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## Europe's exports superstar: It's the organisation!

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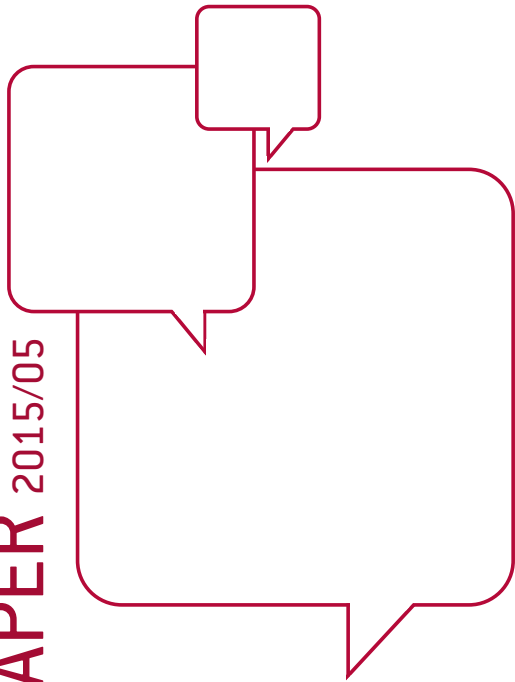
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# EUROPE'S EXPORT SUPERSTARS – IT'S THE ORGANISATION!

DALIA MARIN, JAN SCHYMIK AND JAN TSCHKE

## Highlights

- What explains Germany's superb export performance? Is Germany's export behaviour very distinct compared to other European countries? We explore the organisational responses to competition of 14,000 exporting firms in seven European countries. We examine the export business model of the median exporter and of the top one percent exporters in each country, accounting for 20 percent to 55 percent of total exports.
- What do these firms do to become superstars? We find, first, that the export market share of the median exporter in each of the countries to the world more than tripled (in some cases the export market share increases tenfold) for firms that combine decentralised management with offshoring of production to low-wage countries. Exporters which abstain from any organisational adjustment do very badly. Decentralised management provides incentives for workers for product improvements allowing exporters to compete on quality. Offshoring production to low-wage countries reduces costs allowing exporters to compete on price. Second, we find that Germany is the leading quality exporter in Europe followed by Austria and Spain. Among the top 10 percent of exporters there is no single firm with low quality in Germany and Austria, which suggest that decentralised management has provided incentives for quality in these countries. Third, Germany's exports are less vulnerable to price increases, while exports from France and Italy respond strongly to price changes, and thus costs reductions via offshoring benefits these countries most.

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## **1. Introduction**

Many observers believe that for the recovery from the great recession of 2008-09 it is essential that Europe regains its competitiveness, which has been lost in some of the southern European countries because of capital inflows and a booming housing market. Since the path to improved competitiveness via currency devaluations is closed because of the common currency, other options discussed are lower wages in southern Europe and/or more inflation in the northern European countries.

Typically, people refer to Germany as a benchmark case of a successful adjustment from the “sick man of Europe” in the 2000s to an economic powerhouse today. In this paper we want to shed more light on these issues by examining the following questions. First, what explains Germany’s superb export performance? Has it been wage restraint as is commonly argued or something else? Second, is Germany’s export performance very distinct compared to other European countries? Third, what can other European countries learn from the German experience? In this paper we examine the exporting and organisational behaviour of 14,000 firms in seven European countries. We argue that the superstar exporters of each of the seven countries have much more in common in terms of performance than the country’s macro performance suggests, with Austria, Germany and Spain as very successful exporting countries and France, Italy and the UK with more moderate export growth. The top 5 percent of a country’s exporters account for 69 to 86 percent of total exports in the respective countries. Therefore, looking at these superstar exporters sheds lights on the country’s performance. We take a closer look at the organisational choices of these superstar exporters on the one hand and the median exporter on the other to evaluate why some of these countries have been more successful than others. We find that Austria, Germany and Spain base their export business model on product quality making their exports less responsive to price and cost increases. Exporting firms in these countries introduce decentralised management as a way to incentivise workers in firms to come up with ideas for improvements in product quality. By contrast, France, Italy and the UK base their exporting strategy more on prices by offshoring part of their activities to low-wage countries.

We argue that the wage restraint in the 1990s certainly helped Germany’s export performance but the more fundamental reason for Germany’s success is its exceptional organisational performance. Germany’s exporters offshored part of production to eastern Europe and China to gain price competitiveness when a stronger euro and growing nominal wages started to threaten its export performance. Moreover, German firms moved to decentralised management, empowering their workforces to generate new ideas that improve product quality, thus making the export demand for its products less responsive to price and cost increases. Austria based its exporting strategy almost

exclusively on quality. It experienced much larger wage increases than Germany and based its export performance almost exclusively on decentralised management and non-price competitiveness. As a small country with a population of 8 million, Austria's exporters are exceptionally large. Spain is another impressive exporter in spite of the fact that the country experienced the most drastic increases in wages in the period 2000-13. Spain's nominal wages continued to grow after the great recession of 2008-09. Its exporting strategy is based on quality improvements achieved via a decentralised firm organisation as well as on lowering costs by offshoring production to eastern Europe and China.

We find, first, that the export market share of the median exporter to the world is more than tripled (in some cases it increases by a factor of 10) for firms which combine decentralised management with offshoring production to low wage countries. Exporters which abstain from any organisational adjustment do very badly. Decentralised management provides incentives for workers for product improvements allowing exporters to compete on quality. Offshoring production to low-wage countries reduces costs allowing exporters to compete on prices. Second, there is a striking variation in export market shares for a given productivity level suggesting that organisational changes can help in particular small and medium sized firms to increase their export market share. Third, by examining the behaviour of the export superstars, we find that Germany is the leading quality exporter in Europe followed by Austria and Spain. Among the top 10 percent of exporters there is no single firm with low quality. Moreover, in Germany (and to a lesser degree in Austria) exporters with decentralised management experience the strongest boost to their top quality exports suggesting that decentralised management indeed provides incentives for quality. Decentralisation did not lead to improved quality in France, Italy and Spain which may explain why some of these countries have operated with this organisation less often. Moreover, Germany's exports are less vulnerable to price increases, while France's and Italy's exports are vulnerable to price changes and thus offshoring to low wage countries benefit these countries most. Fourth, offshoring is the most effective competitive strategy for Italian, British and French exporters. Note, however, that among these three countries the most effective offshorers are UK exporters (increasing the EMS by a factor greater than 4 compared to the "none-exporters" – note, we use this term throughout this paper to refer to exporters which do not make any organisational adjustment) and the least effective are French, German and Spanish exporters (increasing the EMS by 50 percent compared to the "none-exporters"). Firms in the UK and Italy often use their sourcing strategies as a way to get access to a market, while French exporters do this less frequently.

The paper is organised in the following sections. Section 2 reports some facts about the competitiveness of European countries. In section 3 we define a firm level measure of export competitiveness and show how the organisational choice of exporters has affected the export performance of the median exporter. In sections 4 and 5 we look at the very large firms and try to understand how these firms have become superstar exporters. In section 6 we examine the role of decentralised management for product quality and non-price competitiveness. In section 7 we discuss some possible reasons why decentralised management may not have provided incentives for product quality in some European countries. Finally, in section 8 we explore whether the rise of Eastern Europe and China has benefited some European countries more than others.

## **2. The Macro View**

We start by looking at some facts about the export performance in European countries. In Figure 1 (figures are shown at the end of the paper) we show exports of manufacturing (in 2000 prices) in the period 2000-2013 of which Germany and Austria have the strongest export growth almost matched by Spain. In 2011 Germany and Spain were the only countries in which export growth exceeded that before the crisis of 2007-08. Interestingly, Austria's and Spain's exports have been growing in spite of rising nominal wages. Also, German exports continued to grow after 2009 when nominal wages started to increase quite substantially (see Figure 2). The nominal wage increases were compensated partially by productivity gains resulting in only a moderate increase in unit labour costs in Austria and Germany and a stark decline in unit labour costs in Spain (at the price of mass unemployment) (see Figure 3).

[Figure 1: Exports of Manufacturing in European Countries (at 2000 prices)]

[Figure 2: Nominal Wages and Salaries in Manufacturing in European Countries]

[Figure 3: Unit Labour Costs in Manufacturing]

Germany's export success can also be seen when looking at the market shares in manufacturing in the OECD market. Germany accounts for over 10 percent of the OECD market compared to France and Italy with about 4 percent and the UK with about 3 percent (see Figure 4). In all countries the market share in the OECD declined since 2004. The decline was particularly pronounced in the UK and France.

[Figure 4: Market Share in the OECD in 2008]

Several facts of Figures 1 to 3 are noteworthy. First, nominal wages in these countries appear to be downward sticky and have not fallen after 2008 in spite of the biggest negative demand shock since the great depression of the 1930s. Therefore, the hope that the recession will restore competitiveness via a fall in wages in the southern European countries looks bleak<sup>1</sup>. Second, exports continued to grow in some of these countries (like Spain, Austria, Germany after 2009) in spite of rising nominal wages. What has contributed to this export performance in these countries?

To answer these questions we want to go deeper and to examine the export business model firms have pursued to remain competitive in world markets. More specifically, we focus on two adjustments in firm organisation that may help exporting firms to meet competitive pressures from foreign rivals. Offshoring production to low wage countries reduce costs and allows exporting firms to compete on prices. Decentralised management provides incentives for workers for product improvements which enables exporters to compete on quality<sup>2</sup>. We start with a firm level analysis of exporting behaviour.

### **3. The Firm View**

#### **3.1. Organisational Choices**

We explore the organisational strategies of European firms in Table 1 and Figure 5. The following points are noteworthy. First, exporting firms tend to engage significantly more often in decentralised management and/or offshoring compared to domestic firms as the share of firms that do not offshore or have decentralised management (termed "none-exporters" in this paper) is much smaller among exporters compared to domestic firms. This suggests that exporters faced with tougher competition from abroad use the firm organisation as a competitive tool to compete on world markets<sup>3</sup>. Second, Austria, Germany, the UK and Spain have the largest share of exporting firms with a decentralised organisation (Spain: 22.1 percent, UK: 22 percent, Germany: 21.8 percent, Austria: 21.4 percent). The share of firms engaged in decentralised management is much smaller among French and Italian exporters. Third, the opposite is the case for offshoring. Germany and the UK have fewer offshoring firms, while in France and Italy a substantial share of exporting firms engage in offshoring (52 percent and 33.9 percent, respectively) with Spain and Austria somewhat in between. Fourth, with the exception of Italy, there is a sizeable share of exporting firms in all countries which engage in both

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<sup>1</sup> Economists have argued that because of these wage stickiness restoring growth in southern Europe will require more inflation in northern Europe, see Krugman (2012) and Blanchard *et al* (2013)

<sup>2</sup> See Marin, Schymik, Tscheke (2015) for a stylized model.

<sup>3</sup> Marin and Verdier (2014) and Marin (2009) examine the role of international trade and foreign competition for decentralized management. Bloom and van Reenen (2007) show that competition has led to better management practice.

organisational margins ("both-exporters"). If we take the frequency of organisational choices as a criterion the following picture emerges: Austria, Germany, the UK, and Spain base their export business model on product quality by empowering their workers in a decentralised firm organisation, while firms in France and Italy focus more on prices and costs by offshoring production to low wage countries. According to these numbers, French exporters are the leading offshorers in Europe. The focus on quality may account for why Austria, Germany and Spain were experiencing positive export growth in spite of rising nominal wages, while France's and Italy's exports are harder hit by rising wages, pushing firms in this countries to try and compensate for this rise in costs by offshoring production to low wage countries<sup>4</sup>. We take a closer look at the importance of product quality as an instrument of non-price competitiveness in section 5.

[Table 1: The Frequency of Offshoring and Decentralised Management]

### 3.2. A Firm-Level Measure of Competitiveness

We have just seen that exporters in France and Italy primarily focus on offshoring to compete on prices while Austria, Germany, the UK and Spain use decentralised management to compete on quality. How effective have these organisational strategies been? We examine next whether firms with decentralised management and/or offshoring production do significantly better in export markets than firms without. We need first to define a firm level measure of competitiveness. We construct the export market share of a 'typical exporter' for each country. The export markets share of the 'average exporting firm' in a country can be defined by

$$EMS = \text{average export value of firms in country } i \text{ to region } j / \text{total world imports to region } j$$

In Figure 6 we show the average and median exporter's market shares in world markets for each country. Several points are noteworthy. The average EMS is driven by two things: the firm size (in terms of turnover) and the share of output exported (the intensive margin of exports). Typically, large countries will have many large firms (and many large exporters) with a smaller share of output exported (they serve also a large domestic market) and thus have larger average EMSs in world markets. The UK and France are examples of this (Table 2). In contrast, small countries will have fewer and smaller firms (and exporters) with a larger share of output exported (as the domestic market is

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<sup>4</sup> The stronger vulnerability of Italy's and France's exports to prices might explain why France and Italy have been asking the EZB to target a weaker euro. Offshoring to low wage countries may have had a larger effect on costs in Germany than the numbers here suggest as the threat to relocate production to low wage countries have contributed to the wage restraint in Germany via wage decentralization as Dustman *et al* (2014) argue.

small) and thus have smaller average EMSs in world markets. Hungary is an example of this. Table 2 illustrates this by showing the size of firms and of exporters, the share of output exported, and the share of exporters in the total number of firms for these countries.

Germany and Austria appear to be exceptions from this rule. Germany, though a large country, has, relative to its size, many small and medium sized exporters (the “Mittelstand”) and thus has one of the smaller average export market shares with about 0.65 per mille (see Figure 6, Table 2). Austria, though a small country, has fewer firms but exceptionally large exporters and thus the average EMS is 5 times as large as Germany’s. This has historic as well as political reasons. The large exporting firms consist of the former state-owned industries which themselves originated from the German military sector located in Austria during World War II. Moreover, in the post war period the government pursued an industrial policy based on economies of scale encouraging the creation of large firms.<sup>5</sup>

In Figure 6 we show in addition to the average also the median export market share as a measure of the competitiveness of the typical exporter of a country to account for the fact that the average EMS may be driven by a few very large exporters as is suggested by a recent literature on firm heterogeneity and trade<sup>6</sup>. Apparently, this is indeed the case. The median EMSs are much smaller compared to the average EMSs suggesting that they are preferable as a measure of economic performance of the ‘typical exporter’ of a country. Therefore, we will continue the analysis using the median EMSs. Furthermore, we will devote a section of the paper to the superstar exporters – the top 1 percent of exporting firms in each country – to understand what drives the competitiveness of the very large firms.

Why are the firm level average EMSs so different from the OECD market shares as shown in Figure 4a? Germany’s exporters have the largest market share in the OECD and one of the smaller firm level average EMS. The reason is that Germany has many more exporters than the other countries which add up to a larger macro market share although the typical exporter is smaller in terms of turnover compared to the other countries.

