0.011]	0.064*** [0.010]	0.043*** [0.001]	0.043 [0.029]
Number of RHS variables	0.0003 [0.0004]	*omitted*	*omitted*	*omitted*	0.0004 [0.001]	*omitted*	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	0.015*** [0.004]	0.018*** [0.002]	0.016*** [0.002]	0.015*** [0.002]	0.0006 [0.024]	*omitted*	*omitted*	*omitted*
Observations	378	378	378	64	557	557	557	59
Adjusted R^2	0.910	0.912	0.912	0.621	0.993	0.993	0.992	0.761
Primary study fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes

Note: The table replicates the main analysis, after excluding elasticities expressed in shares. Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the collected estimates. Columns 2 and 5 are based on the respective weighted-least-squares models (Columns 1 and 4), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Appendix D5. Estimation outcomes excluding semi-elasticities, calculated elasticities and elasticities where the dependent variable is expressed in shares and winsorizing.

Table D5.1. Labor market effects from technology (Dependent variable: e_i)

	Wage elasticities			Employment elasticities		
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS**	**WLS general to specific**	**PEESE**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
FAT – PET – PEESE tests						
Intercept (β_0) (PET) or (γ_0) (PEESE)	-0.092***	-0.046***	-0.041	48.673***	0.462***	0.657***
	[0.002]	[0.008]	[0.048]	[10.897]	[0.105]	[0.069]
St. error (β_1) or st. error^2(γ_1) (FAT)	0.103	0.073	-0.312	-0.631	0.834**	0.624
	[0.158]	[0.135]	[0.738]	[659]	[0.334]	[1.276]
Type of innovation (ref. process innovation)						
Product innovation	0.001	*omitted*	*omitted*	0.001***	0.001***	0.001***
	[0.007]			[0.0002]	[0.0002]	[0.0002]
Data aggregation (ref. worker-level)						
Industry-level	0.086*	*omitted*	*omitted*	-4.970***	-0.435***	-0.544***
	[0.040]			[1.077]	[0.060]	[0.036]
Firm-level	0.094	*omitted*	*omitted*	-2.225***	-0.029***	-0.041***
	[0.102]			[0.478]	[0.005]	[0.0004]
Sectoral Ievel (ref. economy-wide)						
Manufacturing	0.198	0.785***	0.885	0.005**	0.004	0.008***
	[0.118]	[0.186]	[1.077]	[0.002]	[0.002]	[0.001]
Services	*omitted*	*omitted*	*omitted*	0.019**	0.015	0.027***
				[0.008]	[0.010]	[0.006]
Skill-level (ref. varied skill)						
Low-skill	-0.005***	*omitted*	*omitted*	-8.292***	-0.066***	-0.075***
	[0.0009]			[1.890]	[0.009]	[0.0004]
Medium-skill	-0.301**	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
	[0.077]					

High-skill	-0.006*** [0.0008]	*omitted*	*omitted*	-8.937*** [1.827]	-1.094** [0.473]	-1.838 [5.929]
Other methodological aspects						
Technology and trade *(ref. only technology)*	-0.199 [0.208]	-0.542** [0.169]	-0.636 [0.889]	3.260*** [0.713]	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	-0.010*** [0.005]	-0.011*** [0.005]	-0.009*** [0.0005]	0.915*** [0.218]	-0.132*** [0.005]	-0.127*** [0.002]
Lagged independent variable *(ref. contemporaneous ind. var.)*	*omitted*	*omitted*	*omitted*	-0.031 [0.022]	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	*omitted*	-0.525** [0.125]	-0.596 [0.742]	-0.915*** [0.218]	0.132** [0.005]	0.127*** [0.002]
Controlling for endogeneity *(ref. no IV approach)*	-0.312 [0.275]	-1.014** [0.271]	-1.175 [1.494]	0.004 [0.003]	*omitted*	*omitted*
Hours worked *(ref. number of workers)*				0.0001*** [$6.1*10^{-11}$]	0.0001*** [$1.6*10^{-12}$]	0.0001*** [$2.2*10^{-12}$]
Publication characteristics (K-)						
Peer reviewed paper *(ref. working paper)*	*omitted*	*omitted*	*omitted*	7.282*** [1.672]	-0.424*** [0.048]	-0.507*** [0.035]
Peer reviewed paper * st. error	-0.174** [0.057]	*omitted*	*omitted*	0.909** [0.335]	*omitted*	*omitted*
Publication year	0.056 [0.086]	0.183** [0.060]	0.208 [0.329]	-3.718*** [0.818]	-0.128*** [0.003]	-0.132*** [0.002]
Publication year * st. error	0.050** [0.019]	-0.055** [0.021]	-0.465 [1.180]	-0.115 [0.185]	0.098 [0.194]	-0.098 [0.955]
10-Year impact factor	-0.155 [0.151]	-0.779 [0.182]	-0.842 [0.992]	114.85** [25.803]	*omitted*	*omitted*
10-Year impact factor * st. error	0.160 [0.310]	0.905** [0.277]	2.260 [3.980]	-0.886 [1.530]	*omitted*	*omitted*
Geography (ref. US-UK-Canada-Japan)						
Europe	0.059*** [0.007]	*omitted*	*omitted*	0.011*** [0.001]	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)						

Regional – level analysis	*omitted*	*omitted*	*omitted*	-0.118* [0.059]	-0.424*** [0.048]	0.577*** [0.008]
Development status (ref. not-specified)						
Developed	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Developing	*omitted*	*omitted*	*omitted*	-2.935*** [0.562]	-0.177 [0.402]	0.284 [1.294]
Time (ref. midpoint before 2001)						
After 2001	*omitted*	*omitted*	*omitted*	6.704*** [1.493]	*omitted*	*omitted*
Other controls						
Dataspan	-0.076** [0.032]	-0.114*** [0.021]	-0.152 [0.115]	0.029*** [0.003]	0.032*** [0.004]	0.024*** [0.0004]
Number of RHS variables	0.00003 [0.00001]	*omitted*	*omitted*	-0.007** [0.003]	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	-0.043 [0.059]	*omitted*	*omitted*	0.025 [0.080]	0.109** [0.052]	0.010 [0.034]
Observations	58	58	58	198	198	198
Adjusted R^2	0.563	0.616	0.615	0.848	0.817	0.803
Primary study fixed effects	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes
Country by Midpoint fixed effects	yes	yes	yes	yes	yes	yes

Note: The table replicates the main analysis, after excluding semi-elasticities, calculated elasticities and elasticities expressed in shares and winsorizing using the 20th and the 80th percentile. Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the collected estimates. Columns 2 and 6 are based on the respective weighted-least-squares models (Columns 1 and 5), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table D5.2. Labor market effects from trade (Dependent variable: e_i)

	Wage elasticities			Employment elasticities		
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS**	**WLS general to specific**	**PEESE**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
FAT – PET – PEESE tests						
Intercept (β_0) (PET) or (γ_0) (PEESE)	0.085	-1.779**	-0.571***	3.800	0.046**	0.018
	[4202.8]	[0.709]	[0.111]	[4.072]	[0.012]	[0.011]
St. error (β_1) (FAT) or (γ_1)	1.758	0.787*	0.207	-0.032	0.318	-0.070
	[2.239]	[0.431]	[0.252]	[0.638]	[0.267]	[0.091]
Type of trade (ref. trade in final goods)						
Trade in intermediates	-0.002	-0.002**	-0.003***	-0.095**	*omitted*	*omitted*
	[0.008]	[0.0009]	[0.0001]	[0.023]		
Data aggregation (ref. worker-level)						
Industry-level	-0.004	-0.010	-0.009	-2.887	*omitted*	*omitted*
	[0.010]	[0.007]	[0.006]	[3.581]		
Firm-level	0.007	0.015*	0.016**	-2.757	*omitted*	*omitted*
	[0.011]	[0.007]	[0.006]	[3.541]		
Sectoral Ievel (ref. economy-wide)						
Manufacturing	0.193	0.355**	0.107**	-0.122***	-0.114***	-0.081***
	[28465.1]	[0.141]	[0.027]	[0.016]	[0.017]	[0.011]
Services	0.167	0.328**	0.083**	-0.090***	-0.102***	-0.066***
	[28465.1]	[0.139]	[0.026]	[0.021]	[0.018]	[0.014]
Skill-level (ref. varied-skill)						
Low-skill	0.010	0.006	0.007	-0.002**	-0.002***	-0.0008
	[0.011]	[0.005]	[0.005]	[0.0004]	[0.0003]	[0.0005]
Medium-skill	0.011	0.005	0.007**	-0.012**	-0.013**	-0.005**
	[0.018]	[0.004]	[0.003]	[0.003]	[0.005]	[0.002]
High-skill	0.019	0.014**	0.015**	0.0007	0.002***	0.001***
	[0.012]	[0.004]	[0.004]	[0.0009]	[0.0002]	[0.0002]
Other methodological aspects						

Technology and trade *(ref. only trade)*	-0.0008 [0.014]	*omitted*	*omitted*	0.239*** [0.003]	*omitted*	*omitted*
Time series *(ref. cross – sectional)*	0.013 [0.015]	*omitted*	*omitted*	-0.120** [0.042]	*omitted*	*omitted*
Lagged independent variable *(ref. contemporaneous)*	-0.0008 [0.009]	*omitted*	*omitted*	-0.0008 [0.001]	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var.)*	-0.041 [0.175]	*omitted*	*omitted*	0.038*** [0.006]	*omitted*	*omitted*
Controlling for endogeneity *(ref. no-IV approach)*	0.014 [0.012]	*omitted*	*omitted*	0.009 [0.007]	*omitted*	*omitted*
Hours worked *(ref. number of workers)*				-0.064 [0.140]	-0.178*** [0.008]	-0.181*** [0.004]
Publication characteristics						
Peer reviewed paper *(ref. working paper)*	-0.142 [1543.3]	0.035* [0.017]	0.016 [0.010]	0.145 [0.161]	0.243*** [0.005]	0.252 [0.004]
Peer reviewed paper * st. error	-1.287 [2.587]	*omitted*	*omitted*	-0.122 [594]	*omitted*	*omitted*
Publication year	0.071 [1608.0]	0.108** [0.046]	0.025** [0.008]	0.094** [0.041]	0.085*** [0.007]	0.097*** [0.003]
Publication year * st. error	-0.907 [1.212]	*omitted*	*omitted*	0.685** [0.218]	0.819** [0.303]	0.127 [0.163]
10-Year impact factor	0.389 [41063.2]	-2.406** [0.934]	-0.813*** [0.149]	-4.795 [5.515]	*omitted*	*omitted*
10-Year impact factor * st. error	0.218 [0.812]	*omitted*	*omitted*	-0.897 [0.551]	*omitted*	*omitted*
Geography (ref. non-OECD)						
Europe	-0.025 [806.5]	0.034 [0.021]	0.002 [0.007]	-3.574 [3.951]	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)						
Regional – level analysis	0.110 [33863.2]	*omitted*	*omitted*	-3.383 [3.557]	0.137*** [0.011]	0.147*** [0.011]
Development status (ref. not specified)						

