Should I Stay or Should I Go? Firm heterogeneity in the Post-Crisis Period.

Panagiotis Fouskas[a*] and Catherine Robinson[b]

Affiliations:

[a]Birmingham Business School, University of Birmingham, Birmingham, B15 2TT, UK.

[b]Kent Business School, University of Kent, Kent, ME4 4TE, UK.

E-mail addresses:

fouskasp@bham.ac.uk. (P. Fouskas)

c.robinson-501@kent.ac.uk. (C. Robinson)

[*] Corresponding Author.

The Authors would like to thank Alessandra Guariglia, Robert Elliott, Michael Henry and participants at the seminar at the University of Birmingham for their useful comments and suggestions. We would also like to thank the reviewers for the detailed and constructive feedback provided. The responsibility for any remaining errors lies with the authors alone.

Should I Stay or Should I Go? Firm heterogeneity in the Post-Crisis Period.

ABSTRACT

Export-led growth has been of increasing policy interest since the global financial crisis of 2008-2010. Existing microeconomic research on exporting firms is dominated by empirical findings across time and countries that use a variety of measures typically based on two theories of why firms choose to export. One requires firms to be better performers before entry, the other requires there to be improvements in performance as a result of entry. Less attention has been devoted to firms that leave overseas markets. Trade theory predicts this may be a sticky process because of sunk costs; however, evidence suggests that firms do switch in and out of exporting quite frequently. In this paper, we disentangle entry to, and exit from, the overseas market for UK manufacturing firms to better understand the motivations and characteristics underlying both decisions. We explore the extent to which changes in the macroeconomic environment may influence behaviour, following a time of global financial turbulence.

JEL Classification: D24, F14.

Keywords: Exporting, Productivity, Foreign Market-Exit, Panel-Data, Trade.

1 Introduction

A vibrant export sector is an important component of a healthy and growing open economy; offering a source of resilience to domestic downturns as well as increasing the potential customer base. Exporting also allows firms to experience and develop global best practice which may trigger growth through competition and spillovers in the form of lower costs (Onori, 2015). Considerable attention has been paid in recent years to the relationship between performance (mostly productivity) and exporting activity at the firm level (Wagner, 2007, 2012; Greenaway et al., 2007 and Bernard et al., 2012). Governments are better equipped to decide whether (and how) to encourage firms to export (more) with a clearer understanding of the decision-making process firms undertake. While many papers focus on the decision to

begin exporting activities, few studies consider the drivers of a firm's decision to stop exporting.

Exporting firms are widely regarded as being 'better' than those operating solely in a domestic market (c.f, Richardson and Rindal, 1996; Bernard and Wagner, 1997; Temouri et al., 2013). Whether the superiority of exporters exists before entry, has triggered a considerable debate centred around two hypotheses. Firstly, the self-selection hypothesis (Melitz, 2003) which states that more productive firms export because they have the ability to overcome the sunk costs associated with selling abroad. Secondly, the learning-by-exporting hypothesis (Bernard and Jensen, 1999; de Loecker, 2007) which is based on the premise that firms become better as a result of international experience, through exposure to best practice, both in terms of technology and management practices.

Evidence on firm survival argues that exporting makes firms more resilient, increasing the probability of firm survival (Dunne and Hughes, 1994; Wagner, 1994; Bridges and Guariglia, 2008; Fugazza and McLaren, 2014). However, fewer studies have looked at the factors that affect whether a firm stays in overseas markets (Wagner 2008; Ilmakunas and Nurmi 2010; Harris and Li 2011). This paper aims to improve our understanding of the factors that affect export-market entry and exit. This study utilises recent data that captures the rebound of the world economy following the financial crisis of 2008-2010 and compares the determinants of export-market entry and exit during and after the recent financial crisis. Results presented here indicate that the determinants of export-market exit and entry do vary compared to earlier literature in particular in relation to firm finance (e.g. leverage) and costs (e.g. wages, capital).

The paper is structured as follows: Section 2 summarises existing empirical evidence in relation to the decision to export and subsequent firm survival in the export market. Section 3 contains an outline of the methodological approach and considerations underpinning the

analysis. In section 4 we describe the data used here and in Section 5 we present our findings. In the final section we summarize, drawing conclusions on the basis of our analysis.

2 Exporting and Performance

For any firm, the decision to export is based on two potential sources of benefits; the direct growth in sales they may experience from a wider customer base and the indirect improvements in productive efficiency as they learn from competing firms operating by at the global frontier. However, firms entering foreign markets face additional costs and the decision of whether to enter has to be made with imperfect knowledge of these. Firms that feel the costs are too great, will not enter and firms that discover, post-entry, that the costs are larger than anticipated will withdraw.