[Figure 6: Average and Median Firm Export Market Shares in World Markets (in per mille)]

[Table 2: The Export Market Share: Explaining the Numerator]

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<sup>5</sup> See Marin (1995)

<sup>6</sup> See Bernard *et al* (2007) and Ottaviano and Mayer (2007)



### 3.3. Organisational Choices and Export Competitiveness

We are now ready to answer the question whether or not exporting firms did significantly better on export markets when using the firm organisation as a competitive tool. In Figure 7 we show how firms' organisational choices affect the export performance of the 'typical exporter'. As can be seen, the export market shares of the median exporter vary substantially across organisational forms. Exporters typically double or triple their EMSs in world markets when they choose the 'appropriate' business model of exporting (compared to "none-exporters" who abstain from any organisational choice). Moreover, by working along both organisational margins "both-exporters" (offshoring and decentralising firms) in Germany and Spain more than triple their median EMS compared to the "none-exporters", in Austria "both-exporters" boost their EMS by factor eleven and in the UK by a factor of almost 6 compared to the "none-exporters". In France and Italy "both-exporters" double their median EMS compared to "none-exporters". Hence, "both-exporters" are the stars among exporting firms, while "none-exporters" who do not choose the organisation as a competitive tool do very badly on export markets. They have an EMS much below the country's median exporter as the numbers above bars in Figure 7 show<sup>7</sup>.

Furthermore, decentralised management has more than doubled and tripled the export market shares of Germany's and Austria's exporters ("dec-exporters") compared to the "none-exporters" in their respective country. This might explain why these two countries have frequently used decentralised management as a competitive tool as shown in Table 1. In contrast, Spain and partly the UK had to combine decentralised management with offshoring in order to lower costs and to achieve a tripling of its export market share of the median exporter. Offshoring, on the other hand, was the most effective competitive strategy for Italian, British and French exporters. Note, however, that among these three countries the most effective offshorer are UK exporters (increasing the EMS by a factor greater than 4 compared to the "none-exporters").

Summing up, the analysis tends to support the previous conclusion: Austria, Spain, and Germany appear to base their export strategy mainly on product quality by decentralising and empowering workers. This has been effective in boosting export market shares, in particular when exporters of these three countries lowered their costs by organising production internationally. Italy, France, and the UK base their export strategy mainly on product prices. Offshoring production to low wage countries has helped to increase the export market share most among UK exporters.

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<sup>7</sup> Note, that we are reporting simple correlations here. We show, however, that the causality runs from the organisation to the EMS in Marin, Schymik, Tscheke (2015).

[Figure 7: Median Export Market Share by Organisational Form]

#### 4. Firm Heterogeneity

In the previous section we have seen that the countries' average EMSs are much larger than the median EMSs, suggesting that large firms are dominating among exporters. In this section we want to focus on these large firms. In Figure 8 we take a first look at the distribution of exporters by plotting the correlation between the firm's productivity level and the EMS of firms, thereby distinguishing firms by organisational form. As can be clearly seen from the figure, the EMS of firms, irrespective of the organisation chosen, is increasing substantially in productivity. This resembles the well-known fact that more productive firms tend to be bigger in terms of sales, both at home and abroad.<sup>8</sup> The new and important feature of the figure though, is a striking variation in EMSs across organisational forms, holding constant productivity. Figure 8 shows that the right choice of organisation can significantly improve the export performance of firms. This effect can be very large in particular for the small and medium-sized firms at the bottom of the productivity distribution. For example, "both-exporters" in Germany from the bottom 25 percent of the productivity distribution have EMSs about eleven times as high as "none-exporters".

[Figure 8: Export Market Share by Organisational Form for different Productivity Levels]

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<sup>8</sup> See Melitz (2003).

## 5. The Origin of Superstars

We now take a closer look at the largest exporters in each country by focusing on the export performance of the top exporters. How do they become superstars? Figure 9 shows that it is indeed the largest firms that do all the exporting in European countries. The top 1 percent of exporters (in terms of export value) account for 56.5 percent of total exports in Italy, for 42 percent of total exports in France, for 30 percent of exports in Spain, and for more than 25 percent of total exports in Austria, Germany, and the UK, respectively. The top 5 percent of exporters account for about 80 percent of total exports in Italy, 73 percent of total exports in France, 68 percent of total exports in Spain and Austria, and to over 54 percent of total exports in Germany and the UK, respectively<sup>9</sup>.

[Figure 9: The Top Exporters (export value of top firms in percent of total exports)]

What did these top exporters do to become export superstars? Figure 10 gives an answer. In Austria and Germany the top 1 percent of exporters use mainly decentralised management as their business model of exporting. In the UK and Italy the top 1 percent of exporters organised production internationally to boost their EMS in world markets. In France and Spain the top 1 percent of exporters used both organisational margins to meet foreign rivals on world markets (France: "off-exporters" and "both-exporters", Spain: "dec-exporters" and "both-exporters"). A similar, though less stark, picture emerges for the top 5 percent of exporters.

We conclude from looking at the export superstars of each country: Austria's and Germany's exporters (and to a lesser extent Spain's exporters) become superstars by choosing decentralised management which provides incentives for product quality (empowering their workers in an organisation with decentralised management), Italy's and UK's exporters (and to a lesser extent France's exporters) become superstars by offshoring part of production to low wage countries.

[Figure 10: Export Market Shares of Top Exporters]

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<sup>9</sup> This is a well known fact, see Bernard *et al.* (2007) and Mayer and Ottaviano (2007) for rich countries and Freund and Pierola (2015) for developing countries.

## 6. Product Quality

### 6.1 A subjective measure of perceived quality

In the previous sections we assumed that decentralised management goes hand in hand with better product quality and offshoring leads to lower prices and costs. In this section we want to explore whether we find evidence for this. We start with Figure 11 which asks the question: Do exporters with top quality products operate significantly more often with a decentralised organisation compared to low quality exporters? In Austria, Germany, Spain and the UK between 21 to 28 percent of firms who ranked their product quality as top compared to the market average use decentralised management as an organisational form. In these four countries' exporting firms with low quality (firms which ranked their product quality below 70 in the quality spectrum between 0 – 100) use significantly less often a decentralised organisation. Moreover, in Austria, Germany, and the UK offshoring firms are significantly more often low quality exporters (Germany: 37 percent low vs 20 percent top, Austria: 55 percent low vs 26 percent top, UK: 47 percent low vs 20 percent top) suggesting that offshoring exporters in these countries rely on low costs to stay competitive in export markets. However, France, Italy and Spain do not follow this rule. In these three countries offshoring firms appear to be often top quality exporters. The data appear to suggest that in these three countries top quality alone is not sufficient for exporting. Successful exporters of top quality goods have to offshore production abroad to meet the price competition from foreign rivals. Note also, that there is a sizable share of "none-exporters" with top quality in most countries (that neither offshore nor decentralise).

[Figure 11: Organisational Choice by Top Quality Exporters (in percent of exporters)]

Next, we want to know whether decentralised management does indeed provide incentives for quality. We consider decentralised management to provide incentives for quality if it results in an increase in the export market share of top quality goods. We first look at the median exporter in Figure 12a. This appears to be clearly the case for Germany with top quality "dec-exporters" and top quality "both-exporters" boosting their respective export market shares to 0.2 per mille compared to the median of 0.07 per mille (a factor of almost 3). In Spain, Italy and the UK "dec-exporters" and "both-exporters" also boost their top quality export market shares. Interestingly, in Spain and Italy, some of the "off-exporters" are also of top quality.

We now look at the top 10 percent of exporters in Figure 12b. In Austria and Germany, we see only top quality exporters across all organisational forms. To belong to the top 10 percent of exporters you have to be a top quality exporter no matter how you organise. But still, for these two countries, the "dec-

exporters" are clearly the most successful exporters. Similar to the median exporter, for the top 10 percent exporters in Spain, Italy, and the UK offshoring and top quality go together. Note also, that in Spain, France and Italy, decentralisation does not appear to provide incentives for product quality. In France, there is no single top 10 percent dec-exporter with top quality goods. In Spain and Italy, decentralisation creates more low quality goods than goods of top quality. This might explain why France and Italy very seldom decentralise their management<sup>10</sup>.

[Figure 12a: Export Market Share by Top Quality Exporters]

[Figure 12b: Export Market Share by Top Quality Exporters among the Top 10 percent of Exporters]

## 6.2 An industry measure of price vulnerability

Another way of looking at product quality is to see how vulnerable a country's exports are to price changes. This is captured by the elasticity of substitution between different varieties of the same good. It measures the percentage decline in the demand for e.g. Volkswagen when e.g. Renault lowers its price by 1 percent. Presumably, Volkswagen will experience less of a decline for its cars in response to the same price reduction by Renault if it is of high quality. We use this to rank industries by the size of the elasticity of substitution and define industries with an elasticity of substitution above the median as homogenous responding strongly to price changes and industries with an elasticity of substitution below the median as differentiated responding only weakly to price changes. We take the estimates for the size of the elasticity of substitution from Broda, Greenfield and Weinstein (2006) and calculate them at the 4-digit US SIC industry level. Broda, Greenfield and Weinstein (2006) estimate this elasticity for 73 countries at the 3-digit HS1992 level.

We now ask whether exporters of differentiated goods defined in this way can boost their export market share by significantly more when they decentralise management. Figure 13a reports the answer. The answer does not appear to be so clear cut for obvious reasons. A priori we expect exporters of homogenous goods to boost their export market share most when they offshore. The reason is that offshoring firms of homogenous goods have a high responsiveness of demand to price changes. When exporting firms offshore to low wage countries, costs and prices go down and – given the high responsiveness of export demand to price changes – "off-exporters" of homogenous goods should boost EMSs most. This mechanism appears to be at work for "off-exporters" and "both-exporters"

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<sup>10</sup> An obvious question is why does decentralised management not provide incentives for quality in these countries? We postpone an attempt to answer to a later section.

across all countries. Even in Germany, our leading quality exporter, "off-exporters" and "both-exporters" gain most in the homogenous sector (but not in the differentiated industry in which "dec-exporters" and "both-exporters" gain most).

We now proceed by making the definition of differentiated vs homogenous good tighter. We define a good to be differentiated if the elasticity of substitution is in the bottom 10 percent range and it is homogenous when it falls in the top 10 percent range. We show the results in Figure 13b. Now the "both-exporters" in the differentiated and the homogenous industries gain most across all countries except Austria. But in Germany, our leading quality exporter, the export market share of the "dec-exporters" and the "both-exporters" in the differentiated industry are boosted most. Also in Spain the "both-exporters" in the differentiated industry gain most, while in France the off-exporter in the homogenous sector gain most. For the other countries we get a less clear cut result.

[Figure 13a: Export Market Shares: Homogenous vs Differentiated Goods (above and below median elasticity of substitution), in per mille]

[Figure 13b: Export Market Shares: Homogenous vs Differentiated Goods (top 10 percent, bottom 10 percent of elasticity of substitution), in per mille]

We conclude from this analysis that Germany remains the top quality exporter according to the two quality measures, the subjective firm level quality measure as perceived by firms as well as the industry level measure of the elasticity of substitution. German exporters use decentralised management to provide incentives for product quality, and this leads to higher export market shares for exporters with top quality goods and in sectors where top quality is more important. Spanish and Austrian exporters also decentralise their firm organisation, but this does not provide incentives for quality to the same extent as in Germany. France (and to a lesser extent Italy), on the other hand, does not put its export priority on top quality goods, the demand for its export goods shows a high responsiveness to price changes and thus by lowering costs offshoring to low wage countries benefits France most.

### 6.3 Why Decentralised Management may not increase Product Quality

In sections 6.1 and 6.2 we found that decentralised management leads to a boost in the export market shares of top quality goods in Germany, Austria, and the UK. We took this as evidence that decentralised management does indeed provide incentives for quality. In France, Italy and Spain we did not find this. In this section we look at possible reasons why decentralisation has not been effective in promoting incentives for product quality in some countries like Spain, Italy, and France. Table 3 reports on possible candidates for decentralised management. Spain, Austria and the UK have with around 40 percent the largest share of exporters with decentralised management, while Italy and France have the lowest share. In Italy decentralised management occurs infrequently, because firms are typically small (50 employees on average) and family managed (38.9 percent of exporters). Moreover, in Italy people have a relatively low level of trust. Previous research shows that countries with lower levels of trust tend to organise their firms more centralised reporting to the top CEO. Moreover, family managed firms tend to have a poor performance and have a low quality of management<sup>11</sup>. These factors have worked against decentralised management in Italy, while the strong exposure to trade of Italian exporters (see Table 2) has favoured decentralisation (see Marin and Verdier, 2014). The low level of trust can be compensated if a firm has family members in the executive board (but not as top CEO) who makes it less likely that profits are diverted when the firm decentralises decision power to lower levels of management. But Italy has the lowest percentage of exporters with family members in the executive board. Hence, decentralisation has not provided the right incentives for improved performance. France with its relatively low share of firms with decentralised management (24.7 percent) has larger firms and a smaller share of family run firms compared to Italy (17.1 percent vs 11 percent) which favours more decentralisation, but a low exposure to trade (Table 2), a low level of trust and a low share of exporters with family executives (not CEO) have worked against decentralisation. Germany and the UK are polar cases to Italy and France. They have a high level of trust in the population, a relative large share of firms with family executives but not CEOs, a small share of family run business and a relative strong exposure to foreign competition.

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<sup>11</sup> See Bloom, Sadun, van Reenen (2012), and Bloom and van Reenen (2007).

## 7. The Rise of Eastern Europe and China

In the previous section we examined the role of the firm organisation for the export performance of European countries. In this section we explore an alternative explanation for the relative favourable export performance of Germany: the rise of Eastern Europe and China. It is possible that Germany has benefited more from the opening up of Eastern Europe and China than other countries in Europe. The proximity to Eastern Europe may have allowed Germany to source labour and human capital cheaply from this region thereby lowering costs. The rapid modernisation of China may have favoured particularly Germany's exports with its comparative advantage in machinery, transport equipment and other manufactured goods<sup>12</sup>. Moreover, France the leading offshorer in Europe, may have gained less EMSs from offshoring by not having the right regional sourcing pattern.

In Figures 14a to 14c we plot exports of manufacturing to Eastern Europe, Russia, and China. There is some support for the view that the rise of China favoured Germany. German exports to China have increased by 11 times since 2000 outpacing the other European countries. Exports to China doubled alone in 2009-13. Interestingly, Spain experienced the largest growth of exports to Eastern Europe, while the UK's and Germany's export growth came out first in Eastern Europe. Has sourcing inputs and intermediate goods from these regions contributed to the relative export success of Germany, Spain and the UK?