Developed	-0.002 [0.017]	0.010** [0.002]	0.014*** [0.001]	-0.013* [0.007]	*omitted*	*omitted*
Developing	-0.019 [0.027]	-0.008** [0.002]	-0.005*** [0.003]	-0.014 [0.009]	*omitted*	*omitted*
Time (ref. midpoint before 2001)						
After 2001	-0.170 [5205.9]	0.290** [0.107]	0.120*** [0.023]	-0.289*** [0.061]	-0.216*** [0.010]	-0.224*** [0.005]
Other controls						
Dataspan	0.003 [0.057]	0.002 [0.001]	0.004*** [0.0004]	-0.019** [0.007]	-0.018*** [0.004]	-0.005*** [0.0002]
Number of RHS variables	-0.0001 [0.002]	*omitted*	*Omitted*	-0.00006 [0.0009]	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	0.153 [0.355]	0.064 [0.037]	0.006 [0.004]	-0.097 [0.112]	*omitted*	*omitted*
Observations	225	225	225	408	408	408
Adjusted R^2	0.920	0.922	0.913	0.997	0.997	0.997
Primary study fixed effects	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	yes	yes	yes

Note: The table replicates the main analysis, after excluding semi-elasticities, calculated elasticities and elasticities expressed in shares and winsorizing using the 20th and the 80th percentile. Robust st. errors, clustered by primary study are reported in brackets (except for Column 1, where, to achieve convergence, the estimation is based on simple st. errors). All models are weighted by the inverse of the variance of the collected estimates. Columns 2 and 5 are based on the respective weighted-least-squares models (Columns 1 and 4), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. The estimations for trade with China are dropped due to insufficient observations. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Appendix E. Random and fixed effects analysis

Appendix E1. Random effects meta-regression analysis

Table E1.1. Labor market effects from technology (Dependent variable: e_i)

	Wage elasticities			Employment elasticities		
Variable	**Random effects**	**Random effects general to specific**	**Random effects PEESE**	**Random effects**	**Random effects general to specific**	**Random effects PEESE**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
FAT – PET – PEESE tests						
Intercept (β_0) (PET) or (γ_0) (PEESE)	2.178	3.109	0.897	-0.107	0.159	-0.122
	[3.247]	[3.833]	[5.970]	[0.248]	[0.123]	[0.315]
St. error (β_1) or st. error^2(γ_1) (FAT)	3.688	2.365	0.677	-1.820	-0.158	-1.286
	[3.211]	[3.702]	[6.222]	[1.356]	[0.353]	[1.509]
Type of innovation (ref. process innovation)						
Product innovation	-1.391	*omitted*	*omitted*	0.320	0.282	0.278
	[1.642]			[0.216]	[0.201]	[0.194]
Data aggregation (ref. worker-level)						
Industry-level	0.682**	*omitted*	*omitted*	3.830**	2.217**	3.946*
	[0.183]			[1.700]	[0.611]	[2.195]
Firm-level	-10.139	*omitted*	*omitted*	8.305***	6.811***	8.594**
	[6.657]			[2.108]	[1.001]	[2.574]
Sectoral Ievel (ref. economy-wide)						
Manufacturing	0.108	-0.068	0.006	0.012	-0.031	-0.016
	[0.078]	[0.136]	[0.058]	[0.520]	[0.516]	[0.513]
Services	0.063	-0.062	0.040	0.294*	0.258	0.256
	[0.090]	[0.182]	[0.063]	[0.173]	[0.177]	[0.172]
Skill-level (ref. varied skill)						
Low-skill	-0.496	*omitted*	*omitted*	-1.153	-1.232	-1.202
	[0.496]			[0.972]	[0.962]	[0.962]

Medium-skill	-0.535 [0.476]	*omitted*	*omitted*	-1.159 [0.990]	-1.172 [0.970]	-1.180 [0.978]
High-skill	0.498 [0.387]	*omitted*	*omitted*	2.133** [0.957]	2.212** [0.956]	2.092** [0.948]
Other methodological aspects						
Technology and trade *(ref. only technology)*	-0.032*** [0.003]	-0.035** [0.009]	-0.032*** [0.004]	0.0009 [0.127]	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	0.259 [0.376]	0.159 [0.558]	-0.042 [0.352]	-0.362*** [0.070]	-0.443*** [0.032]	-0.430*** [0.024]
Lagged independent variable *(ref. contemporaneous ind. var.)*	-0.013 [0.021]	*omitted*	*omitted*	-0.559* [0.300]	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	0.149 [0.167]	-0.159 [0.096]	-0.127** [0.059]	0.373*** [0.067]	0.450*** [0.032]	0.432*** [0.024]
Controlling for endogeneity *(ref. no IV approach)*	-0.149 [0.132]	-0.125 [0.117]	-0.157 [0.106]	0.012 [0.072]	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	-3.446 [5.723]	*omitted*	*omitted*			
Hours worked *(ref. number of workers)*				-0.004*** [$3.8*10^{-12}$]	0.0004*** [$2.5*10^{-14}$]	0.0004*** [$5.7*10^{-14}$]
Publication characteristics (K-)						
Peer reviewed paper *(ref. working paper)*	-7.891 [5.829]	*omitted*	*omitted*	-0.088 [1.623]	-2.460*** [0.600]	-2.751*** [0.657]
Peer reviewed paper * st. error	-3.091** [1.217]	*omitted*	*omitted*	0.724 [1.131]	*omitted*	*omitted*
Publication year	-2.715* [1.528]	23.720 [30.191]	6.429 [41.265]	1.373** [0.572]	1.663** [0.591]	1.650** [0.630]
Publication year * st. error	0.485 [0.668]	-0.270 [0.558]	0.207 [0.442]	0.360 [0.269]	-0.444 [1.682]	0.397** [0.184]
10-Year impact factor	-12.422 [11.086]	-16.502 [20.023]	-5.025 [27.199]	6.628** [3.004]	*omitted*	*omitted*
10-Year impact factor * st. error	0.354 [2.541]	1.849 [4.042]	3.816 [2.371]	-0.486 [0.960]	*omitted*	*omitted*

Geography (ref. US-UK-Canada-Japan)						
Europe	0.041 [0.758]	*omitted*	*omitted*	0.073** [0.023]	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)						
Regional – level analysis	0.826*** [0.135]	*omitted*	*omitted*	0.635 [0.640]	0.582 [0.436]	0.807** [0.304]
Development status (ref. not-specified)						
Developed	*omitted*	*omitted*	*omitted*	0.383** [0.055]	0.349 [0.234]	0.419*** [0.055]
Developing	0.333 [0.309]	0.435 [0.319]	0.326 [0.325]	0.203 [0.171]	0.606* [0.347]	0.265* [0.153]
Time (ref. midpoint before 1995)						
After 2001	-0.764** [0.293]	-0.473* [0.263]	-0.450 [0.293]	0.312 [0.190]	*omitted*	*omitted*
Other controls						
Dataspan	-0.599*** [0.022]	-0.596*** [0.032]	-0.587*** [0.014]	1.333*** [0.150]	1.365*** [0.081]	1.340*** [0.080]
Number of RHS variables	-0.0004 [0.003]	*omitted*	*omitted*	0.015 [0.0026]	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	-0.473** [0.151]	*omitted*	*omitted*	-0.489** [0.238]	-0.542** [0.207]	-0.497** [0.217]
Observations	231	231	231	392	392	392
Adjusted R^2	0.504	0.368	0.372	0.662	0.655	0.656
Primary study fixed effects	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes
Country by Midpoint fixed effects	yes	yes	yes	yes	yes	yes

Note: St. errors clustered by primary study are reported in brackets. The st. errors are corrected for the random effects estimates, based on Doucouliagos et al. (2022). Columns 2 and 5 are based on the respective WLS-MRA models (Columns 1 and 4), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories is significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table E1.2. Labor market effects from trade (Dependent variable: e_i)

	Wage elasticities				Employment elasticities			
Variable	**Random effects**	**Random effects general to specific**	**Random effects PEESE**	**Random Effects general to specific - China**	**Random effects**	**Random effects general to specific**	**Random effects PEESE**	**Random Effects general to specific - China**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
FAT – PET – PEESE tests								
Intercept (β_0) (PET) or (γ_0) (PEESE)	0.006	0.004	0.038	-0.375	-0.095	-0.082	-0.136	-0.494
	[0.085]	[0.066]	[0.140]	[0.366]	[0.197]	[0.199]	[0.535]	[0.570]
St. error (β_1) (FAT) or (γ_1)	0.447	0.322	0.945	-5.394	-0.972	-0.623	-0.773	-13.945**
	[1.164]	[1.196]	[2.500]	[4.504]	[0.807]	[0.715]	[1.971]	[5.581]
Type of trade (ref. trade in final goods)								
Trade in intermediates	-0.100	-0.184	-0.182	-0.145**	-0.557	*omitted*	*omitted*	*omitted*
	[0.170]	[0.173]	[0.175]	[0.039]	[0.448]			
Data aggregation (ref. worker-level)								
Industry-level	-0.485	0.018	0.005	7.554	-3.305*	*omitted*	*omitted*	*omitted*
	[0.484]	[0.364]	[0.361]	[5.707]	[1.787]			
Firm-level	0.119	0.198	0.197	*omitted*	-2.525	*omitted*	*omitted*	*omitted*
	[0.315]	[0.488]	[0.484]		[1.632]			
Sectoral Ievel (ref. economy-wide)								
Manufacturing	0.420**	0.305**	0.292**	0.533**	-0.415***	-0.449**	-0.421**	9.667
	[0.163]	[0.098]	[0.087]	[0.198]	[0.107]	[0.127]	[0.155]	[10.522]
Services	0.103	-0.039	-0.046	1.831	0.039	-0.003	-0.016	10.522
	[0.203]	[0.189]	[0.164]	[2.535]	[0.276]	[0.168]	[0.182]	[10.299]
Skill-level (ref. varied skill)								
Low-skill	0.075	0.025	0.025	-0.252	-0.485*	-0.455*	-0.469*	-0.742*
	[0.138]	[0.118]	[0.117]	[0.266]	[0.253]	[0.247]	[0.247]	[0.333]
Medium-skill	-0.431	-0.502	-0.503	*omitted*	-0.591	-0.568	-0.580	*omitted*
	[0.372]	[0.348]	[0.350]		[0.455]	[0.468]	[0.462]	
High-skill	0.400	0.334	0.336	-0.143	0.251	0.264	0.248	1.035**

	[0.260]	[0.240]	[0.239]	[0.599]	[0.212]	[0.207]	[0.204]	[0.386]
Other methodological aspects								
Technology and trade *(ref. only trade)*	0.071 [0.092]	*omitted*	*omitted*	*omitted*	-0.144 [0.116]	*omitted*	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	-0.620* [0.345]	*omitted*	*omitted*	*omitted*	-0.546 [0.757]	*omitted*	*omitted*	*omitted*
Lagged independent variable *(ref. contemporaneous ind. var.)*	0.033 [0.069]	*omitted*	*omitted*	*omitted*	0.068 [0.105]	*omitted*	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	-0.306 [0.505]	*omitted*	*omitted*	*omitted*	0.203 [0.151]	*omitted*	*omitted*	*omitted*
Controlling for endogeneity *(ref. no IV approach)*	0.138 [0.151]	*omitted*	*omitted*	*omitted*	0.073 [0.145]	*omitted*	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	-2.283 [3.760]	-5.263** [2.054]	-6.060** [2.954]	*omitted*				
Hours worked *(ref. number of workers)*					-0.114*** [0.006]	-0.115*** [0.006]	-0.114*** [0.016]	-0.100*** [0.018]
Publication characteristics (K-)								
Peer reviewed paper *(ref. working paper)*	-10.318 [15.852]	3.124 [6.405]	3.301 [6.027]	-7.312 [5.677]	-0.654 [0.694]	-0.161 [0.288]	-0.171 [0.237]	0.913 [2.522]
Peer reviewed paper * st. error	-0.435 [1.127]	*omitted*	*omitted*	*omitted*	0.749 [0.954]	*omitted*	*omitted*	*omitted*
Publication year	0.454 [1.284]	0.450* [0.255]	0.425 [0.261]	4.445 [3.038]	1.730** [0.549]	-2.492 [1.574]	-2.713 [4.069]	-13.845 [9.140]
Publication year * st. error	0.022 [0.886]	*omitted*	*omitted*	*omitted*	0.426 [0.387]	0.249 [0.216]	0.152 [0.410]	15.897** [5.925]
10-Year impact factor	-16.291 [29.540]	8.076 [11.215]	9.714 [11.087]	0.298 [3.442]	-0.461 [1.351]	*omitted*	*omitted*	*omitted*
10-Year impact factor * st. error	0.385 [0.384]	*omitted*	*omitted*	*omitted*	0.555 [0.591]	*omitted*	*omitted*	*omitted*
Geography (ref. US-UK-Canada-Japan)								
Europe	0.016 [0.155]	0.131 [0.092]	0.135 [0.085]	0.515 [1.824]	7.123*** [1.700]	*omitted*	*omitted*	*omitted*

Spatial unit (ref. national-level analysis)								
Regional – level analysis	-0.656 [0.482]	*omitted*	*omitted*	*omitted*	3.902*** [0.464]	3.520*** [0.330]	3.479*** [0.0.411]	0.927 [1.243]
Development status (ref. not-specified)								
Developed	0.095 [0.372]	0.117 [0.354]	0.134 [0.322]	*omitted*	-0.283 [0.339]	*omitted*	*omitted*	*omitted*
Developing	0.132 [0.482]	0.118 [0.392]	0.155 [0.375]	5.957 [4.661]	-0.935 [0.571]	*omitted*	*omitted*	*omitted*
Time (ref. midpoint before 1995)								
After 2001	-6.724 [15.967]	5.562 [6.317]	5.695 [5.949]	-1.075** [0.389]	-0.814*** [0.174]	-0.592*** [0.117]	-0.551** [0.179]	1.484*** [0.251]
Other controls								
Dataspan	-1.926*** [0.201]	-1.974*** [0.151]	-1.938*** [0.216]	-2.924** [0.727]	-0.070 [0.053]	-0.055 [0.040]	-0.063 [0.041]	0.063 [0.083]
Number of RHS variables	-0.016 [0.028]	*omitted*	*omitted*	*omitted*	0.008 [0.017]	*omitted*	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	0.708 [0.421]	0.415** [0.203]	0.415** [0.193]	0.344* [0.162]	-0.277 [0.684]	*omitted*	*omitted*	*omitted*
Observations	459	459	459	64	635	635	635	60
Adjusted R^2	0.174	0.190	0.191	0.665	0.275	0.261	0.259	0.793
Primary study fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes

Note: St. errors clustered by primary study are reported in brackets. The st. errors are corrected for the random effects estimates, based on Doucouliagos et al. (2022). Columns 2 and 6 are based on the respective weighted-least-squares models (Columns 1 and 5), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Appendix E2. Fixed effects meta-regression analysis (MRA)

Table E2.1. Labor market effects from technology (Dependent variable: e_i)

	Wage elasticities			Employment elasticities		
Variable	**Fixed effects**	**Fixed effects general to specific**	**Fixed effects PEESE**	**Fixed effects**	**Fixed effects general to specific**	**Fixed effects PEESE**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
FAT – PET – PEESE tests						
Intercept (β_0) (PET) or (γ_0) (PEESE)	-1.815	0.551**	0.678**	0.751***	0.706***	0.231
	[2.465]	[0.243]	[0.242]	[0.150]	[0.141]	[0.141]
St. error (β_1) or st. error^2(γ_1) (FAT)	-1.807***	-1.474***	2.018***	-1.540***	-1.296***	0.780***
	[0.397]	[0.157]	[0.321]	[0.244]	[0.097]	[0.213]
Type of innovation (ref. process innovation)						
Product innovation	0.005	*omitted*	*omitted*	0.001	0.001*	0.001
	[0.007]			[0.0008]	[0.0008]	[0.0008]
Data aggregation (ref. worker-level)						
Industry-level	0.200	*omitted*	*omitted*	0.100	0.167**	0.190**
	[0.145]			[0.110]	[0.084]	[0.084]
Firm-level	0.925	*omitted*	*omitted*	0.982***	1.117***	1.128***
	[1.335]			[0.194]	[0.183]	[0.183]
Sectoral Ievel (ref. economy-wide)						
Manufacturing	-0.277	-0.225	-0.790***	0.227***	0.221***	0.200***
	[0.248]	[0.164]	[0.162]	[0.007]	[0.007]	[0.007]
Services	-0.270	-0.218	-0.783***	0.076***	0.068***	0.038***
	[0.248]	[0.164]	[0.162]	[0.005]	[0.005]	[0.005]
Skill-level (ref. varied skill)						
Low-skill	-0.003	*omitted*	*omitted*	0.061***	0.050***	0.012
	[0.005]			[0.011]	[0.011]	[0.011]
Medium-skill	-0.002	*omitted*	*omitted*	0.069***	0.060***	0.029**
	[0.008]			[0.012]	[0.012]	[0.012]

High-skill	-0.001 [0.005]	*omitted*	*omitted*	0.195*** [0.007]	0.187*** [0.007]	0.160*** [0.007]
Other methodological aspects						
Technology and trade *(ref. only technology)*	-0.008 [0.103]	-0.008 [0.103]	-0.017 [0.104]	0.009 [0.052]	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	-0.010 [0.012]	-0.010 [0.012]	-0.008 [0.012]	-0.142*** [0.003]	-0.146*** [0.003]	-0.160*** [0.003]
Lagged independent variable *(ref. contemporaneous ind. var.)*	0.001* [0.0005]	*omitted*	*omitted*	-0.007*** [0.001]	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	-0.445* [0.254]	-0.391** [0.171]	-0.872*** [0.170]	0.148*** [0.003]	0.152*** [0.003]	0.161*** [0.003]
Controlling for endogeneity *(ref. no IV approach)*	-0.015** [0.007]	-0.019** [0.007]	-0.040*** [0.06]	0.029*** [0.001]	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	2.864 [2.778]	*omitted*	*omitted*			
Hours worked *(ref. number of workers)*				0.0001 [0.297]	0.0001 [0.297]	0.0001 [0.297]
Publication characteristics (K-)						
Peer reviewed paper *(ref. working paper)*	1.546 [1.799]	*omitted*	*omitted*	-0.782** [0.280]	-0.848*** [0.135]	-0.307** [0.135]
Peer reviewed paper * st. error	0.155 [0.396]	*omitted*	*omitted*	0.534** [0.246]	*omitted*	*omitted*
Publication year	-0.781* [0.456]	-0.127 [0.220]	-0.934*** [0.228]	0.602*** [0.091]	0.676*** [0.073]	0.650*** [0.073]
Publication year * st. error	-1.896*** [0.123]	-2.045*** [0.108]	-1.070*** [0.154]	-1.355*** [0.099]	-1.282*** [0.096]	-2.682*** [0.651]
10-Year impact factor	-2.031 [2.158]	1.130** [0.354]	0.713** [0.345]	0.244 [0.548]	*omitted*	*omitted*
10-Year impact factor * st. error	-4.030** [0.568]	-3.764** [0.514]	-2.793** [0.903]	0.881*** [0.231]	*omitted*	*omitted*
Geography (ref. US-UK-Canada-Japan)						
Europe	-0.375	*omitted*	*omitted*	-0.0008	*omitted*	*omitted*

	[0.379]			[0.011]		
Spatial unit (ref. national-level analysis)						
Regional – level analysis	0.114 [0.235]	*omitted*	*omitted*	0.492*** [0.082]	0.474*** [0.082]	0.769*** [0.082]
Development status (ref. not-specified)						
Developed	*omitted*	*omitted*	*omitted*	0.580 [0.355]	0.888** [0.346]	0.547 [0.346]
Developing	0.557*** [0.143]	0.575*** [0.142]	1.014*** [0.140]	0.198** [0.063]	0.211*** [0.036]	0.325*** [0.035]
Time (ref. midpoint before 1995)						
After 2001	-0.307* [0.158]	-0.279* [0.156]	-0.330** [0.154]	0.025 [0.060]	*omitted*	*omitted*
Other controls						
Dataspan	-0.349*** [0.174]	-0.349** [0.174]	-0.385** [0.175]	0.241** [0.073]	0.240** [0.073]	0.252** [0.073]
Number of RHS variables	$1.1*10^{-6}$ [0.00009]	*omitted*	*omitted*	0.0008*** [0.0002]	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	-0.049 [0.045]	*omitted*	*omitted*	-0.095*** [0.015]	-0.098*** [0.014]	-0.118*** [0.014]
Observations	231	231	231	392	392	392
χ^2 p-value	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
Primary study fixed effects	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes
Country by Midpoint fixed effects	yes	yes	yes	yes	yes	yes