### 7.1 The Sourcing Regions

We explore the sourcing pattern in Figure 15. Several things are noteworthy. First, the major sourcing region for European firms is the EU15 where more than 75 percent of offshoring exporters source their intermediate inputs. Germany is the leading offshorer to eastern Europe followed by Austria and France. 26 percent to 30 percent of offshoring exporters in these three countries source from this region. China&India is important as a sourcing region for the UK (42 percent of UK offshoring exporters), Germany (31 percent), Spain and France (about 27 percent), while sourcing from Latin America is popular among German (5.3 percent), Italian (4.8 percent) and UK (4.5 percent) offshoring exporters.

Is sourcing from a particular region conducive to exporting? We first look at the EU15 in Figure 16. It is apparent, that sourcing from the EU15 does not buy "off-exporters" into exporting more. For Austrian

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<sup>12</sup> Marin (2010, 2011) argues that the opening up of Eastern Europe after the fall of communism allowed Germany to deal with its severe human capital shortage by offshoring the skill intensive part of the value chain to Eastern Europe.



and British "off-exporters" sourcing from the EU15 actually reduces their export market share compared to "off-exporters" who do not source from the EU15. In contrast, Austria and the UK firms can increase median EMSs substantially when sourcing in the US (UK: +75 percent, Austria: 257 percent), while the other countries gain only little or even lose (Italy) from sourcing in the US.

We now turn to the low cost sourcing regions eastern Europe, China&India, and Latin America. "Off-exporters" from France and Spain gain most from sourcing in eastern Europe compared to "off-exporters" who do not source from this region. They double their median export market share when they source in eastern Europe. Italy increases its EMSs by 41 percent, Austria by 67 percent and Germany by 58 percent by sourcing in eastern Europe, compared to "off-exporters" of the same country who do not source from this region. Hence, sourcing in eastern Europe may explain why export growth was particularly pronounced in Spain.

The biggest gainers from sourcing in China&India are "off-exporters" from the UK and Austria. Their EMSs increases by over 70 percent compared to "off-exporters" which do not source from this region. "Off-exporters" from Spain, Germany and France benefit only modestly from sourcing in the Chinese/Indian markets as compared to "off-exporters" who do not source from this region. Thus, the spectacular success of German firms is not based on access to cheap inputs in the Chinese market, while access to Chinese inputs has helped UK and Austrian exports to grow substantially.

The gain from sourcing in Latin America is spectacular for France (it increases its export market share in Latin America by 531 percent compared to "off-exporters" who do not source in Latin America). But also Austria (244 percent) and Italy (200 percent) benefit, while UK firms lose out.

Summing up, the biggest gainers from offshoring to low wage countries are Austria (in Latin America, the US, China&India, and eastern Europe) and the UK (US and China&India). Germany does not appear to get special access to a particular market by sourcing there. France and Italy increase their EMSs most from sourcing in Latin America and eastern Europe, while Spain gains most from eastern Europe and the US. This might explain why Spanish export growth exceeded that of the other countries. Surprisingly, for the export performance of Spain, France, and Italy in China&India sourcing there is not very important.

## 7.2 Regional Business Models of Exporting

In this section we want to explore whether exporters adjust their business model to differences in export destinations. More specifically, is offshoring more prevalent in low wage countries where exporters meet rivals with lower costs and is decentralised management more often used to compete in quality in high cost regions? We examine this question in Figure 17.

We start with Germany. In the EU15 market the "both-exporters" and "dec-exporters" of Germany have the largest median export market share, while in the other regions offshoring is the most successful business model of exporting. Note, that even in the US market German exporters are more successful by offshoring, probably because prices matter there more due to the weaker dollar. As German firms, Spanish exporters switch from decentralised management to offshoring when they move from the high-cost EU market to the lower cost regions of eastern Europe, China&India and Latin America. French and Italian exporters use the same business model of exporting in all markets with "off-exporters" and "both-exporters" having the largest EMSs. In contrast, UK firms adapt their business model of exporting to the particular market circumstances. In the US they are most successful by decentralising management, in eastern Europe they use both organisational margins to meet competition there, while in China&India as well as in Latin America "none-exporters" which abstain from any organisational adjustments are most competitive. Austria keeps its business model of exporting ("dec-exporters" and "both-exporters") in all markets except Latin America.<sup>13</sup>

We conclude: Germany's spectacular increase in exports to China is not due to sourcing cheap intermediates but rather because China demanded goods in which Germany has a comparative advantage. However, we do find evidence that Germany competes in markets with low costs by changing its business model of exporting more to offshoring which allows firms to compete on prices. Offshoring is not used as a market entry devise but rather as a way to lower costs. Except for the UK, we do not see a similar switching of business model in other European countries.

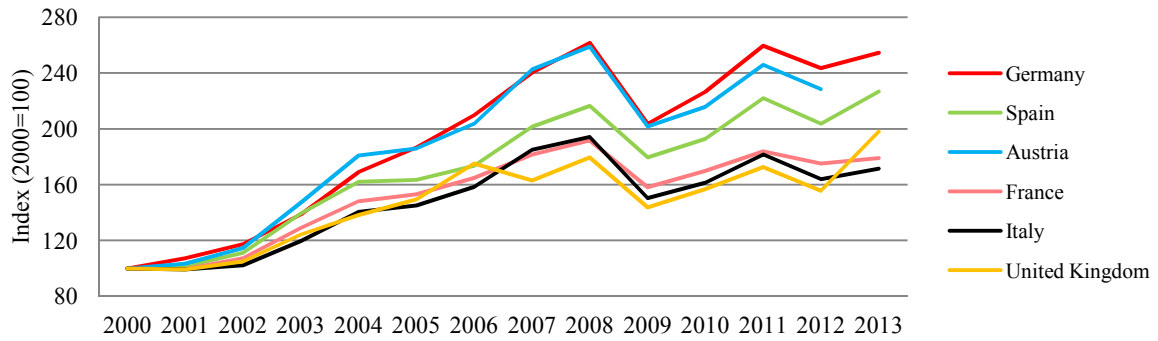
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<sup>13</sup> See Marin, Rousova, Verdier (2013) for the factors that determine whether firms transplant their business model to different markets.

## **8. Conclusion**

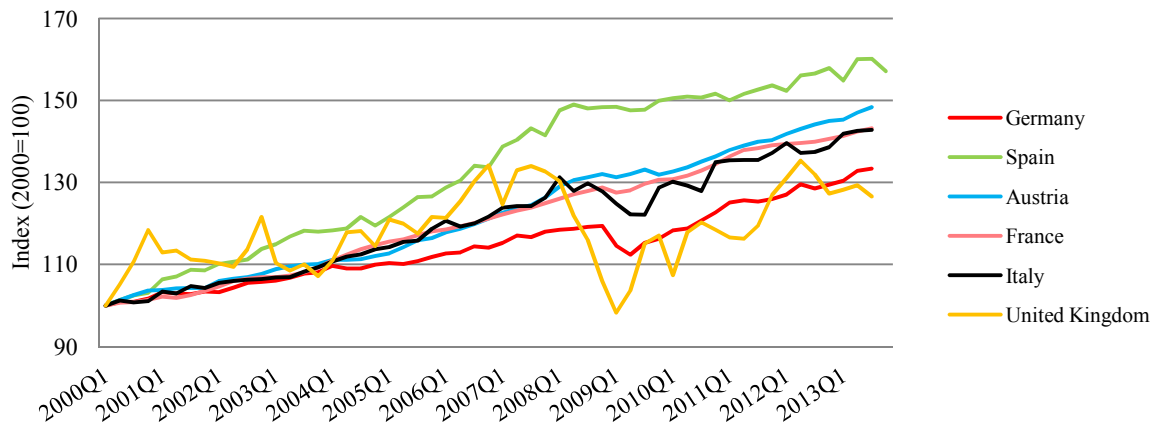
In this paper we examine the role of firm organisation for the competitiveness of European countries. We develop a firm level measure of competitiveness by calculating the export market share of the median exporter and of the export superstars in seven European countries. We find that European firms can triple their export market share when they meet competition with foreign rivals by introducing decentralised management and by offshoring production to low wage countries. Decentralised management improves product quality and offshoring to low wage countries reduces costs. Firms in Europe follow a distinct pattern of export business models. Germany is the world leader in exporting high quality goods. Among the top 10 percent of German exporters there is no single firm with low quality. Germany is effective in incentivising workers to improve quality when they decentralise management. The focus on quality in Germany's export business model explains why Germany can afford price increases without losing too much export market share. France's and Italy's export business model has a focus on price. Their exports respond to price changes and offshoring production to low wage countries has benefited these countries most. This explains why these two countries frequently offshore to low wage countries even when their products are of high quality. In France and Italy decentralised management has not been effective to improve product quality which may explain why these two countries only rarely operate with this organisation.

**Figure 1: Exports of Manufacturing in European Countries 2000 – 2013**  
(in 2000 prices)



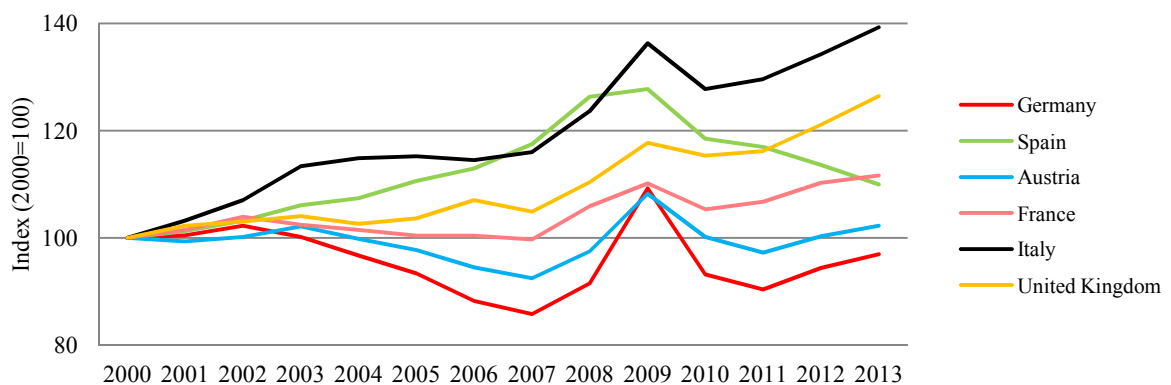
Source: Comtrade, Eurostat

**Figure 2: Nominal Wages and Salaries in Manufacturing 2000 – 2013**



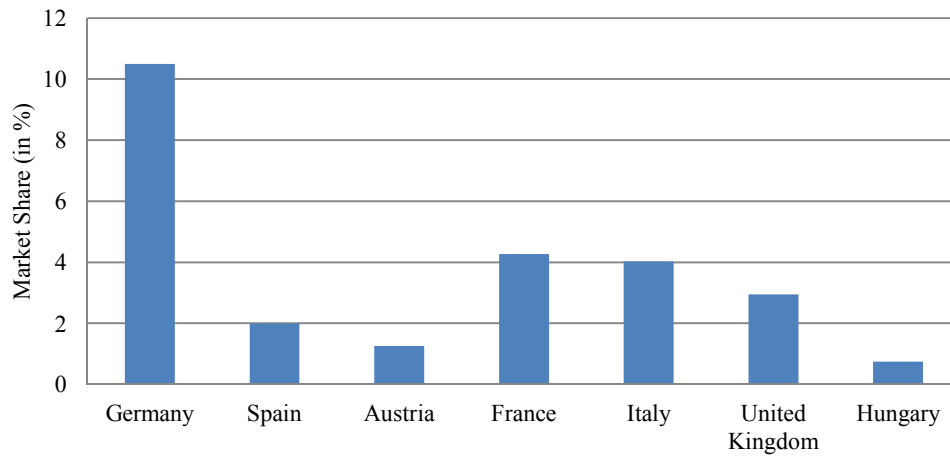
Source: Eurostat

**Figure 3: Unit Labor Costs in Manufacturing 2000 – 2013**



Source: OECD Productivity Database

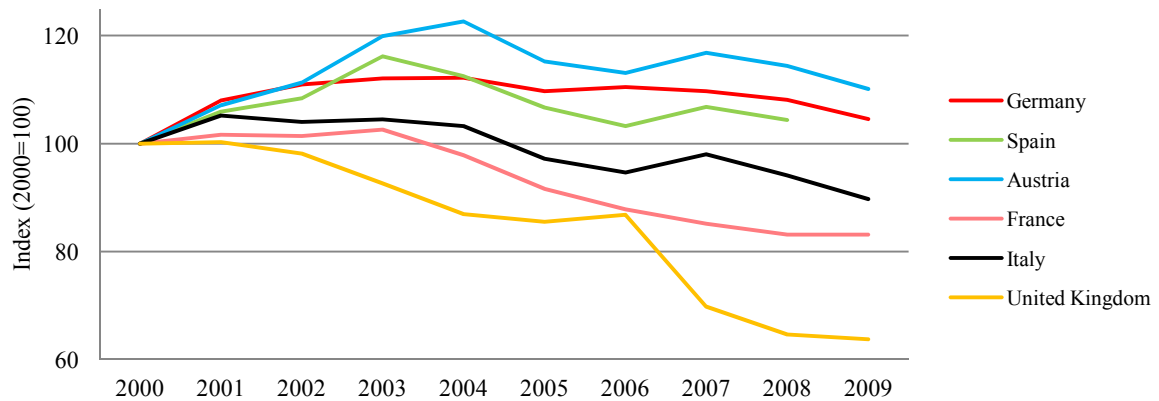
**Figure 4a: Market Share (Manufacturing) in the OECD in 2008**



**Source:** OECD

**Notes:** The OECD export market share measures the degree of importance of a country's manufacturing industry within the total manufacturing exports of the OECD. It is calculated by dividing the exports of manufacturing goods of the country by OECD's total merchandise manufacturing exports.

**Figure 4b: OECD Market Share (Manufacturing) Index 2000 – 2009**



**Source:** OECD

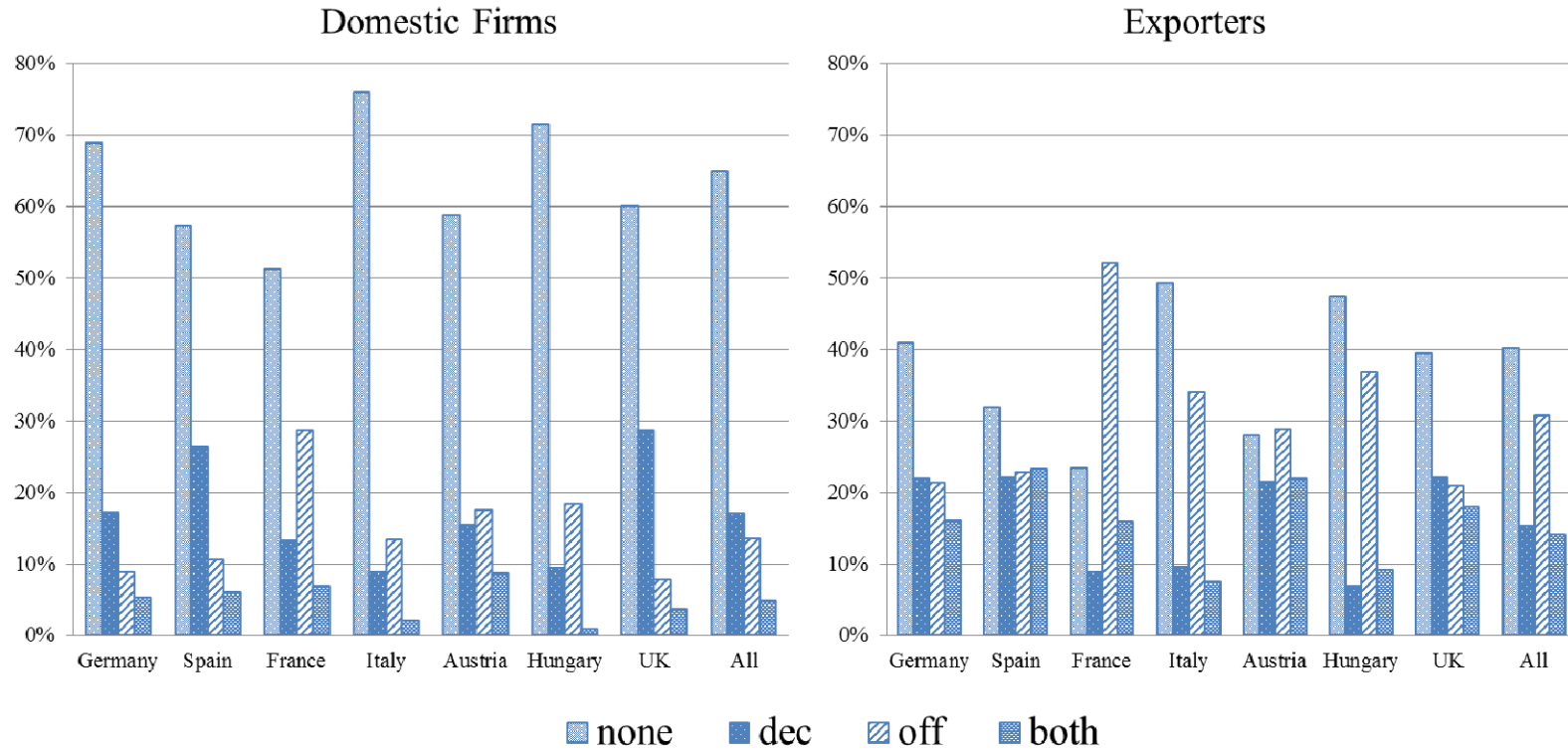
**Notes:** The OECD export market share measures the degree of importance of a country's manufacturing industry within the total manufacturing exports of the OECD. It is calculated by dividing the exports of manufacturing goods of the country by OECD's total merchandise manufacturing exports and presented as an index with base year 2000.

**Table 1: The Frequency of Offshoring and Decentralised Management  
(Manufacturing)**

	Domestic Firms				Exporters			
	<i>none</i>	<i>dec</i>	<i>off</i>	<i>both</i>	<i>none</i>	<i>dec</i>	<i>off</i>	<i>both</i>
	in percent of domestic firms				in percent of exporters			
Germany	68.8%	17.2%	8.8%	5.2%	40.8%	21.8%	21.3%	16.0%
Spain	57.2%	26.3%	10.5%	6.0%	31.9%	22.1%	22.8%	23.2%
Austria	58.6%	15.3%	17.4%	8.6%	27.8%	21.4%	28.8%	21.9%
France	51.2%	13.2%	28.7%	6.9%	23.4%	8.8%	52.0%	15.8%
Italy	75.8%	8.8%	13.3%	2.0%	49.2%	9.4%	33.9%	7.5%
UK	60.0%	28.6%	7.8%	3.7%	39.3%	22.0%	20.8%	17.9%
Hungary	71.5%	9.3%	18.4%	0.8%	47.4%	6.9%	36.7%	9.1%
Average	64.8%	17.0%	13.5%	4.7%	40.1%	15.2%	30.7%	14.0%

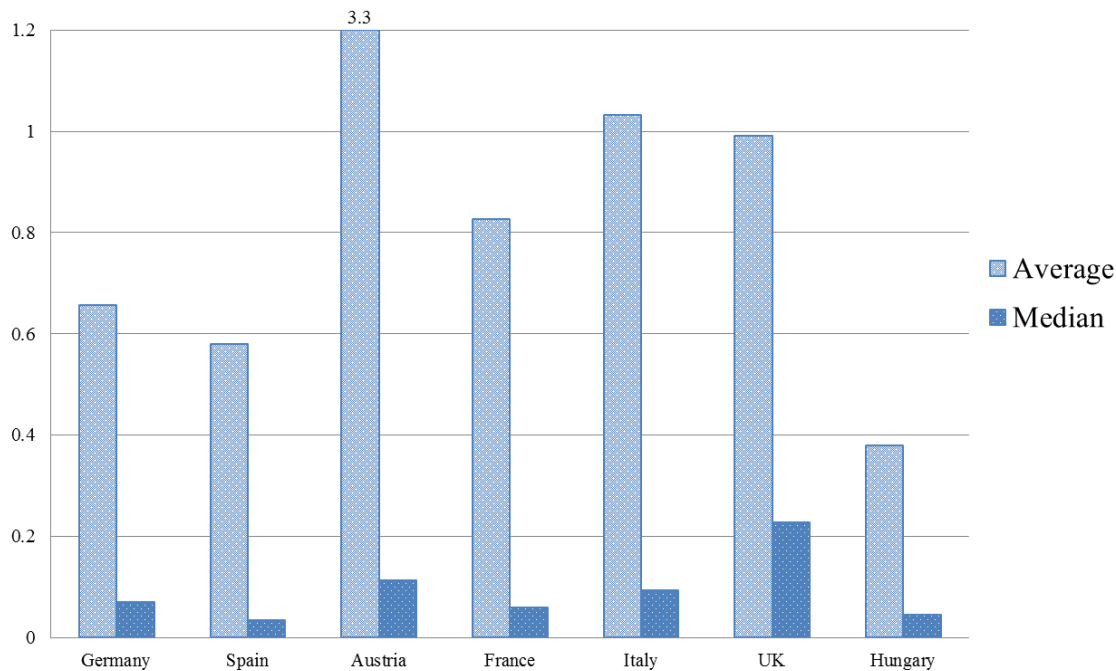
**Notes:** Values are the share of firms with a given type of organisation. *none*: neither decentralised nor offshoring, *dec*: decentralised firm, *off*: offshoring firm, *both*: decentralised and offshoring firm (categories are mutually exclusive). A firm is considered to be *offshoring* when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production?". A firm is considered to be *decentralised* when it responds "decentralised: managers can take autonomous decisions in some business areas" to the question "With reference to strategic decisions which of the following statements better describe your firm situation?". EFIGE sample weights are used throughout.

**Figure 5: Offshoring and Decentralised Management**  
(in percent of firms)



**Notes:** Values are the share of firms with a given type of organisation. *none*: neither decentralised nor offshoring, *dec*: decentralised firm, *off*: offshoring firm, *both*: decentralised and offshoring firm (categories are mutually exclusive). A firm is considered to be offshoring when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production?". A firm is considered to be decentralised when it responds "decentralised: managers can take autonomous decisions in some business areas" to the question "With reference to strategic decisions which of the following statements better describe your firm situation?". EFIGE sample weights are used throughout.

**Figure 6: Average and Median Export Market Shares in the World  
(in per mille)**



**Notes:** *Export Market Share:* Average and median firm's export value/total imports of the world for the firm specific set of industries. Values represent weighted average or median over all exporters of a country. EFIGE sample weights are used throughout.

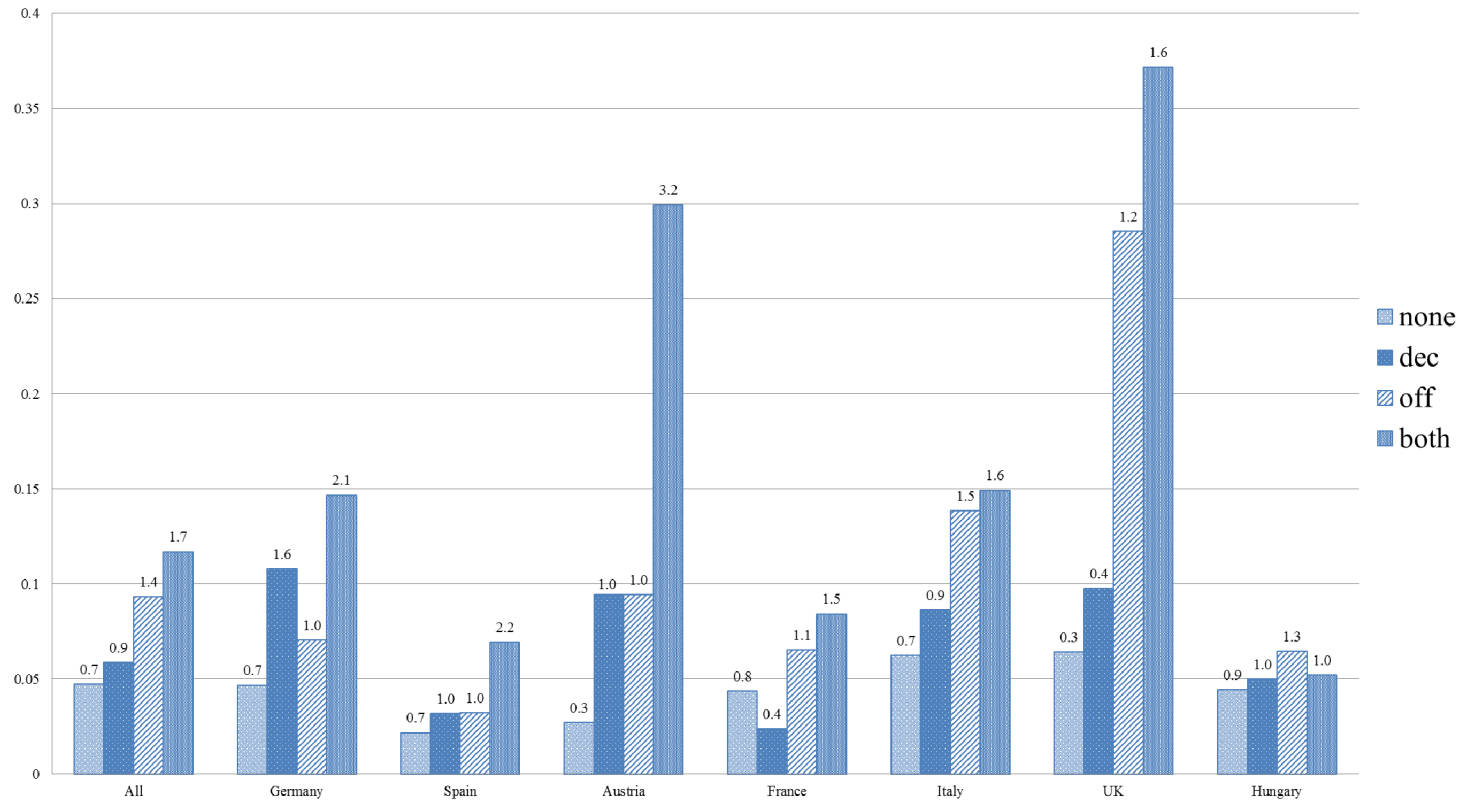
**Table 2: The Export Market Share - Explaining the Numerator**

	Germany	Spain	Austria	France	Italy	UK	Hungary
Export Market Share (in percent)	0.07%	0.06%	0.33%	0.08%	0.10%	0.10%	0.04%
Exports/Turnover (in percent)	29.8%	25.6%	41.3%	28.8%	34.5%	29.4%	46.0%
Turnover of Exporters (in th. US-\$)	26796.9	17392.3	43741.7	34672.0	23210.8	154447.9	15530.4
Turnover of all Firms (in th. US-\$)	19667.9	12629.7	38299.9	21972.6	17821.1	119489.7	10341.8
Number of Exporters /Number of Firms (in percent)	45.8%	53.5%	60.9%	50.2%	67.0%	58.6%	55.9%

**Notes:** *Export Market Share:* Average firm's export value/total imports of the world for the firm specific set of industries. *Exporters:* all firms that "sold abroad some or all of its own products/services in 2008". EFIGE sample weights are used throughout.