Note: St. errors are reported in brackets. All models are weighted by the inverse of the variance of the collected elasticities. Columns 2 and 5 are based on the respective WLS-MRA models (Columns 1 and 4), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories is significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table E2.2. Labor market effects from trade (Dependent variable: e_i)

	Wage elasticities				Employment elasticities			
Variable	**Fixed effects**	**Fixed effects general to specific**	**PEESE**	**Fixed effects general to specific - China**	**Fixed effects**	**Fixed effects general to specific**	**PEESE**	**Fixed effects general to specific - China**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
FAT – PET – PEESE tests								
Intercept (β_0) (PET) or (γ_0) (PEESE)	2.064**	1.701**	0.004	0.009	-13.987***	3.561**	1.339	-2.312
	[0.957]	[0.853]	[0.005]	[0.273]	[1.950]	[1.296]	[1.354]	[7.164]
St. error (β_1) (FAT) or (γ_1)	0.176	0.375***	0.013	-0.752	0.963***	-0.058	-0.059	-5.068***
	[0.113]	[0.082]	[0.014]	[0.545]	[0.154]	[0.062]	[0.051]	[1.061]
Type of trade (ref. trade in final goods)								
Trade in intermediates	-0.002**	-0.003**	-0.003***	-0.003*	-0.040	*omitted*	*omitted*	*omitted*
	[0.001]	[0.001]	[0.0006]	[0.002]	[0.048]			
Data aggregation (ref. worker-level)								
Industry-level	-0.004**	-0.009***	0.0003	1.917**	10.793***	*omitted*	*omitted*	*omitted*
	[0.002]	[0.001]	[0.0008]	[0.913]	[1.711]			
Firm-level	0.014***	0.016***	0.026***	*omitted*	11.139***	*omitted*	*omitted*	*omitted*
	[0.002]	[0.001]	[0.0008]		[1.712]			
Sectoral Ievel (ref. economy-wide)								
Manufacturing	0.014	0.014	-0.001	0.019**	-0.149***	-0.121***	-0.088**	1.379
	[0.009]	[0.009]	[0.001]	[0.009]	[0.027]	[0.027]	[0.027]	[2.093]
Services	-0.002	-0.003	-0.016***	-0.037	-0.136**	-0.099***	-0.060**	1.616
	[0.009]	[0.009]	[0.001]	[0.071]	[0.027]	[0.027]	[0.027]	[2.093]
Skill-level (ref. varied skill)								
Low-skill	0.006***	0.004**	-0.002*	-0.0001	-0.003**	-0.003**	-0.001	-0.085
	[0.001]	[0.001]	[0.001]	[0.003]	[0.001]	[0.001]	[0.001]	[0.191]
Medium-skill	0.007**	0.005*	-0.006**	*omitted*	-0.040**	-0.036	-0.028	*omitted*
	[0.003]	[0.003]	[0.002]		[0.035]	[0.035]	[0.035]	
High-skill	0.015***	0.013***	0.005***	0.003	0.0006	0.002**	0.001	0.175

	[0.002]	[0.002]	[0.001]	[0.003]	[0.0008]	[0.0008]	[0.0008]	[0.195]
Other methodological aspects								
Technology and trade *(ref. only trade)*	0.0001 [0.002]	*omitted*	*omitted*	*omitted*	-0.001 [0.002]	*omitted*	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	0.007** [0.002]	*omitted*	*omitted*	*omitted*	-0.322*** [0.052]	*omitted*	*omitted*	*omitted*
Lagged independent variable *(ref. contemporaneous ind. var.)*	0.0009 [0.001]	*omitted*	*omitted*	*omitted*	-0.0005 [0.0004]	*omitted*	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	0.018 [0.027]	*omitted*	*omitted*	*omitted*	0.004*** [0.001]	*omitted*	*omitted*	*omitted*
Controlling for endogeneity *(ref. no IV approach)*	0.007*** [0.001]	*omitted*	*omitted*	*omitted*	0.007*** [0.0006]	*omitted*	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	-2.987** [1.027]	-2.613** [0.899]	0.114*** [0.001]	*omitted*				
Hours worked *(ref. number of workers)*					0.272 [2.028]	0.275 [2.028]	0.199*** [2.029]	0.147 [2.029]
Publication characteristics (K-)								
Peer reviewed paper *(ref. working paper)*	-1.146** [0.451]	-0.948** [0.395]	0.013*** [0.008]	-1.945** [0.918]	-0.180 [2.029]	-0.970 [2.047]	-0.411 [2.049]	1.386 [3.185]
Peer reviewed paper * st. error	0.275 [0.183]	*omitted*	*omitted*	*omitted*	-1.556*** [0.175]	*omitted*	*omitted*	*omitted*
Publication year	0.114** [0.052]	0.130** [0.048]	-0.009*** [0.0005]	0.457** [0.152]	0.181 [0.204]	5.048** [1.836]	1.950 [1.920]	-1.293 [7.295]
Publication year * st. error	-0.011 [0.125]	*omitted*	*omitted*	*omitted*	1.195*** [0.070]	1.148*** [0.063]	*omitted*	5.603*** [1.674]
10-Year impact factor	1.851** [0.872]	1.517** [0.774]	0.0004 [0.0004]	0.466** [0.183]	-0.567 [0.431]	*omitted*	*omitted*	*omitted*
10-Year impact factor * st. error	0.243** [0.110]	*omitted*	*omitted*	*omitted*	-0.769*** [0.124]	*omitted*	*omitted*	*omitted*
Geography (ref. US-UK-Canada-Japan)								
Europe	-0.008** [0.004]	-0.008* [0.004]	-0.005*** [0.001]	-0.041 [0.091]	3.334*** [0.573]	*omitted*	*omitted*	*omitted*

Spatial unit (ref. national-level analysis)								
Regional – level analysis	0.018 [0.161]	*omitted*	*omitted*	*omitted*	2.829*** [0.467]	3.090*** [0.466]	2.780*** [0.464]	1.472** [0.498]
Development status (ref. not-specified)								
Developed	0.004*** [0.001]	0.008*** [0.001]	0.005*** [0.001]	*omitted*	-0.022*** [0.003]	*omitted*	*omitted*	*omitted*
Developing	-0.025*** [0.003]	-0.023*** [0.004]	-0.009*** [0.0008]	*omitted*	-0.026*** [0.004]	*omitted*	*omitted*	*omitted*
Time (ref. midpoint before 1995)								
After 2001	-0.915* [0.514]	-0.716* [0.432]	0.006*** [0.001]	-0.088 [0.150]	-0.109 [0.111]	-0.128 [0.111]	-0.098 [0.111]	0.262 [0.164]
Other controls								
Dataspan	-0.407** [0.118]	-0.408** [0.117]	0.007*** [0.0005]	-0.345** [0.122]	0.052 [0.124]	0.058 [0.124]	0.042 [0.124]	0.042 [0.159]
Number of RHS variables	0.0004** [0.0001]	*omitted*	*omitted*	*omitted*	-0.0004** [0.0002]	*omitted*	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	0.015** [0.007]	0.018** [0.007]	0.015** [0.005]	0.015** [0.007]	0.008 [0.025]	*omitted*	*omitted*	*omitted*
Observations	459	459	459	64	635	635	635	60
χ^2 p-value	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
Primary study fixed effects	yes	yes	no	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	no	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	no	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	no	yes	yes	yes	yes	yes

Note: St. errors are reported in brackets. All models are weighted by the inverse of the variance of the collected elasticities. Columns 2 and 6 are based on the respective weighted-least-squares models (Columns 1 and 5), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Appendix F. Partial correlation coefficients. Theoretical principles and empirical results.

Appendix F1. Construction and summary statistics of partial correlation coefficients

Partial correlation coefficients (pcc's) are unitless statistical measures of the strength and the direction of association between two variables, holding other factors constant (Stanley & Doucouliagos, 2012). We calculate pcc's from the reported regression outcomes, based on the following formula (Eq. F1.1):

$$pcc = \frac{t}{\sqrt{t^2+df}} \tag{F1}$$

where pcc is the partial correlation coefficient, t is the associated t-statistic of the reported regression outcome and df reports the degrees of freedom of the t-statistic. The standard error of the partial correlation coefficient is calculated based on Eq. (F2):

$$se_{pcc} = \sqrt{(1 - pcc^2)/df} \tag{F2}$$

Partial correlation coefficients are particularly useful since they allow the direct comparison between the reported outcomes from different studies; therefore, they enable the compilation of the most comprehensive datasets within a particular field of study. In contrast, they have two main drawbacks. First, they are just statistical and not economic measures of the investigated effects. Secondly, their distribution is not normal when their values are close to -1 and +1. Although this is hardly a problem for the current analysis, we follow Stanley and Doucouliagos (2012) and perform the Fischer's z-transformation, as illustrated in Eq. (F3):

$$r_z = \frac{1}{2} ln\left(\frac{1+r}{1-r}\right) \tag{F3}$$

Furthermore, calculating partial correlation coefficients requires detailed information about the degrees of freedom of the estimated model in the primary study. Such information is rarely directly available from the authors and has to be approximated based on the total number of observations and the number of variables, including the various types of fixed effects. However, those calculations are not always accurate, due to lack of information about the total number of fixed effects groups included in the estimation. Therefore, the calculated partial correlation coefficients introduce 'noise' to our analysis.

The above drawbacks explain our choice to use elasticities in the main analysis and use the partial correlation coefficients in a supplementary way.