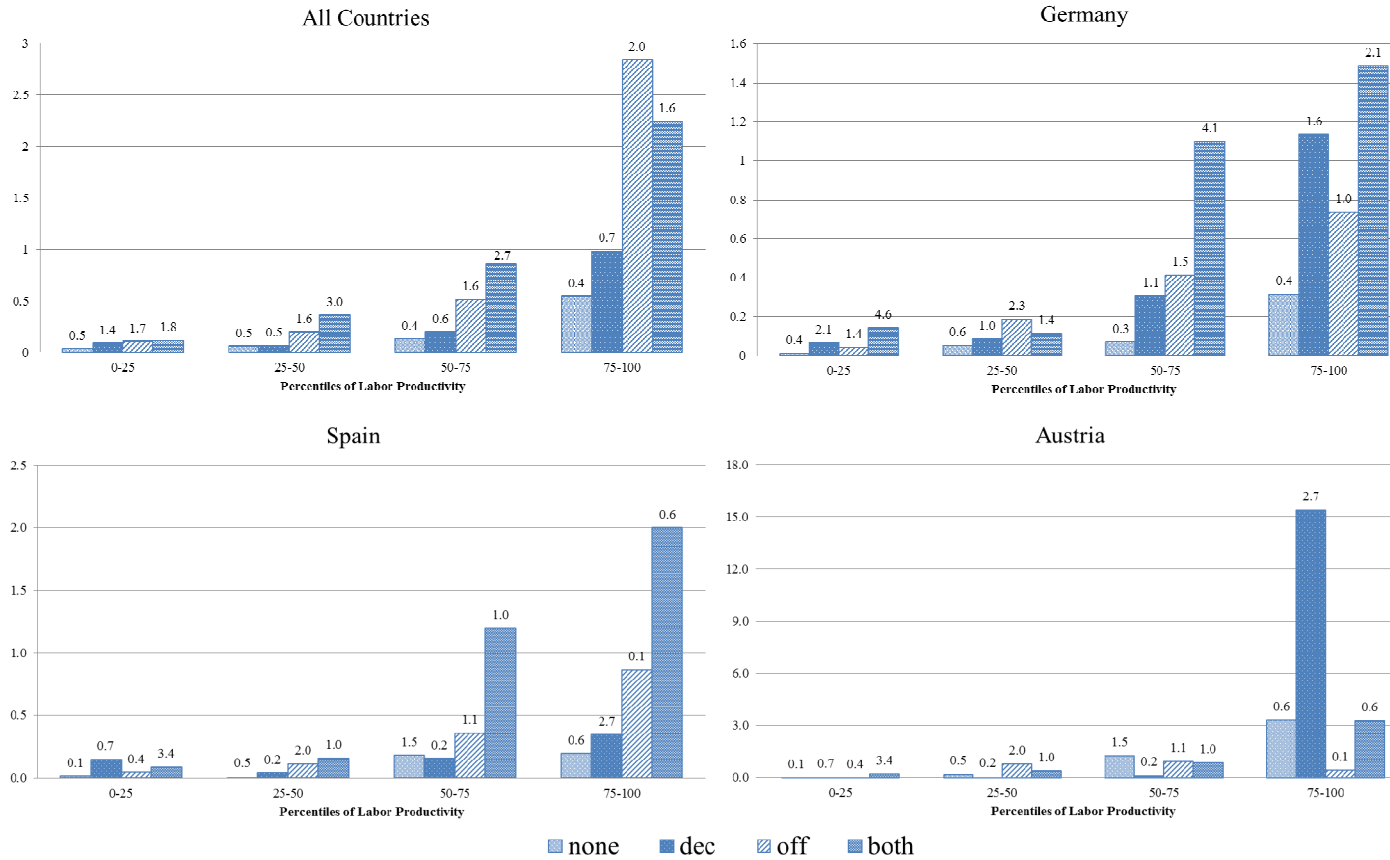


**Figure 7: Export Market Share by Organisational Form**



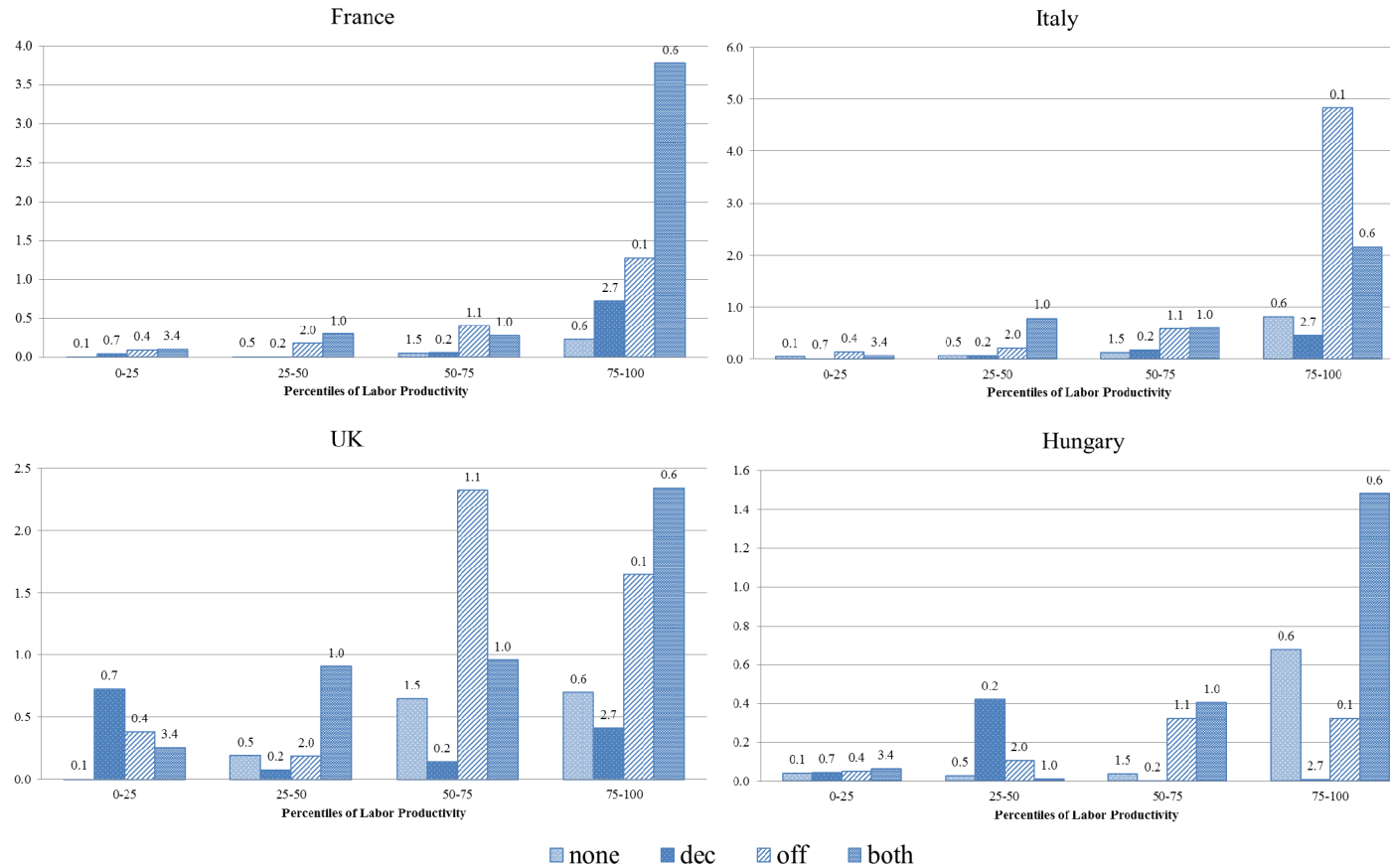
**Notes:** *Export Market Share:* Median firm's export value/total imports of the world for the firm specific set of industries. *none:* neither decentralised nor offshoring, *dec:* decentralised firm, *off:* offshoring firm, *both:* decentralised and offshoring firm (categories are mutually exclusive). A firm is considered to be offshoring when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production?". A firm is considered to be decentralised when it responds "decentralised: managers can take autonomous decisions in some business areas" to the question "With reference to strategic decisions which of the following statements better describe your firm situation?". Numbers above bars are ratio of group specific median to country median. E.g. Offshoring exporters in Italy have a median export market share about 1.5 times as high as the median (across groups) Italian exporter. EFIGE sample weights are used throughout.

**Figure 8: Export Market Share by Organisational Form for Different Productivity Levels**  
(in per mille)



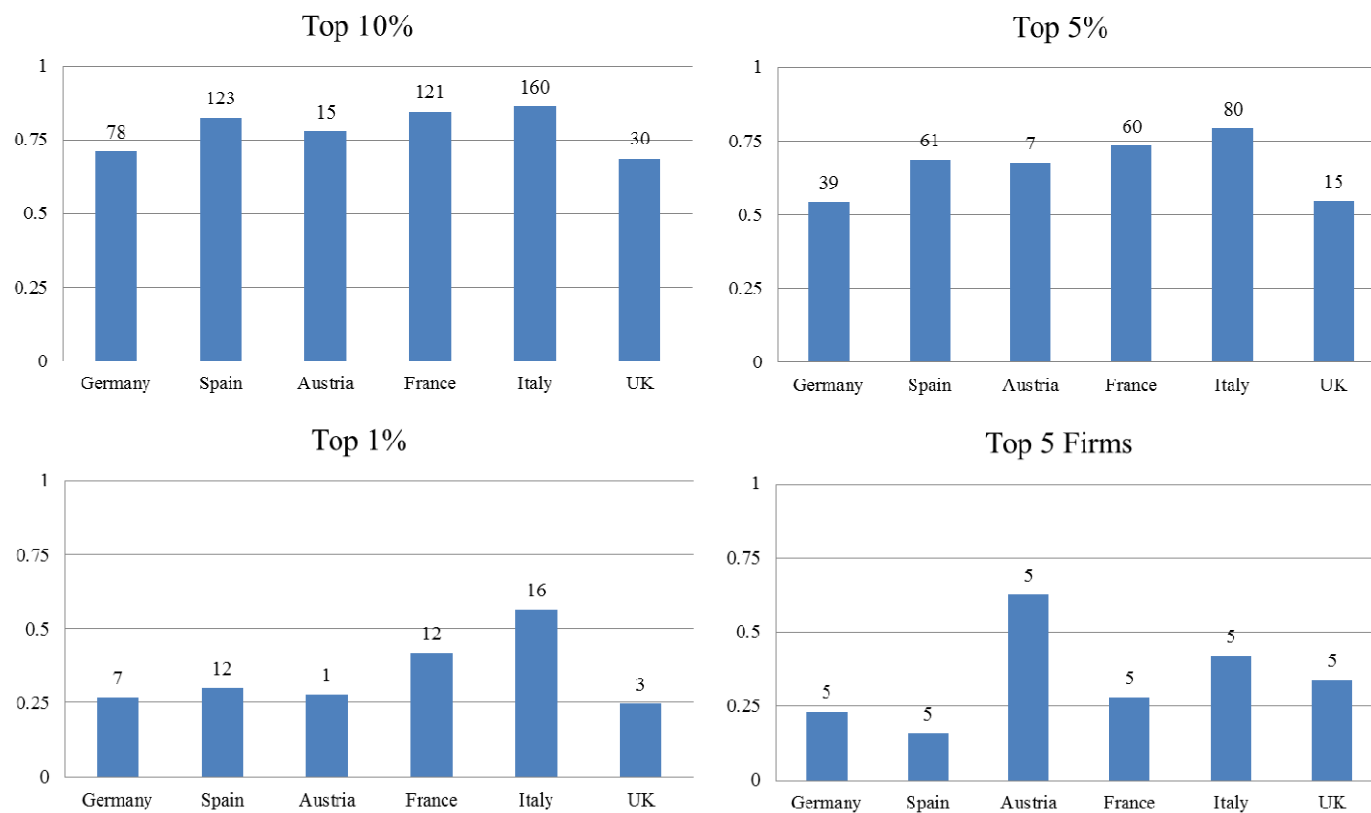
**Notes:** *Export Market Share:* Average firm's export value/total imports of the world for the firm specific set of industries. *none:* neither decentralised nor offshoring, *dec:* decentralised firm, *off:* offshoring firm, *both:* decentralised and offshoring firm (categories are mutually exclusive). A firm is considered to be offshoring when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production?". A firm is considered to be decentralised when it responds "decentralised: managers can take autonomous decisions in some business areas" to the question "With reference to strategic decisions which of the following statements better describe your firm situation?". Numbers above bars are the ratio of group specific values to average (for a given percentile). E.g. Offshoring only firms between the 25th and the 50th percentile in the German productivity distribution have an export market share about 2.3 times as high as the average export market share of all German firms in the same productivity range. EFIGE sample weights are used throughout.

**Figure 8: Export Market Share by Organisational Form for Different Productivity Levels (continued)**  
(in per mille)



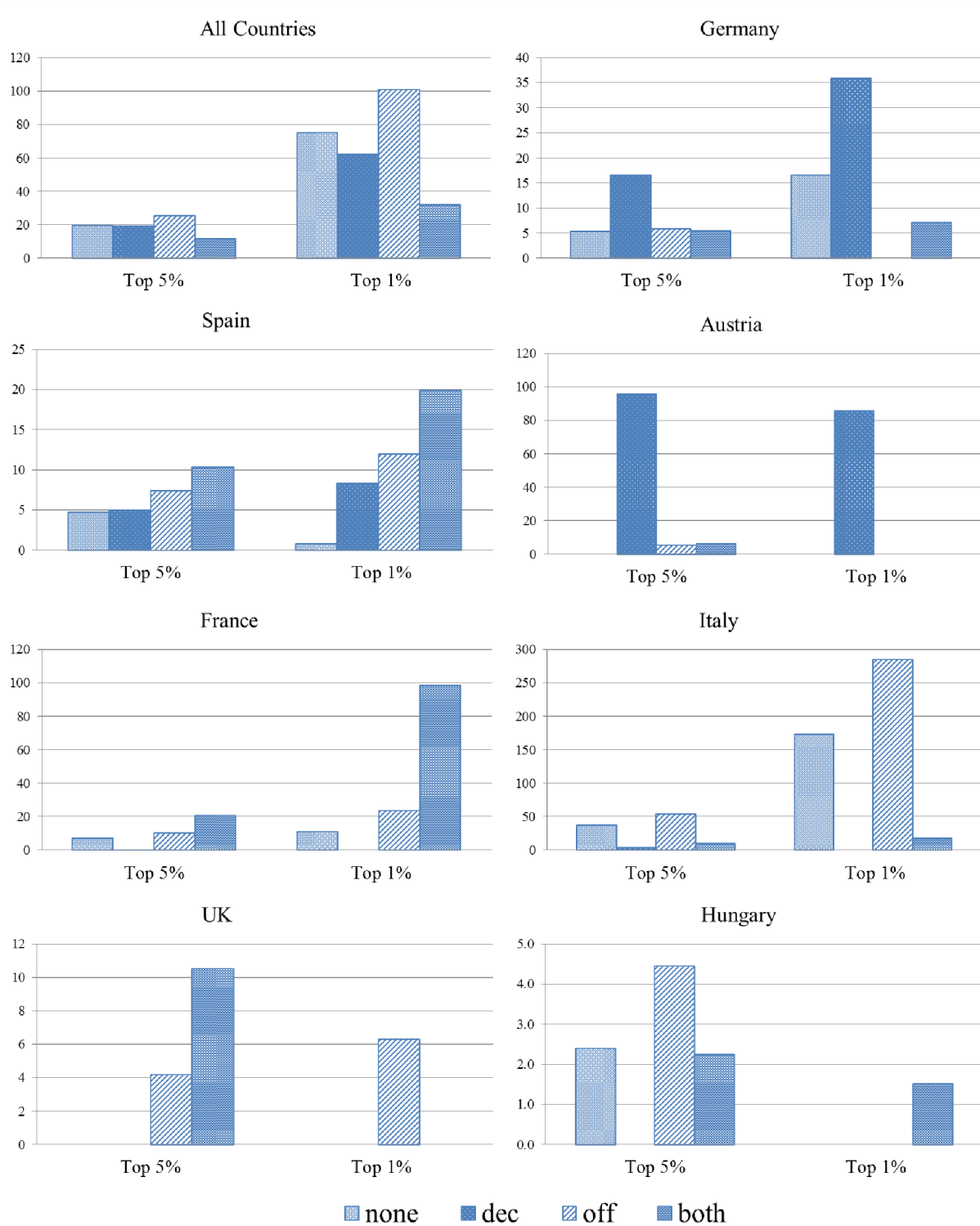
**Notes:** *Export Market Share:* Average firm's export value/total imports of the world for the firm specific set of industries. *none:* neither decentralised nor offshoring, *dec:* decentralised firm, *off:* offshoring firm, *both:* decentralised and offshoring firm (categories are mutually exclusive). A firm is considered to be offshoring when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production?". A firm is considered to be decentralised when it responds "decentralised: managers can take autonomous decisions in some business areas" to the question "With reference to strategic decisions which of the following statements better describe your firm situation?". Numbers above bars are the ratio of group specific values to average (for a given percentile). E.g. Offshoring only firms between the 25th and the 50th percentile in the German productivity distribution have an export market share about 2.3 times as high as the average export market share of all German firms in the same productivity range. EFIGE sample weights are used throughout.

**Figure 9: The Top Exporters**  
**(export value of top exporters in percent of total exports)**



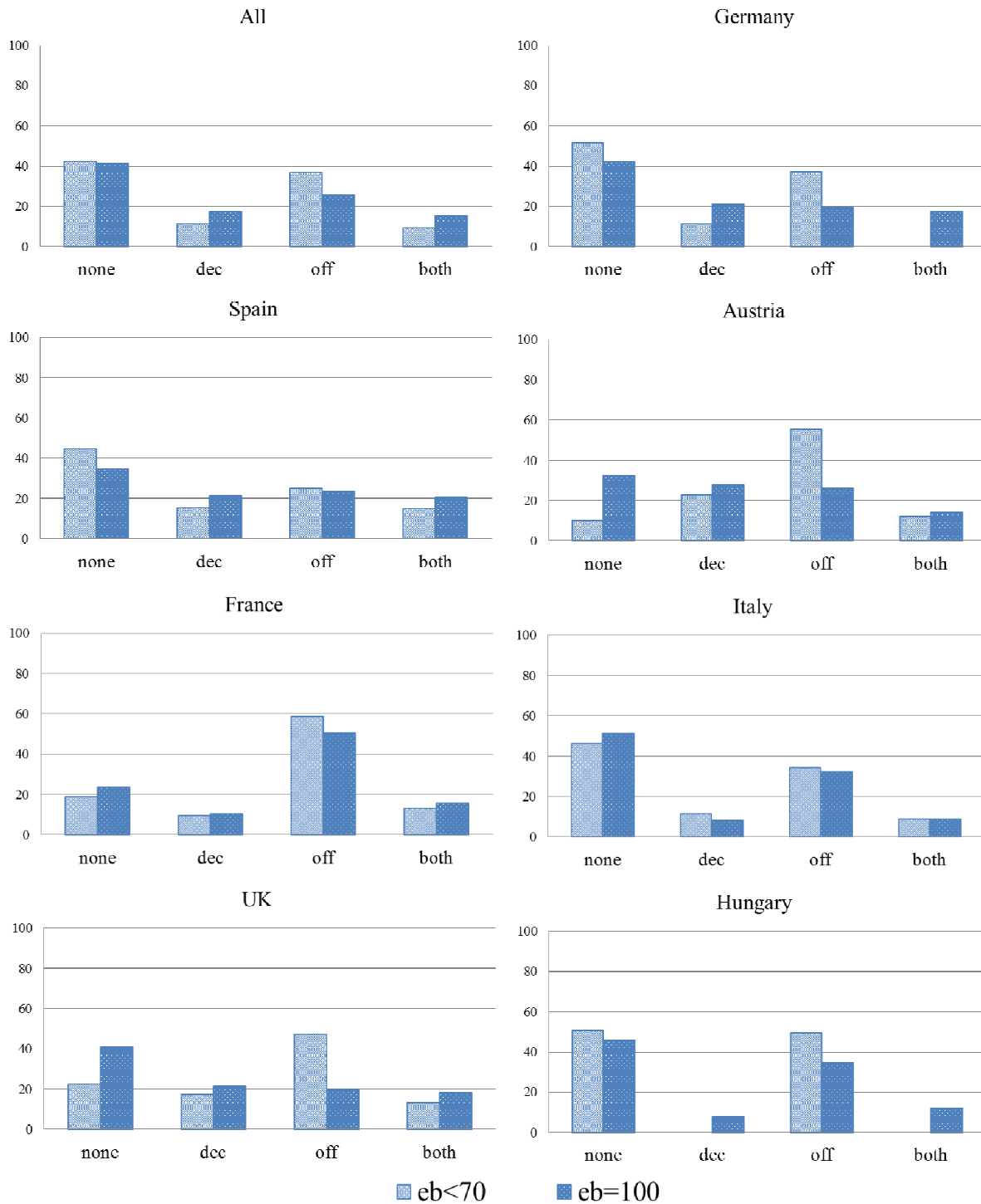
**Notes:** Export value of top firms in percent of total exports (EFIGE). Total EFIGE exports of a country are the sum of firms' export values multiplied by EFIGE absolute weights. EFIGE absolute weights tell how many firms of the population are represented by a given sampled firm. Thus, adding up weights for a given country sample yields the total number of firms in the population. Weights are chosen to match data on firms from EUROSTAT in terms of size and industry distribution. Firms belonging to the same sector/size cell share the same weight.

**Figure 10: Export Market Shares of Top Exporters**



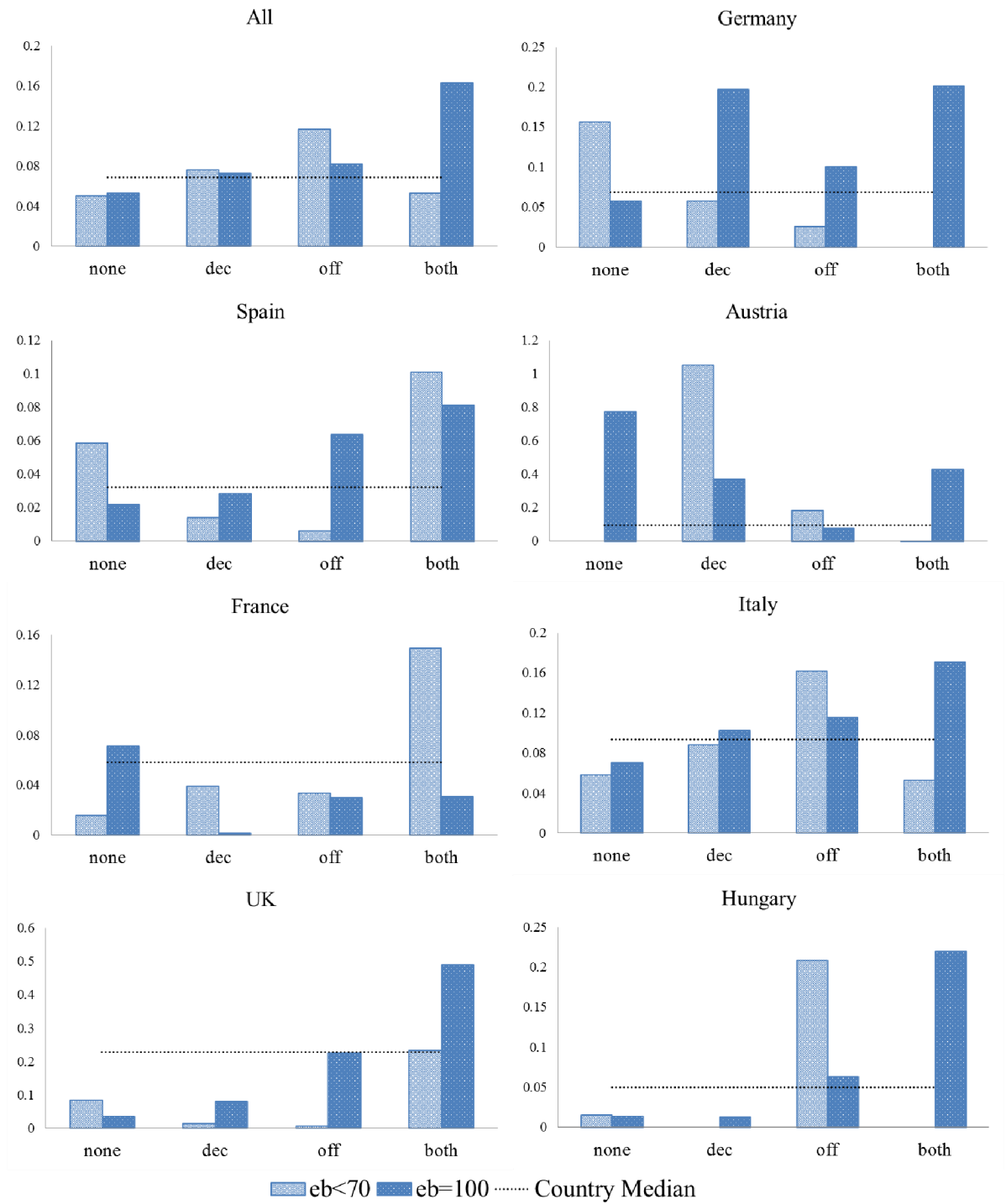
**Notes:** *Export Market Share:* Average firm's export value/total imports of the world for the firm specific set of industries. Top exporters are defined in terms of export value. *none:* neither decentralised nor offshoring, *dec:* decentralised firm, *off:* offshoring firm, *both:* decentralised and offshoring firm (categories are mutually exclusive). A firm is considered to be offshoring when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production?". A firm is considered to be decentralised when it responds "decentralised: managers can take autonomous decisions in some business areas" to the question "With reference to strategic decisions which of the following statements better describe your firm situation?". EFIGE sample weights are used throughout.

**Figure 11: Organisational Choice by Top Quality Exporters**  
(in percent of exporters)



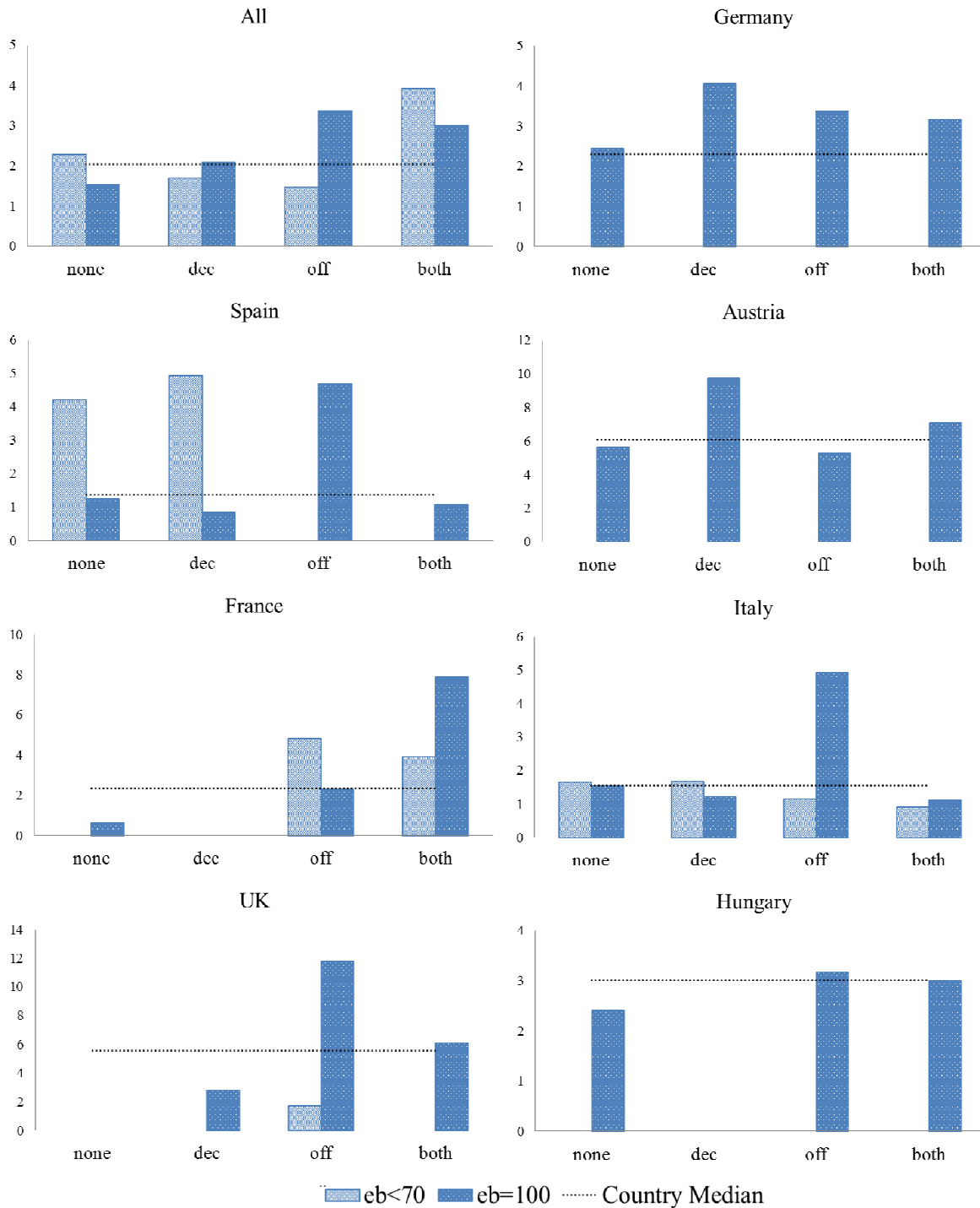
**Notes:** *none*: neither decentralised nor offshoring, *dec*: decentralised firm, *off*: offshoring firm, *both*: decentralised and offshoring firm (categories are mutually exclusive). A firm is considered to be offshoring when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production". A firm is considered to be decentralised when it responds "decentralised: managers can take autonomous decisions in some business areas" to the question "With reference to strategic decisions which of the following statements better describe your firm situation? Decisions in your firm are...". *eb* is a subjective measure of product quality as perceived by firms from the survey question: "Now please think of the product category your main product belongs to. If we rank the maximum quality available in the market for this product equals to 100, how would you rate the quality of your own product?". EFIGE sample weights are used throughout.

**Figure 12a: Export Market Share by Top Quality Exporters  
(in per mille)**



**Notes:** *Export Market Share:* Median firm's export value/total imports of the world for the firm specific set of industries. *none:* neither decentralised nor offshoring, *dec:* decentralised firm, *off:* offshoring firm, *both:* decentralised and offshoring firm (categories are mutually exclusive). A firm is considered to be offshoring when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production". A firm is considered to be decentralised when it responds "decentralised: managers can take autonomous decisions in some business areas" to the question "With reference to strategic decisions which of the following statements better describe your firm situation? Decisions in your firm are...". *eb* is a subjective measure of product quality as perceived by firms from the survey question: "Now please think of the product category your main product belongs to. If we rank the maximum quality available in the market for this product equals to 100, how would you rate the quality of your own product?". EFIGE sample weights are used throughout.