Table F1.1. Summary statistics

	Obs.	**Mean**	**St. Dev.**	**IQR**	**Skewn.**	**Kyrt.**	I^2	**Q-test**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Technology pcc's	611	0.015	0.457	0.100	-10.67	210.2	100%	0.000***
• Wage pcc's	230	0.017	0.178	0.048	-0.982	13.68	99.9%	0.000***
• Employment pcc's	381	0.013	0.562	0.124	-9.175	147.3	100%	0.000***
Trade pcc's	1092	-0.005	0.152	0.052	-0.773	10.97	100%	0.000***
• Wage pcc's	457	0.005	0.124	0.026	0.531	10.19	100%	0.000***
• Employment pcc's	635	-0.012	0.169	0.077	-1.064	10.01	99.8%	0.000***

Note: Column 4 reports the interquartile range (the difference between the 75th and the 25th percentile). Column 7 reports the percentage of the between-estimate heterogeneity, besides the one attributed to sampling error. Column 8 reports the p-value for the $\chi 2$ Cochran's test under the null hypothesis of no between-estimate heterogeneity. $*$ for $p < 0.1$, $**$ for $p < 0.05$ and $***$ for $p < 0.0$

Appendix F2. Meta-regression analysis outcomes based on partial correlation coefficients

Table F2.1. Labor market effects from technology (Dependent variable: pcc_i)

	Wage elasticities			Employment elasticities		
Variable	**WLS**	**WLS general to specific**	**PEESE**	**WLS**	**WLS general to specific**	**PEESE**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
FAT – PET – PEESE tests						
Intercept (β_0) (PET) or (γ_0) (PEESE)	11.592	-0.095	1.020	-1.354	1.400**	-0.038
	[13.497]	[0.831]	[1.663]	[3.098]	[0.550]	[0.085]
St. error (β_1) or st. error^2(γ_1) (FAT)	-9.129***	-7.645**	7.584	-5.939**	-13.905	0.091
	[2.050]	[2.080]	[6.081]	[2.552]	[3.167]	[0.120]
Type of innovation (ref. process innovation)						
Product innovation	0.020	*omitted*	*omitted*	-0.001	0.009	-0.032*
	[0.022]			[0.012]	[0.0008]	[0.017]
Data aggregation (ref. worker-level)						
Industry-level	0.114	*omitted*	*omitted*	0.154	-0.516	0.660***
	[0.162]			[0.608]	[0.425]	[0.063]
Firm-level	-5.693	*omitted*	*omitted*	-3.851	-2.417**	-1.212***
	[6.879]			[4.781]	[0.716]	[0.144]
Sectoral Ievel (ref. economy-wide)						
Manufacturing	-0.417	0.940	-1.635	0.020**	0.017**	-0.018
	[0.433]	[0.880]	[2.105]	[0.009]	[0.008]	[0.021]
Services	0.364	0.918	-1.673	0.054***	0.046***	0.030
	[0.437]	[0.893]	[2.111]	[0.012]	[0.011]	[0.044]
Skill-level (ref. varied skill)						
Low-skill	0.032	*omitted*	*omitted*	-0.107***	-0.027	-0.571***
	[0.029]			[0.028]	[0.065]	[0.070]
Medium-skill	0.079	*omitted*	*omitted*	-0.099**	-0.017	-0.534***
	[0.050]			[0.031]	[0.062]	[0.062]
High-skill	0.072	*omitted*	*omitted*	-0.004	0.023	-0.368***

	[0.054]			[0.015]	[0.051]	[0.009]
Other methodological aspects						
Technology and trade *(ref. only technology)*	-0.001 [0.0008]	0.0006*** [$2.2*10^{-7}$]	0.0006** [$2.2*10^{-7}$]	0.028*** [0.005]	*omitted*	*omitted*
Time series *(ref. cross-sectional)*	0.003 [0.003]	0.003 [0.002]	-0.009 [0.008]	0.604 [0.778]	-0.017 [0.011]	-0.088*** [0.001]
Lagged independent variable *(ref. contemporaneous ind. var.)*	-0.014** [0.004]	*omitted*	*omitted*	-0.645 [0.766]	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var)*	0.300 [0.418]	0.902 [0.892]	-1.780 [2.094]	0.606 [0.770]	0.016 [0.010]	0.064*** [$2.7*10^{-6}$]
Controlling for endogeneity *(ref. no IV approach)*	-0.012 [0.019]	-0.014 [0.021]	-0.008 [0.011]	0.007 [0.005]	*omitted*	*Omitted*
Wages in shares *(ref. wages not in shares)*	-11.379 [14.285]	*omitted*	*omitted*			
Hours worked *(ref. number of workers)*				-0.006 [0.016]	$5.6*10^{-6}$ [$4.6*10^{-6}$]	0.0002*** [$1.7*10^{-13}$]
Publication characteristics (K-)						
Peer reviewed paper *(ref. working paper)*	-7.851 [9.298]	*omitted*	*omitted*	1.973 [3.951]	-0.315 [0.338]	0.606*** [0.047]
Peer reviewed paper * st. error	-1.209 [6.759]	*omitted*	*omitted*	-5.522 [3.220]	*omitted*	*omitted*
Publication year	2.413 [2.739]	0.400 [0.454]	-0.851 [1.072]	-1.022 [1.386]	-1.564** [0.561]	-1.431*** [0.150]
Publication year * st. error	2.741 [4.544]	3.654 [2.208]	-3.329 [4.662]	-3.184 [3.125]	-1.218 [3.281]	0.721 [1.850]
10-Year impact factor	9.576 [10.998]	1.018** [0.419]	-0.452 [0.877]	-1.644** [0.583]	*omitted*	*omitted*
10-Year impact factor * st. error	-4.499 [7.167]	-8.776** [4.211]	25.004 [16.254]	9.391 [5.941]	*omitted*	*omitted*
Geography (ref. US-UK-Canada-Japan)						
Europe	-0.027 [0.020]	*omitted*	*omitted*	0.051*** [0.011]	*omitted*	*omitted*

Spatial unit (ref. national-level analysis)						
Regional – level analysis	-2.450 [2.649]	*omitted*	*omitted*	-6.469** [2.281]	-6.423*** [1.050]	0.600 [0.548]
Development status (ref. not-specified)						
Developed	*omitted*	*omitted*	*omitted*	0.006** [0.002]	0.007 [0.005]	0.009 [0.006]
Developing	0.003 [0.003]	0.004 [0.003]	0.003 [0.003]	0.003 [0.003]	0.008 [0.009]	0.011 [0.013]
Time (ref. midpoint before 1995)						
After 2001	0.0006 [0.018]	0.005 [0.022]	-0.003 [0.011]	0.276 [0.320]	*omitted*	*omitted*
Other controls						
Dataspan	-0.005*** [0.00005]	-0.005*** [0.0001]	-0.004*** [0.0006]	-1.810 [2.137]	-0.108** [0.031]	0.130*** [0.017]
Number of RHS variables	0.0006 [0.0004]	*omitted*	*omitted*	$-2.7*10^{-7}$ [0.00004]	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	-0.007 [0.007]	*omitted*	*omitted*	-0.195** [0.067]	-0.202*** [0.023]	-0.014 [0.022]
Observations	229	229	231	370	370	370
Adjusted R^2	0.533	0.502	0.456	0.999	0.999	0.995
Primary study fixed effects	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes
Country by Midpoint fixed effects	yes	yes	yes	yes	yes	yes

Note: Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the partial correlation coefficients. Columns 2 and 5 are based on the respective WLS-MRA models (Columns 1 and 4), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories is significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table F2.2. Labor market effects from trade (Dependent variable: pcc_i)

	Wage elasticities				Employment elasticities			
Variable	**WLS**	**WL general to specific**	**PEESE**	**WLS general to specific - China**	**WLS**	**WLS general to specific**	**PEESE**	**WLS general to specific - China**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
FAT – PET – PEESE tests								
Intercept (β_0) (PET) or (γ_0) (PEESE)	-7.215 [4.504]	2.138 [1.755]	-0.015 [0.221]	-1.033 [0.591]	-5.402* [2.699]	7.719 [6.659]	2.787 [1.962]	0.597 [0.798]
St. error (β_1) (FAT) or (γ_1)	-13.119 [8.926]	-7.729 [7.250]	1.207 [0.893]	-3.738 [3.720]	-54.025** [19.156]	-23.194 [20.614]	-15.535 [11.776]	13.079 [22.173]
Type of trade (ref. trade in final goods)								
Trade in intermediates	-0.005 [0.006]	-0.001*** [0.0001]	-0.001*** [0.0002]	-0.001*** [$5.4*10^{-6}$]	-0.004 [0.010]	*omitted*	*omitted*	*omitted*
Data aggregation (ref. worker-level)								
Industry-level	0.113 [0.071]	0.063 [0.039]	0.020** [0.008]	0.564 [0.410]	0.764 [0.461]	*omitted*	*omitted*	*omitted*
Firm-level	0.070 [0.063]	0.041 [0.033]	0.006 [0.007]	*omitted*	1.441** [0.687]	*omitted*	*omitted*	*omitted*
Sectoral Ievel (ref. economy-wide)								
Manufacturing	-0.276 [0.334]	-0.104 [0.312]	0.237*** [0.007]	0.115 [0.134]	0.607** [0.241]	0.110 [0.111]	0.188 [0.154]	-0.223 [0.220]
Services	-0.282 [0.334]	-0.109 [0.312]	0.231 [0.007]	0.109 [0.082]	0.555** [0.206]	0.106 [0.091]	0.195 [0.141]	-0.091 [0.235]
Skill-level (ref. varied-skill)								
Low-skill	0.009 [0.006]	0.009 [0.007]	0.001 [0.001]	-0.006 [0.008]	-0.022** [0.010]	-0.018* [0.010]	-0.036** [0.011]	-0.022* [0.011]
Medium-skill	0.001 [0.003]	0.003 [0.004]	-0.002 [0.002]	*omitted*	0.017 [0.028]	-0.003 [0.024]	-0.031** [0.013]	*omitted*
High-skill	0.011* [0.006]	0.013 [0.008]	0.003** [0.001]	0.004 [0.016]	-0.020*** [0.005]	-0.010** [0.004]	-0.015** [0.007]	0.035** [0.010]

Other methodological aspects								
Technology and trade *(ref. only trade)*	0.005 [0.004]	*omitted*	*omitted*	*omitted*	-0.062 [0.063]	*omitted*	*omitted*	*omitted*
Time series *(ref. cross – sectional)*	-0.002 [0.003]	*omitted*	*omitted*	*omitted*	-0.632** [0.309]	*omitted*	*omitted*	*omitted*
Lagged independent variable *(ref. contemporaneous)*	0.009 [0.006]	*omitted*	*omitted*	*omitted*	0.015 [0.012]	*omitted*	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var.)*	-0.005 [0.006]	*omitted*	*omitted*	*omitted*	0.002 [0.020]	*omitted*	*omitted*	*omitted*
Controlling for endogeneity *(ref. no-IV approach)*	-0.061 [0.054]	*omitted*	*omitted*	*omitted*	-0.244*** [0.054]	*omitted*	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	7.651 [4.557]	-1.158 [0.864]	-0.108 [0.104]	*omitted*				
Hours worked *(ref. number of workers)*					0.013 [0.010]	0.004 [0.011]	0.003 [0.006]	-0.001 [0.002]
Publication characteristics								
Peer reviewed paper *(ref. working paper)*	3.727 [2.439]	-0.627** [0.188]	-0.359*** [0.057]	0.029 [0.128]	-6.864** [2.692]	-0.869 [0.517]	-0.896** [0.433]	-0.771*** [0.086]
Peer reviewed paper * st. error	6.994 [8.727]	*omitted*	*omitted*	*omitted*	81.209** [31.516]	*omitted*	*omitted*	*omitted*
Publication year	0.536* [0.312]	0.184 [0.191]	0.052** [0.023]	0.069 [0.038]	0.792 [0.564]	11.202 [9.968]	3.440 [2.682]	0.588 [0.978]
Publication year * st. error	13.566* [8.006]	*omitted*	*omitted*	*omitted*	-15.393 [9.819]	-0.045*** [0.010]	-16.143 [11.795]	-24.205 [32.088]
10-Year impact factor	-5.306 [3.325]	1.301 [1.165]	-0.131 [0.144]	-0.870 [0.850]	-6.549** [3.059]	*omitted*	*omitted*	*omitted*
10-Year impact factor * st. error	6.487 [4.647]	*omitted*	*omitted*	*omitted*	78.691** [32.530]	*omitted*	*omitted*	*omitted*
Geography (ref. non-OECD)								
Europe	-0.106 [0.066]	-0.120 [0.089]	-0.008 [0.011]	0.184 [0.185]	8.200** [3.232]	*omitted*	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)								

Regional – level analysis	0.190 [0.144]	*omitted*	*omitted*	*omitted*	0.026 [0.088]	0.176 [0.112]	0.213* [0.116]	-0.004 [0.032]
Development status (ref. not specified)								
Developed	0.020 [0.017]	0.002*** [0.0004]	0.001** [0.0003]	*omitted*	-0.013 [0.011]	*omitted*	*omitted*	*omitted*
Developing	0.010 [0.010]	-0.001** [0.0005]	-0.002** [0.0005]	*omitted*	-0.016* [0.009]	*omitted*	*omitted*	*omitted*
Time (ref. midpoint before 2001)								
After 2001	2.664 [1.726]	-0.468 [0.395]	-0.019 [0.048]	0.032 [0.062]	0.004 [0.069]	0.026 [0.016]	0.028 [0.018]	0.059 [0.076]
Other controls								
Dataspan	-0.027 [0.031]	-0.053** [0.023]	-0.078*** [0.0005]	-0.071*** [0.011]	0.016 [0.030]	0.0006 [0.014]	0.009 [0.005]	0.001** [0.0003]
Number of RHS variables	-0.0007 [0.0007]	*omitted*	*omitted*	*omitted*	-0.007 [0.006]	*omitted*	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	0.914 [0.628]	-0.571 [0.533]	0.057 [0.070]	0.128** [0.038]	0.407 [0.332]	*omitted*	*omitted*	*omitted*
Observations	457	457	457	64	635	635	635	60
Adjusted R^2	0.665	0.548	0.545	0.575	0.540	0.325	0.169	0.767
Primary study fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes

Note: Robust st. errors, clustered by primary study are reported in brackets. All models are weighted by the inverse of the variance of the partial correlation coefficients. Columns 2 and 5 are based on the respective weighted-least-squares models (Columns 1 and 4), following a general-to-specific approach, by sequentially eliminating the least significant explanatory variables, until at least one variable in the reported categories are significant at the 10% level. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Appendix G. Collective robustness analysis (summary tables, only WLS general-to-specific estimation outcomes)

Table G1. Wage effects from technology

	Wage elasticities from technology								
Variable	**WLS (main analysis)**	**WLS trimming outliers**	**WLS winsorizing outliers**	**WLS excluding semi-elasticities**	**WLS excluding calculated elasticities**	**WLS excluding elasticities in shares**	**WLS excluding (4)-(6) and winsorizing**	**Random effects**	**Partial correlation coefficients**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
FAT – PET – PEESE tests									
Intercept (β_0) (PET) or (γ_0) (PEESE)	0.551**	0.421*	0.437*	0.418	0.206*	3.909	-0.046***	3.109	-0.095
	[0.161]	[0.212]	[0.212]	[0.348]	[0.115]	[2.661]	[0.008]	[3.833]	[0.831]
St. error (β_1) (FAT) or (γ_1)	-1.474**	-1.936**	-1.237*	-0.963**	-1.653**	-2.181***	0.073	2.365	-7.645**
	[0.567]	[0.824]	[0.648]	[1.141]	[0.550]	[0.309]	[0.135]	[3.702]	[2.080]
Type of trade (ref. trade in final goods)									
Product innovation	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Data aggregation (ref. worker-level)									
Industry-level	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Firm-level	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Sectoral Ievel (ref. economy-wide)									
Manufacturing	-0.225*	-0.287	-0.268*	-0.402	-0.212*	-0.185*	0.785***	-0.068	0.940
	[0.111]	[0.200]	[0.133]	[0.348]	[0.106]	[0.104]	[0.186]	[0.136]	[0.880]
Services	-0.218*	-0.279	-0.259*	-0.395	0.134	-2.765	*omitted*	-0.062	0.918
	[0.112]	[0.201]	[0.133]	[0.348]	[0.423]	[2.403]		[0.182]	[0.893]
Skill-level (ref. varied-skill)									
Low-skill	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Medium-skill	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
High-skill	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Other methodological aspects									
Technology and trade	-0.008**	-0.009**	0.006**	-0.001	-0.007**	-0.007**	-0.542**	-0.035**	0.0006***
(ref. only trade)	[0.002]	[0.004]	[0.002]	[0.087]	[0.002]	[0.002]	[0.169]	[0.009]	[$2.2*10^{-7}$]
Time series	-0.010*	-0.013**	-0.013**	-0.012**	-0.006	-0.007	-0.011***	0.159	0.003

(ref. cross – sectional)	[0.005]	[0.005]	[0.006]	[0.005]	[0.006]	[0.006]	[0.005]	[0.558]	[0.002]
Lagged independent variable *(ref. contemporaneous)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Dependent variable in levels	-0.391***	-0.462**	-0.392**	-0.070*	-0.015	-2.906	-0.525**	-0.159	0.902
(ref. first-differenced dep. var.)	[0.086]	[0.176]	[0.120]	[0.039]	[0.383]	[2.354]	[0.125]	[0.096]	[0.892]
Controlling for endogeneity	-0.019**	-0.002	-0.025***	-0.078	-0.016**	-0.012**	-1.014**	-0.125	-0.014
(ref. no-IV approach)	[0.005]	[0.002]	[0.005]	[0.067]	[0.004]	[0.003]	[0.271]	[0.117]	[0.021]
Wages in shares *(ref. wages not in shares)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	-0.542** [0.169]	*omitted*	*omitted*
Publication characteristics									
Peer reviewed paper *(ref. working paper)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Peer reviewed paper * st. error	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Publication year	-0.127 [0.389]	-0.298 [0.405]	0.088 [0.361]	-0.018 [0.038]	-0.283 [0.405]	-0.399 [0.442]	0.183** [0.060]	23.720 [30.191]	0.400 [0.454]
Publication year * st. error	-2.045*** [0.423]	-1.427* [0.724]	-1.273** [0.583]	-1.997*** [0.442]	-1.958*** [0.435]	-1.663*** [0.295]	-0.055** [0.021]	-0.270 [0.558]	3.654 [2.208]
10-Year impact factor	1.130** [0.478]	0.686 [0.654]	0.118 [0.485]	-0.160 [0.112]	0.770* [0.396]	8.242 [5.850]	-0.779 [0.182]	-16.502 [20.023]	1.018** [0.419]
10-Year impact factor * st. error	-3.764** [1.407]	-3.485* [1.973]	-1.843 [1.563]	-1.944 [2.044]	-4.997** [1.383]	-5.781** [1.593]	0.905** [0.277]	1.849 [4.042]	-8.776** [4.211]
Geography (ref. non-OECD)									
Europe	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)									
Regional – level analysis	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Development status (ref. not specified)									
Developed	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Developing	0.575*** [0.063]	0.631*** [0.128]	0.405*** [0.089]	*omitted*	0.562*** [0.061]	0.541*** [0.060]	*omitted*	0.435 [0.319]	0.004 [0.003]
Time (ref. midpoint before 2001)									
After 2001	-0.279*** [0.047]	-0.292*** [0.044]	0.083** [0.022]	0.211 [0.311]	-0.284*** [0.053]	-0.286*** [0.055]	*omitted*	-0.473* [0.263]	0.005 [0.022]

Other controls									
Dataspan	-0.349*** [0.008]	-0.354*** [0.014]	0.036** [0.009]	-0.002 [0.002]	-0.348*** [0.008]	-0.347*** [0.007]	-0.114*** [0.021]	-0.596*** [0.032]	-0.005*** [0.0001]
Number of RHS variables	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Observations	231	193	231	163	153	124	58	231	229
Adjusted R^2	0.622	0.634	0.676	0.409	0.723	0.784	0.616	0.368	0.502
Primary study fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes

Note: All columns (except Column 8) report WLS-MRA models, following the general-to-specific approach. Column 1 reports the main analysis outcomes. Column 2 trims the first and last 5 percentiles of the distributions of the elasticities and the st. errors to remove outliers. Column 3 winsorizes the first and the last 20 percentiles of the distribution of the elasticities. Column 4 excludes semi-elasticities (from log-linear models), Column 5 excludes calculated elasticities (as reported in the primary studies), Column 6 excludes elasticities expressed in shares. Column 7 excludes the elasticities from Columns 4 to 6 and winsorizes the first and last 20 percentiles of the remaining sample. Column 7 reports the random effects model (fixed effects model is not reported here for brevity since the point estimates are the same with the WLS-MRA in Column 1). Column 8 reports the WLS-MRA estimation results based on partial correlation coefficients. All models are weighted by the inverse of the variance of the elasticities. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table G2. Employment effects from technology