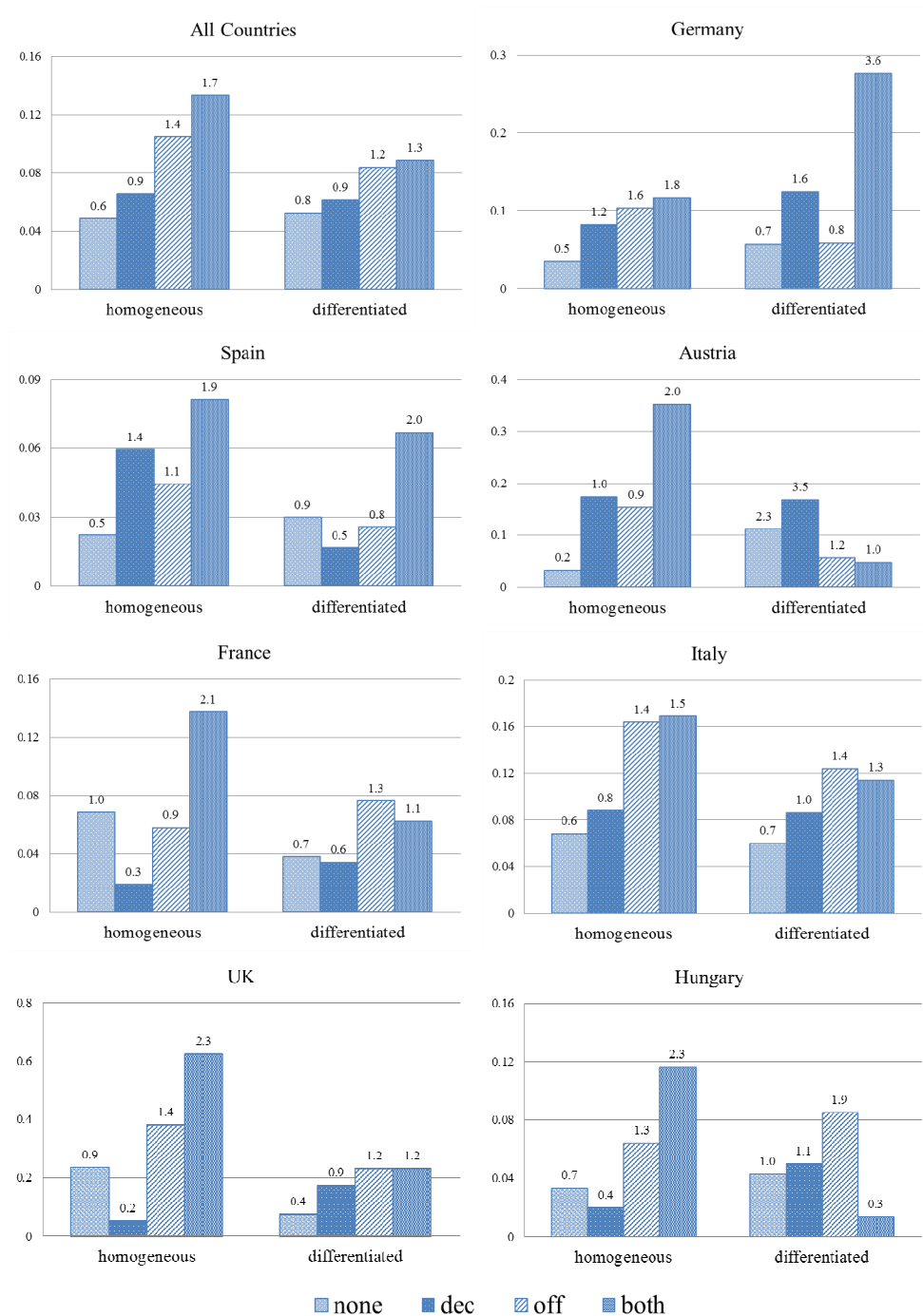
**Figure 12b: Export Market Share by Top Quality Exporters of Top 10% Exporters (in per mille)**



**Notes:** *Export Market Share:* Median firm's export value/total imports of the world for the firm specific set of industries. *none:* neither decentralised nor offshoring, *dec:* decentralised firm, *off:* offshoring firm, *both:* decentralised and offshoring firm (categories are mutually exclusive). A firm is considered to be offshoring when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production". A firm is considered to be decentralised when it responds "decentralised: managers can take autonomous decisions in some business areas" to the question "With reference to strategic decisions which of the following statements better describe your firm situation? Decisions in your firm are...". *eb* is a subjective measure of product quality as perceived by firms from the survey question: "Now please think of the product category your main product belongs to. If we rank the maximum quality available in the market for this product equals to 100, how would you rate the quality of your own product?". EFIGE sample weights are used throughout.

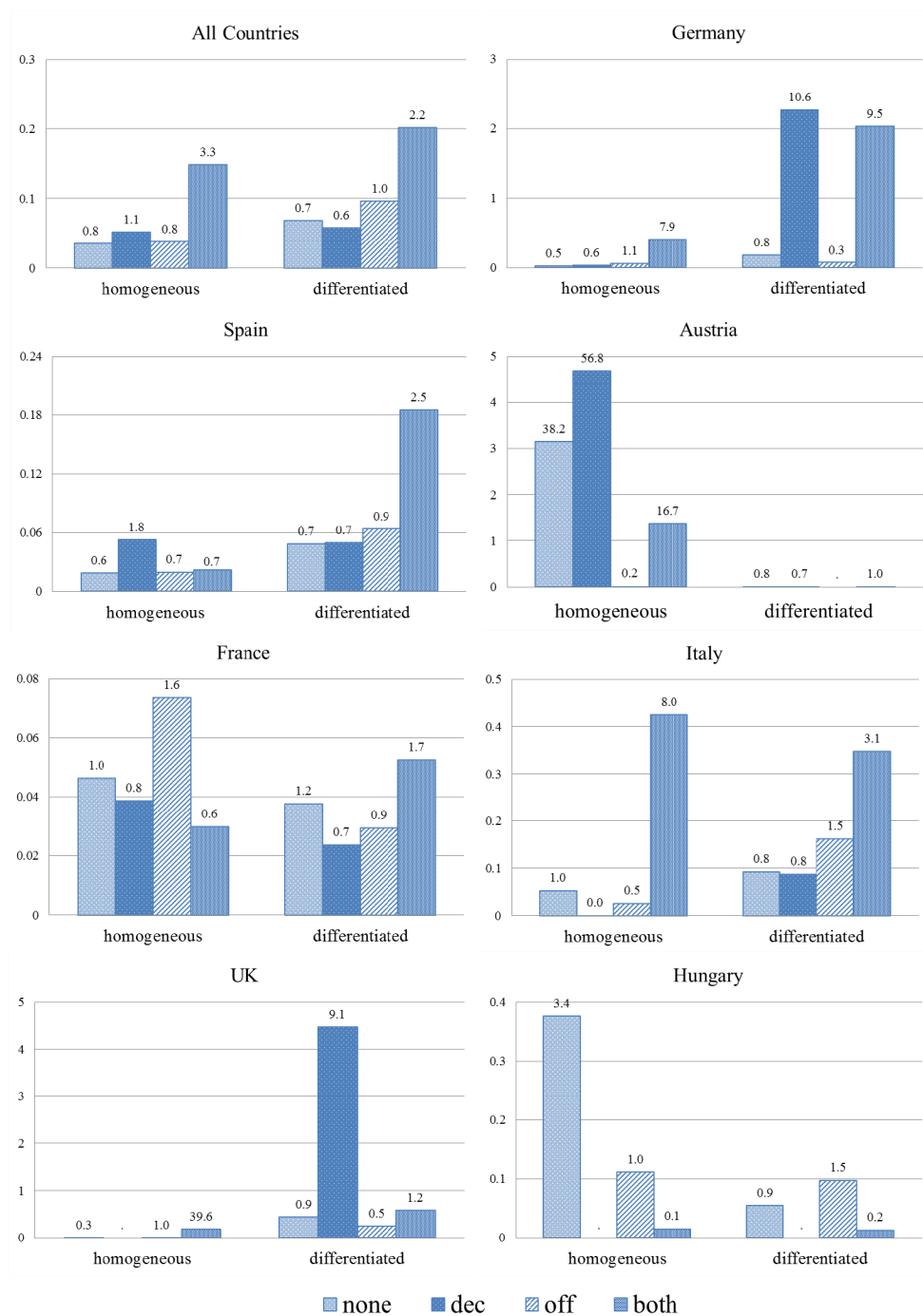


**Figure 13a: Export Market Share for Differentiated versus Homogeneous Sectors**  
**differentiated sector:  $\sigma < \text{median}$ , homogeneous sector:  $\sigma > \text{median}$**   
**(in per mille)**



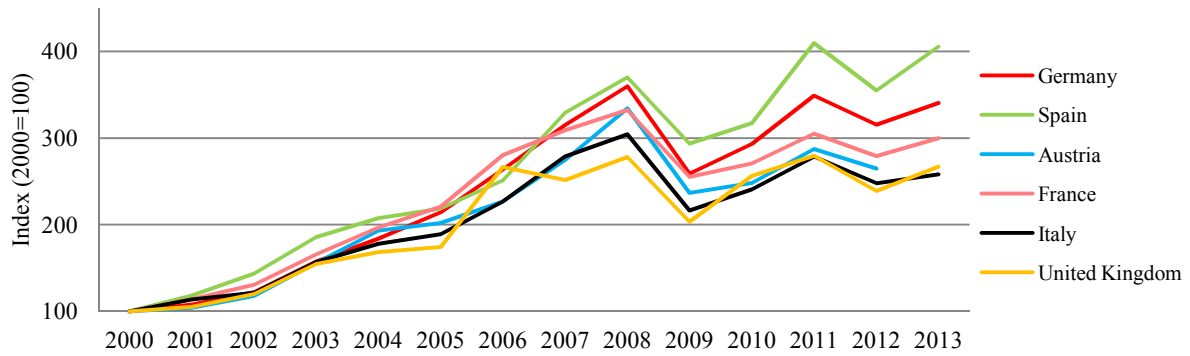
**Notes:** *Export Market Share:* Median firm's export value/total imports of the world for the firm specific set of industries. Numbers above bars are the ratio of the group specific median to the median across groups (for a given sub-sample). Firms are homogeneous if the elasticity of substitution  $\sigma$  belongs to highest 50% in its country and are differentiated if the elasticity of substitution  $\sigma$  belongs to the lowest 50% in its country. The elasticities of substitution are calculated at the sectoral level from Broda, Greenfield and Weinstein (2006). *none:* neither decentralised nor offshoring, *dec:* decentralised firm, *off:* offshoring firm, *both:* decentralised and offshoring firm (categories are mutually exclusive). A firm is considered to be offshoring when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production". A firm is considered to be decentralised when it responds "decentralised: managers can take autonomous decisions in some business areas" to the question "With reference to strategic decisions which of the following statements better describe your firm situation? Decisions in your firm are...". *eb* is a subjective measure of product quality as perceived by firms from the survey question: "Now please think of the product category your main product belongs to. If we rank the maximum quality available in the market for this product equals to 100, how would you rate the quality of your own product?". EFIGE sample weights are used throughout.

**Figure 13b: Export Market Share for Differentiated versus Homogeneous Sectors**  
 differentiated sector:  $\sigma$  bottom 10<sup>th</sup> percentile, homogeneous sector:  $\sigma$  top 10<sup>th</sup> percentile  
 (in per mille)



**Notes:** *Export Market Share:* Median firm's export value/total imports of the world for the firm specific set of industries. Numbers above bars are the ratio of the group specific median to the median across groups (for a given sub-sample). Firms are homogeneous if the elasticity of substitution  $\sigma$  belongs to the top 10<sup>th</sup> percentile in its country and are differentiated if the elasticity of substitution  $\sigma$  belongs to the bottom 10<sup>th</sup> percentile in its country. The elasticities of substitution are calculated at the sectoral level from Broda, Greenfield and Weinstein (2006). *none:* neither decentralised nor offshoring, *dec:* decentralised firm, *off:* offshoring firm, *both:* decentralised and offshoring firm (categories are mutually exclusive). A firm is considered to be offshoring when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production". A firm is considered to be decentralised when it responds "decentralised: managers can take autonomous decisions in some business areas" to the question "With reference to strategic decisions which of the following statements better describe your firm situation? Decisions in your firm are...". *eb* is a subjective measure of product quality as perceived by firms from the survey question: "Now please think of the product category your main product belongs to. If we rank the maximum quality available in the market for this product equals to 100, how would you rate the quality of your own product?". EFIGE sample weights are used throughout.

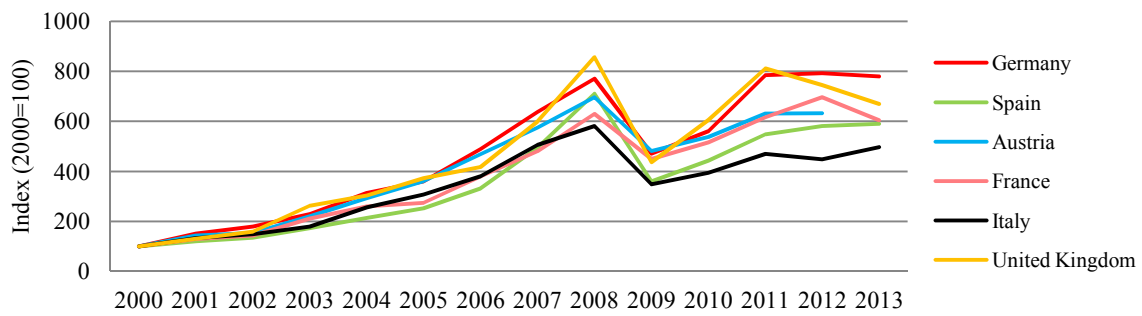
**Figure 14a: Exports of Manufacturing to Eastern Europe 2000 – 2013**  
(in 2000 prices)



Source: Comtrade, Eurostat

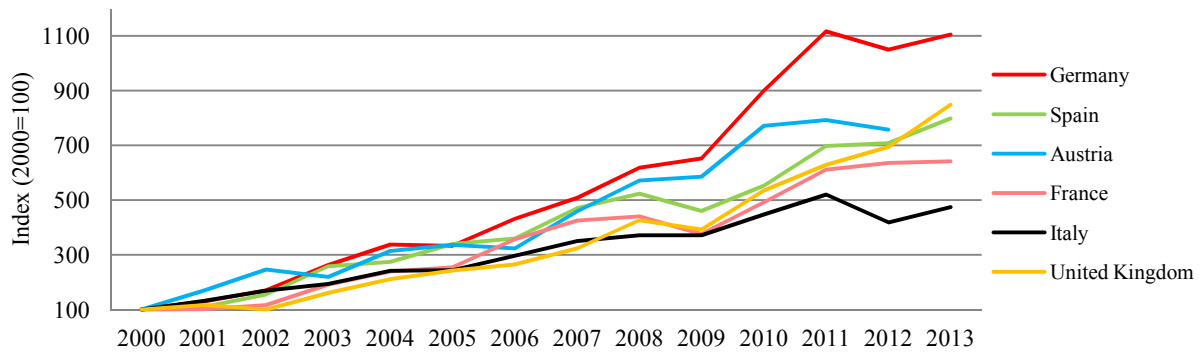
Notes: Eastern Europe includes: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic and Slovenia