	Employment elasticities from technology								
Variable	**WLS (main analysis)**	**WLS trimming outliers**	**WLS winsorizing outliers**	**WLS excluding semi-elasticities**	**WLS excluding calculated elasticities**	**WLS excluding elasticities in shares**	**WLS excluding (4)-(6) and winsorizing**	**Random effects**	**Partial correlation coefficients**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
FAT – PET – PEESE tests									
Intercept (β_0) (PET) or (γ_0) (PEESE)	0.706*	-0.298	0.125***	0.367	0.221	-0.503	0.462***	0.159	1.400**
	[0.358]	[0.265]	[0.032]	[0.426]	[0.239]	[0.525]	[0.105]	[0.123]	[0.550]
St. error (β_1) (FAT) or (γ_1)	-1.296	-0.544	0.170	-0.140	-1.344	0.080	0.834**	-0.158	-13.905
	[0.951]	[0.740]	[0.252]	[1.611]	[1.004]	[0.956]	[0.334]	[0.353]	[3.167]
Type of trade (ref. process innovation)									
Product innovation	0.001**	0.003**	0.001***	0.001**	0.001**	0.001**	0.001***	0.282	0.009
	[0.0005]	[0.001]	[0.0002]	[0.0005]	[0.0005]	[0.0004]	[0.0002]	[0.201]	[0.0008]
Data aggregation (ref. worker-level)									
Industry-level	0.167**	0.184**	-0.021	0.142*	0.067	-1.024**	-0.435***	2.217**	-0.516
	[0.078]	[0.074]	[0.029]	[0.080]	[0.126]	[0.295]	[0.060]	[0.611]	[0.425]
Firm-level	1.117***	0.985***	0.239***	0.413*	0.601*	-0.125*	-0.029***	6.811***	-2.417**
	[0.066]	[0.062]	[0.024]	[0.224]	[0.345]	[0.072]	[0.005]	[1.001]	[0.716]
Sectoral Ievel (ref. economy-wide)									
Manufacturing	0.221	0.243	0.075	0.005	0.221	0.207	0.004	-0.031	0.017**
	[0.139]	[0.161]	[0.048]	[0.011]	[0.140]	[0.142]	[0.002]	[0.516]	[0.008]
Services	0.068**	0.104***	0.031***	0.027	0.068***	0.045**	0.015	0.258	0.046***
	[0.013]	[0.019]	[0.004]	[0.030]	[0.013]	[0.016]	[0.010]	[0.177]	[0.011]
Skill-level (ref. varied-skill)									
Low-skill	0.050**	0.093***	0.016	-0.122	0.038	0.004	-0.066***	-1.232	-0.027
	[0.023]	[0.022]	[0.017]	[0.332]	[0.038]	[0.037]	[0.009]	[0.962]	[0.065]
Medium-skill	0.060**	0.108***	0.033**	-0.111	-0.093	*omitted*	*omitted*	-1.172	-0.017
	[0.018]	[0.021]	[0.011]	[0.325]	[0.071]			[0.970]	[0.062]
High-skill	0.187***	0.225***	0.139***	0.013	0.189***	0.170***	-1.094**	2.212**	0.023
	[0.014]	[0.023]	[0.005]	[0.339]	[0.011]	[0.015]	[0.473]	[0.956]	[0.051]

Other methodological aspects									
Technology and trade *(ref. only trade)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Time series *(ref. cross – sectional)*	-0.146*** [0.008]	0.780*** [0.222]	-0.045*** [0.002]	-0.159*** [0.014]	-0.146*** [0.009]	-0.290** [0.108]	-0.132*** [0.005]	-0.443*** [0.032]	-0.088*** [0.001]
Lagged independent variable *(ref. contemporaneous)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var.)*	0.152*** [0.006]	0.048*** [0.003]	0.046*** [0.001]	0.160*** [0.011]	0.151*** [0.006]	0.292** [0.110]	0.132** [0.005]	0.450*** [0.032]	0.064*** [$2.7*10^{-6}$]
Controlling for endogeneity *(ref. no-IV approach)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Hours worked *(ref. number of workers)*	0.0001*** [$6.80*10^{-11}$]	0.0001*** [$2.4*10^{-10}$]	0.0001*** [$3.5*10^{-12}$]	0.0001*** [$6.8*10^{-8}$]	0.0001*** [$6.5*10^{-8}$]	0.0001*** [$6.7*10^{-10}$]	0.0001*** [$1.6*10^{-12}$]	0.0004*** [$2.5*10^{-14}$]	0.0002*** [$1.7*10^{-13}$]
Publication characteristics									
Peer reviewed paper *(ref. working paper)*	-0.848** [0.406]	-0.771*** [0.178]	-0.161*** [0.005]	-0.029 [0.297]	-0.241 [0.315]	0.708 [0.458]	-0.424*** [0.048]	-2.460*** [0.600]	0.606*** [0.047]
Peer reviewed paper * st. error	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Publication year	0.676*** [0.021]	0.614*** [0.030]	0.187*** [0.015]	0.208 [0.414]	0.290 [0.232]	-0.041 [0.057]	-0.128*** [0.003]	1.663** [0.591]	-1.431*** [0.150]
Publication year * st. error	-1.282** [0.565]	-1.212* [0.659]	-0.378* [0.194]	0.052 [0.871]	-1.258** [0.569]	-0695 [0.742]	0.098 [0.194]	-0.444 [1.682]	0.721 [1.850]
10-Year impact factor	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
10-Year impact factor * st. error	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Geography (ref. non-OECD)									
Europe	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)									
Regional – level analysis	0.474** [0.173]	-0.171 [0.208]	0.068 [0.050]	-0.392 [0.360]	0.472** [0.178]	0.933** [0.415]	-0.424*** [0.048]	0.582 [0.436]	0.600 [0.548]
Development status (ref. not specified)									
Developed	0.888*** [0.202]	*omitted*	-0.018 [0.052]	*omitted*	0.897*** [0.213]	0.580** [0.216]	*omitted*	0.349 [0.234]	0.009 [0.006]
Developing	0.211**	0.228**	0.055**	2.740*	0.211**	-0.020	-0.177	0.606*	0.011

	[0.072]	[0.065]	[0.017]	[1.491]	[0.074]	[0.164]	[0.402]	[0.347]	[0.013]
Time (ref. midpoint before 2001)									
After 2001	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Other controls									
Dataspan	0.240***	0.256***	0.012***	-0.004	0.241***	0.017	0.032***	1.365***	0.130***
	[0.006]	[0.005]	[0.001]	[0.010]	[0.005]	[0.015]	[0.004]	[0.081]	[0.017]
Number of RHS variables	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	-0.098**	-0.099*	-0.011*	-0.214	-0.098**	-0.006	0.109**	-0.542**	-0.014
	[0.038]	[0.051]	[0.006]	[0.255]	[0.038]	[0.034]	[0.052]	[0.207]	[0.022]
Observations	392	328	392	285	355	276	198	392	370
Adjusted R^2	0.985	0.624	0.944	0.994	0.985	0.229	0.817	0.655	0.995
Primary study fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	no	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	no	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	no	yes	yes	yes	yes	yes

Note: All columns (except Column 8) report WLS-MRA models, following the general-to-specific approach. Column 1 reports the main analysis outcomes. Column 2 trims the first and last 5 percentiles of the distributions of the elasticities and the st. errors to remove outliers. Column 3 winsorizes the first and the last 20 percentiles of the distribution of the elasticities. Column 4 excludes semi-elasticities (from log-linear models), Column 5 excludes calculated elasticities (as reported in the primary studies), Column 6 excludes elasticities expressed in shares. Column 7 excludes the elasticities from Columns 4 to 6 and winsorizes the first and last 20 percentiles of the remaining sample. Column 7 reports the random effects model (fixed effects model is not reported here for brevity since the point estimates are the same with the WLS-MRA in Column 1). Column 8 reports the WLS-MRA estimation results based on partial correlation coefficients. All models are weighted by the inverse of the variance of the elasticities. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table G3. Wage effects from trade

	Wage elasticities from trade								
Variable	**WLS (main analysis)**	**WLS trimming outliers**	**WLS winsorizing outliers**	**WLS excluding semi-elasticities**	**WLS excluding calculated elasticities**	**WLS excluding elasticities in shares**	**WLS excluding (4)-(6) and winsorizing**	**Random effects**	**Partial correlation coefficients**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
FAT – PET – PEESE tests									
Intercept (β_0) (PET) or (γ_0) (PEESE)	1.701**	1.792*	1.944**	3.825***	1.893***	1.893***	-1.779**	0.004	2.138
	[0.665]	[0.923]	[0.470]	[0.411]	[0.275]	[0.275]	[0.709]	[0.066]	[1.755]
St. error (β_1) (FAT) or (γ_1)	0.375	0.430	0.224	0.635	0.498	0.498	0.787*	0.322	-7.729
	[0.310]	[0.443]	[0.221]	[0.477]	[0.399]	[0.401]	[0.431]	[1.196]	[7.250]
Type of trade (ref. trade in final goods)									
Trade in intermediates	-0.002***	-0.003***	-0.003***	-0.003**	-0.003***	-0.003***	-0.002**	-0.184	-0.001***
	[0.0006]	[0.0006]	[0.0005]	[0.0008]	[0.0006]	[0.0007]	[0.0009]	[0.173]	[0.0001]
Data aggregation (ref. worker-level)									
Industry-level	-0.009	-0.002	-0.009	-0.010	-0.009	-0.009	-0.010	0.018	0.063
	[0.007]	[0.003]	[0.007]	[0.007]	[0.007]	[0.007]	[0.007]	[0.364]	[0.039]
Firm-level	0.016**	0.015	0.016**	0.015**	0.016**	0.016**	0.015*	0.198	0.041
	[0.006]	[0.019]	[0.006]	[0.007]	[0.007]	[0.007]	[0.007]	[0.488]	[0.033]
Sectoral Ievel (ref. economy-wide)									
Manufacturing	0.014***	0.014***	0.014***	3.389***	0.013***	0.013***	0.355**	0.305**	-0.104
	[0.001]	[0.002]	[0.0009]	[0.397]	[0.002]	[0.002]	[0.141]	[0.098]	[0.312]
Services	-0.003	-0.003	-0.002	3.362***	-0.003	-0.004	0.328**	-0.039	-0.109
	[0.009]	[0.010]	[0.009]	[0.394]	[0.010]	[0.010]	[0.139]	[0.189]	[0.312]
Skill-level (ref. varied-skill)									
Low-skill	0.004	0.004	0.004	0.007	0.004	0.004	0.006	0.025	0.009
	[0.001]	[0.004]	[0.004]	[0.005]	[0.004]	[0.004]	[0.005]	[0.118]	[0.007]
Medium-skill	0.005	0.004	0.005	0.006	0.004	0.004	0.005	-0.502	0.003
	[0.003]	[0.004]	[0.003]	[0.004]	[0.003]	[0.003]	[0.004]	[0.348]	[0.004]
High-skill	0.013**	0.012**	0.012**	0.015**	0.013**	0.013**	0.014**	0.334	0.013
	[0.004]	[0.004]	[0.003]	[0.005]	[0.004]	[0.004]	[0.004]	[0.240]	[0.008]