**Figure 14b: Exports of Manufacturing to Russia 2000 – 2013**  
(in 2000 prices)



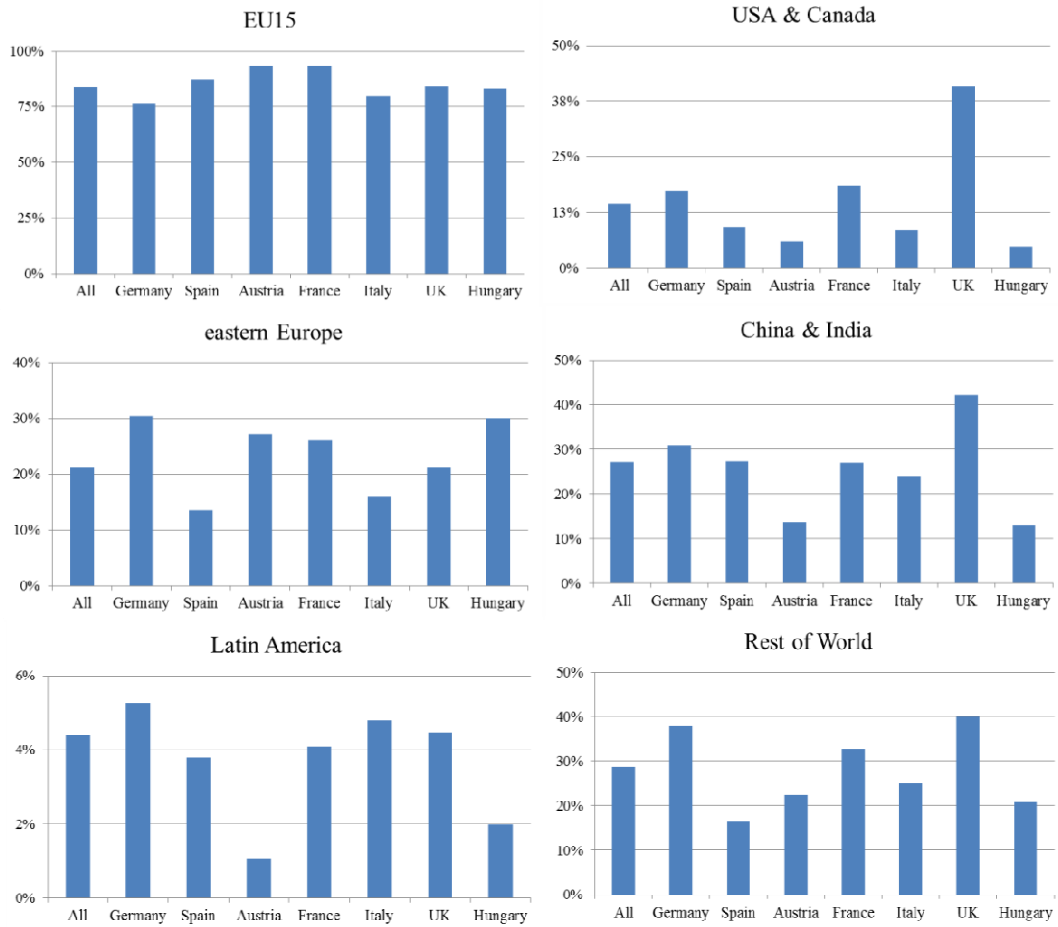
Source: Comtrade, Eurostat

**Figure 14c: Exports of Manufacturing to China 2000 – 2013**  
(in 2000 prices)



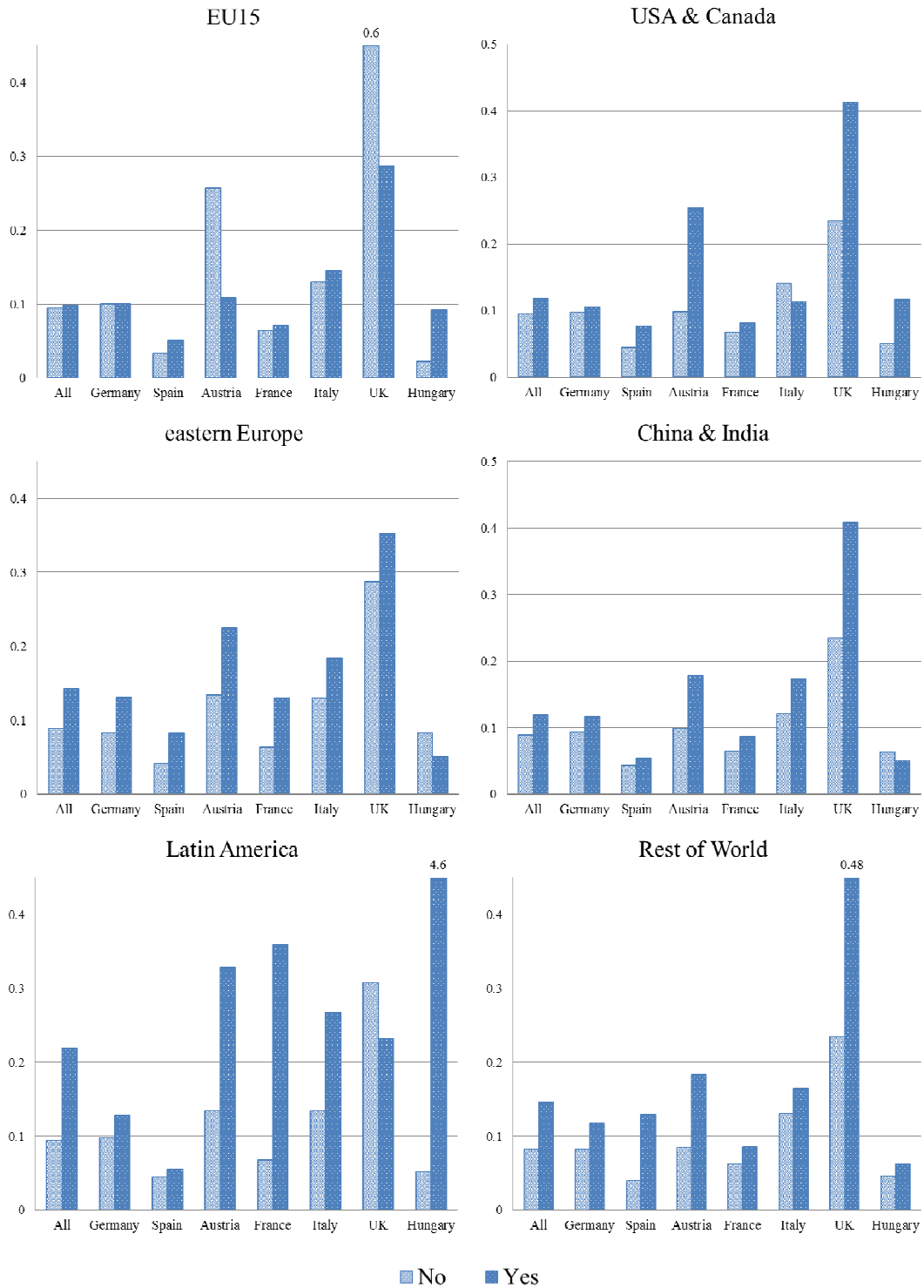
Source: Comtrade, Eurostat

**Figure 15: Regional Sourcing**  
(in percent of offshoring exporters)



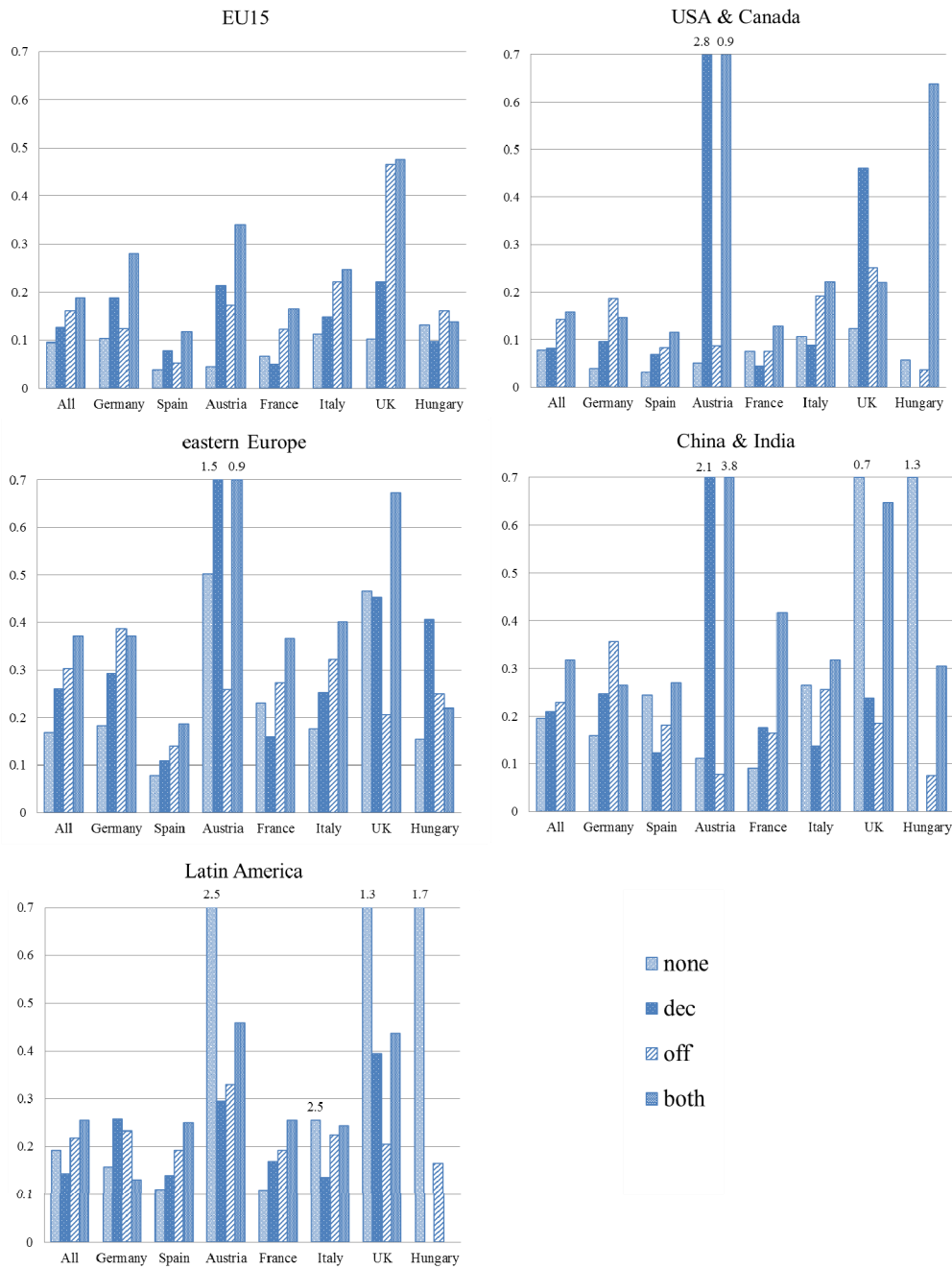
**Notes:** Numbers are the share in percent of offshoring exporters sourcing from a specific region. Multiple responses possible, numbers do not add up to 100%. Latin America: Antigua, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Ecuador, El Salvador, Grenada, Guatemala, Guayana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Rep., St. Kitts-Nevis, St. Lucia, St. Vincent, Suriname, Trinidad Tobago, Uruguay, Venezuela. eastern Europe: Bulgaria, Cyprus, Estonia, Latvia, Lithuania, Malta, Poland, Czech Republic, Romania, Slovakia, Slovenia, Hungary. EFIGE sample weights are used throughout.

**Figure 16: Export Market Share and Regional Sourcing  
(in percent of offshoring exporters)**



**Notes:** *Export Market Share:* Median firm's export value/total imports of the world for the firm specific set of industries. *No:* offshoring exporter does not source from this region. *Yes:* offshoring exporter sources from this region. A firm is considered to be offshoring when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production". Latin America: Antigua, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Ecuador, El Salvador, Grenada, Guatemala, Guayana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Rep., St. Kitts-Nevis, St. Lucia, St. Vincent, Suriname, Trinidad Tobago, Uruguay, Venezuela. Other EU: Bulgaria, Cyprus, Estonia, Latvia, Lithuania, Malta, Poland, Czech Republic, Romania, Slovakia, Slovenia, Hungary. EFIGE sample weights are used throughout.

**Figure 17: Regional Export Market Shares**  
(in per mille)



**Notes:** *Regional Export Market Shares:* Median firm's export value to a given region/total regional imports for the firm specific set of industries. *none:* neither decentralised nor offshoring, *dec:* decentralised firm, *off:* offshoring firm, *both:* decentralised and offshoring firm (categories are mutually exclusive). A firm is considered to be offshoring when it responds "Yes, from abroad" to the question: "In 2008 has the firm purchased raw material or any intermediate goods for its domestic production". A firm is considered to be decentralised when it responds "decentralised: managers can take autonomous decisions in some business areas" to the question "With reference to strategic decisions which of the following statements better describe your firm situation? Decisions in your firm are...". Latin America: Antigua, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Ecuador, El Salvador, Grenada, Guatemala, Guayana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Rep., St. Kitts-Nevis, St. Lucia, St. Vincent, Suriname, Trinidad Tobago, Uruguay, Venezuela. Other EU: Bulgaria, Cyprus, Estonia, Latvia, Lithuania, Malta, Poland, Czech Republic, Romania, Slovakia, Slovenia, Hungary. EFIGE sample weights are used throughout.

**Table 3: What drives Decentralised Management?**  
(in percent of exporters)

	Germany	Spain	Austria	France	Italy	UK	Hungary
Decentralised Management	37.9%	44.2%	43.3%	24.7%	17.0%	40.4%	15.9%
Potential Determinants:							
<i>Size of Exporters (Number of Employees)</i>	97	63	106	118	50	143	104
<i>Family Managed Exporters</i>	22.5%	24.9%	24.4%	17.1%	38.9%	11.0%	26.4%
<i>Exporters with Family Executives (not CEO)</i>	3.9%	3.7%	2.3%	1.3%	0.4%	2.8%	3.8%
<i>Trust</i>	40.7%	33.3%	37.4%	27.4%	34.9%	40.0%	21.3%

**Notes:** A firm is considered to be decentralised when it responds "*decentralised: managers can take autonomous decisions in some business areas*" to the question "*With reference to strategic decisions which of the following statements better describe your firm situation?*". *Family Managed:* firm's share of managers related to the controlling family is higher than the national average. *Exporters with Family Executives (not CEO):* firm has family members in the executive board, but top CEO is not a member of the family. *Trust:* "*Generally speaking, would you say that most people can be trusted (1) or that you can't be too careful in dealing with people (0)*". We use the average responses for NUTS-1 region of the exporter, source: European Value Survey.

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