Other methodological aspects									
Technology and trade *(ref. only trade)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Time series *(ref. cross – sectional)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Lagged independent variable *(ref. contemporaneous)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var.)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Controlling for endogeneity *(ref. no-IV approach)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Wages in shares *(ref. wages not in shares)*	-2.613** [0.867]	-2.657** [1.903]	-2.261** [0.611]	-3.040*** [0.499]	0.670*** [0.108]	*omitted*	0.006 [0.005]	-5.263** [2.054]	-1.158 [0.864]
Publication characteristics									
Peer reviewed paper *(ref. working paper)*	-0.948** [0.325]	-1.002** [0.447]	-0.961** [0.229]	-3.293*** [0.391]	-1.040*** [0.142]	-1.041*** [0.142]	0.035* [0.017]	3.124 [6.405]	-0.627** [0.188]
Peer reviewed paper * st. error	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Publication year	0.130*** [0.005]	0.136*** [0.008]	-0.003 [0.005]	1.847*** [0.219]	0.133*** [0.003]	0.133*** [0.013]	0.108** [0.046]	0.450* [0.255]	0.184 [0.191]
Publication year * st. error	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
10-Year impact factor	1.517** [0.598]	1.579* [0.835]	1.739*** [0.423]	1.108*** [0.135]	1.689*** [0.242]	1.689*** [0.244]	-2.406** [0.934]	8.076 [11.215]	1.301 [1.165]
10-Year impact factor * st. error	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Geography (ref. non-OECD)									
Europe	-0.008*** [0.002]	-0.008** [0.003]	-0.009*** [0.001]	-0.047** [0.021]	-0.007** [0.002]	-0.007** [0.002]	0.034 [0.021]	0.131 [0.092]	-0.120 [0.089]
Spatial unit (ref. national-level analysis)									
Regional – level analysis	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Development status (ref. not specified)									
Developed	0.008** [0.004]	0.008** [0.004]	0.008** [0.004]	0.012*** [0.003]	0.008** [0.004]	0.008** [0.004]	0.010** [0.002]	0.117 [0.354]	0.002*** [0.0004]
Developing	-0.023	-0.025	-0.008**	-0.022	-0.023	-0.023	-0.008**	0.118	-0.001**

	[0.018]	[0.019]	[0.004]	[0.024]	[0.018]	[0.018]	[0.002]	[0.392]	[0.0005]
Time (ref. midpoint before 2001)									
After 2001	-0.716** [0.328]	-0.759 [0.466]	-0.959** [0.230]	-5.690*** [0.662]	-0.811*** [0.138]	-0.812*** [0.138]	0.290** [0.107]	5.562 [6.317]	-0.468 [0.395]
Other controls									
Dataspan	-0.408*** [0.019]	-0.412*** [0.027]	-0.030** [0.014]	-0.004 [0.006]	-0.416*** [0.024]	-0.416*** [0.024]	0.002 [0.001]	-1.974*** [0.151]	-0.053** [0.023]
Number of RHS variables	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	0.018*** [0.002]	0.018*** [0.002]	0.017*** [0.008]	0.079* [0.041]	0.018*** [0.002]	0.018*** [0.002]	0.064 [0.037]	0.415** [0.203]	-0.571 [0.533]
Observations	459	390	459	306	384	378	225	459	457
Adjusted R^2	0.906	0.331	0.926	0.905	0.912	0.912	0.922	0.190	0.548
Primary study fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes

Note: All columns (except Column 8) report WLS-MRA models, following the general-to-specific approach. Column 1 reports the main analysis outcomes. Column 2 trims the first and last 5 percentiles of the distributions of the elasticities and the st. errors to remove outliers. Column 3 winsorizes the first and the last 20 percentiles of the distribution of the elasticities. Column 4 excludes semi-elasticities (from log-linear models), Column 5 excludes calculated elasticities (as reported in the primary studies), Column 6 excludes elasticities expressed in shares. Column 7 excludes the elasticities from Columns 4 to 6 and winsorizes the first and last 20 percentiles of the remaining sample. Column 7 reports the random effects model (fixed effects model is not reported here for brevity since the point estimates are the same with the WLS-MRA in Column 1). Column 8 reports the WLS-MRA estimation results based on partial correlation coefficients. All models are weighted by the inverse of the variance of the elasticities. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Table G4. Employment effects from trade

	Employment elasticities from trade								
Variable	**WLS (main analysis)**	**WLS trimming outliers**	**WLS winsorizing outliers**	**WLS excluding semi-elasticities**	**WLS excluding calculated elasticities**	**WLS excluding elasticities in shares**	**WLS excluding (4)-(6) and winsorizing**	**Random effects**	**Partial correlation coefficients**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
FAT – PET – PEESE tests									
Intercept (β_0) (PET) or (γ_0) (PEESE)	3.561**	-0.105***	0.689	0.068	-0.512***	-0.136***	0.046**	-0.082	7.719
	[1.558]	[0.019]	[0.710]	[1.579]	[0.057]	[0.26]	[0.012]	[0.199]	[6.659]
St. error (β_1) (FAT) or (γ_1)	-0.058	-0.141	0.086	0.332	0.010	0.077	0.318	-0.623	-23.194
	[0.314]	[0.313]	[0.210]	[0.299]	[0.297]	[0.325]	[0.267]	[0.715]	[20.614]
Type of trade (ref. trade in final goods)									
Trade in intermediates	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Data aggregation (ref. worker-level)									
Industry-level	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Firm-level	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Sectoral Ievel (ref. economy-wide)									
Manufacturing	-0.121***	-0.095***	-0.101***	-0.141***	-0.123***	-0.131***	-0.114***	-0.449**	0.110
	[0.020]	[0.014]	[0.012]	[0.024]	[0.019]	[0.023]	[0.017]	[0.127]	[0.111]
Services	-0.099	-0.071**	-0.089***	-0.121***	-0.101***	-0.109***	-0.102***	-0.003	0.106
	[0.019]	[0.020]	[0.014]	[0.022]	[0.018]	[0.022]	[0.018]	[0.168]	[0.091]
Skill-level (ref. varied-skill)									
Low-skill	-0.003*	-0.015**	-0.001***	-0.004**	-0.003**	-0.003**	-0.002***	-0.455*	-0.018*
	[0.001]	[0.0008]	[0.0002]	[0.001]	[0.001]	[0.001]	[0.0003]	[0.247]	[0.010]
Medium-skill	-0.036**	-0.043**	-0.004	-0.041**	-0.044***	-0.046***	-0.013**	-0.568	-0.003
	[0.016]	[0.011]	[0.008]	[0.015]	[0.007]	[0.008]	[0.005]	[0.468]	[0.024]
High-skill	0.002**	-0.005**	0.002***	0.002**	0.002**	0.002**	0.002***	0.264	-0.010**
	[0.0006]	[0.001]	[0.0001]	[0.0005]	[0.0006]	[0.0006]	[0.0002]	[0.207]	[0.004]
Other methodological aspects									
Technology and trade *(ref. only trade)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*

Time series *(ref. cross – sectional)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Lagged independent variable *(ref. contemporaneous)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Dependent variable in levels *(ref. first-differenced dep. var.)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Controlling for endogeneity *(ref. no-IV approach)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Hours worked *(ref. number of workers)*	0.275*** [0.041]	-0.058*** [0.001]	0.060 [0.037]	-0.581 [2.780]	0.282*** [0.039]	0.305*** [0.049]	-0.178*** [0.008]	-0.115*** [0.006]	0.004 [0.011]
Publication characteristics									
Peer reviewed paper *(ref. working paper)*	-0.970** [0.337]	0.213*** [0.027]	-0.134 [0.146]	0.531 [2.427]	-0.079** [0.023]	-0.189*** [0.041]	0.243*** [0.005]	-0.161 [0.288]	-0.869 [0.517]
Peer reviewed paper * st. error	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Publication year	5.048** [2.214]	-0.123*** [0.023]	1.009 [1.013]	0.169 [2.234]	0.746*** [0.088]	-0.234*** [0.032]	0.085*** [0.007]	-2.492 [1.574]	11.202 [9.968]
Publication year * st. error	1.148** [0.326]	0.403 [0.307]	0.596** [0.239]	1.470*** [0.344]	1.148** [0.325]	1.337** [0.375]	0.819** [0.303]	0.249 [0.216]	-0.045*** [0.010]
10-Year impact factor	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
10-Year impact factor * st. error	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Geography (ref. US-UK-Canada)									
Europe	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Spatial unit (ref. national-level analysis)									
Regional – level analysis	3.090*** [0.197]	0.433*** [0.047]	0.483** [0.173]	0.754 [1.042]	3.129*** [0.188]	2.907*** [0.187]	0.137*** [0.011]	3.520*** [0.330]	0.176 [0.112]
Development status (ref. not specified)									
Developed	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Developing	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Time (ref. midpoint before 2001)									
After 2001	-0.128*** [0.016]	-0.091*** [0.014]	-0.007 [0.014]	-0.552 [3.473]	-0.131*** [0.014]	-0.140*** [0.018]	-0.216*** [0.010]	-0.592*** [0.117]	0.026 [0.016]
Other controls									

Dataspan	0.058***	0.056***	0.011	-0.508***	-0.060***	0.064***	-0.018***	-0.055	0.0006
	[0.008]	[0.010]	[0.007]	[0.015]	[0.008]	[0.010]	[0.004]	[0.040]	[0.014]
Number of RHS variables	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Including important controls or fixed effects *(ref. missing important controls or fixed effects)*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*	*omitted*
Observations	635	533	635	471	590	557	408	635	635
Adjusted R^2	0.992	0.504	0.996	0.992	0.992	0.993	0.997	0.261	0.325
Primary study fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country fixed effects	yes	yes	yes	no	yes	yes	yes	yes	yes
Midpoint fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes
Country x Midpoint fixed effects	yes	yes	yes	no	yes	yes	yes	yes	yes

Note: All columns report WLS-MRA models, following the general-to-specific approach. Column 1 reports the main analysis outcomes. Column 2 trims the first and last 5 percentiles of the distributions of the elasticities and the st. errors to remove outliers. Column 3 winsorizes the first and the last 20 percentiles of the distribution of the elasticities. Column 4 excludes semi-elasticities (from log-linear models), Column 5 excludes calculated elasticities (as reported in the primary studies), Column 6 excludes elasticities expressed in shares. Column 7 excludes the elasticities from Columns 4 to 6 and winsorizes the first and last 20 percentiles of the remaining sample. Column 7 reports the random effects model (fixed effects model is not reported here for brevity since the point estimates are the same with the WLS-MRA in Column 1). Column 8 reports the WLS-MRA estimation results based on partial correlation coefficients. All models are weighted by the inverse of the variance of the elasticities. * for p<0.1, ** for p<0.05 and *** for p<0.01.

Appendix H. Best practice estimates

Table G1. Best practice estimates

Sample	Reasoning	Outcome
Wage elasticities from technology	Constant + time series analysis + first-differenced dependent variable + model includes both technology and trade + estimation method addresses endogeneity + more recent estimate (after 2001)	-0.104
Employment elasticities from technology	Constant + analysis at the macro- level + firm-level evidence + varied skill-level of the workforce + time series analysis + first differenced dependent variable + elasticities reported in peer-reviewed journals + the estimated model includes important control variables	0.796
Wage elasticities from trade	Constant + trade refers to both intermediate and final products + manufacturing sector + firm level analysis + in Europe + elasticities reported in peer-reviewed journals	0.775
Employment elasticities from trade	Constant + manufacturing sector + more recent effect (after 2001) + elasticities published in peer-reviewed journals	2.167

Reference list

Stanley, T. D., & Doucouliagos, H. (2012). *Meta-regression analysis in economics and business*. Routledge Advances in Research Methods.