Empirical evidence on self-selection into exporting exists for almost all countries. The majority of studies are based on manufacturing data (Clerides et al., 1998; Delgado et al., 2002; Baldwin and Gu, 2003; Bernard and Jensen, 2004; Aw et al., 2000; Girma et al., 2004; Castellani, 2002; Arnold and Hussinger, 2005; Van Biesebroeck, 2005), which is generally more reliable than service sector export information. These studies generally find that more productive firms and those which that pay higher wages will self-select into foreign markets. Greenaway et al. (2005), however, find little evidence of self-selection in their study of Swedish manufacturing firms, which they attribute to firm homogeneity because of the open Swedish economy.

Evidence of export persistence at the micro level is mixed. Contrary to the expectation that firms will become locked-in to exporting in the short run, even in the face of no demonstrable productivity improvement (as reported in Dixit, 1989a,b; Impullitti et al., 2013), there is considerable evidence of firms switching in and out of exporting, particularly in the early stages (Albornoz et al, 2012). Gullstrand and Persson (2015) use detailed data on the destination of products to find that overseas activity is typically short-lived for peripheral

markets but not for core markets. In the same spirit, Bekes and Murakozy (2012) show that about 50 percent of firm–product–destination export spells are short-lived in the case of Hungarian firms and find that permanent trade is more likely with higher level productivity and greater financial stability.

In the case of UK firms, Harris and Li (2011) have considered the characteristics of firms that survive in overseas markets. They find that hazard rates are lower for firms that are larger, foreign owned and have higher productivity and gearing. Similarly, Hiller et al. (2017) and Wagner (2008) using Danish and German data respectively also finds that foreign market survival is positively associated with productivity. Ilmakunnas and Nurmi (2010) find that capital-intensive firms in Finnish manufacturing have greater chance of survival in the export market and that foreign ownership can reduce failure rates for small firms and firms with low levels of human capital. Engel et al. (2013) show that being part of a multi-site firm lowers the probability of stopping exporting but also increases the probability of engaging in foreign direct investment. Eaton et al. (2008; 2016) show that the initial value of exports is positively correlated with survival, indicating that the scale of initial involvement may be a determining factor in a firm's persistence in overseas markets.

A final area of interest in relation to persistence of overseas presence in existing research is the financial health of firms. Görg and Spaliara (2014), Bellone et al. (2010) and Bridges and Guariglia (2008) agree that better financial health is positively correlated with higher survival rates; however, the country's financial system and the past export activity are seen as moderating factors on the relationship.

In summary, the rationale for exporting has been researched extensively before with a range of firm level characteristics being found to be relevant, including age, size, financial health and productivity. Less empirical evidence exists in relation to the persistence of exporting and whether this is affected by macroeconomic conditions. This paper addresses this knowledge gap with the use of UK data.

3 Methodology

To model the probability of entering and exiting the export market, we begin by assuming that variation among firms on the entry or exit condition arises from both their observable and unobservable characteristics (Roberts and Tybout, 1997). Using a traditional random effects probit model with unobserved heterogeneity (c_i)[1] the relationship can be specified thus:

$$P(y_{it} = 1|x_{it-1}, c_i) = \Phi(x_{it-1}\beta + c_i) \quad (1)$$

where, y_{it} is the binary dependent variable (in our case, entry to, or exit from, the foreign market), x_{it-1} is the matrix of the firm's observable characteristics, including lags and $\Phi(.)$ is the normal cumulative distribution function defined in the unit interval. The inclusion of lags makes the matrix of observables predetermined on the decision of the firm to enter or exit the foreign market and therefore removes possible simultaneity. However, a limitation of the model is the strong assumption that c_i and x_{it-1} are independent (i.e. $c_i|x_{it-1} \sim Normal(0, \sigma_c^2)$).

Chamberlain (1980) relaxes this assumpion by assuming a specific correlation between unobserved heterogeneity (c_i) and observable time-varying characteristics. Mundlak's (1978) version of Chamberlain's assumption is $c_i|x_{it-1} \sim Normal(\mu + \bar{x}_i\gamma, \sigma_\alpha^2)$, where $\bar{x}_i = \frac{1}{T}\sum_T^1 x_{it-1}$. Under the Mundlak-Chamberlain assumption, Wooldridge (2010) refers to model (1) as the **correlated random effects probit model** (CRE), estimated using conditional maximum likelihood estimation. Although restrictive, the CRE allows for some dependence between unobserved heterogeneity and observable characteristics.

When modeling the decision to enter the overseas market, the inclusion of a lagged dependent variable captures the sunk-costs associated with entry, which relates to the **self-**

[1] Empirical studies that employ random effects probit models include Bridges and Guariglia (2008), Greenaway et al (2007), Fugazza and Mclaren (2014) and Diaz-Mora et al (2015).

selection hypothesis. Model (1) therefore becomes a dynamic probit model with correlated random effects:

$$P(y_{it} = 1|y_{it-1} \ldots . y_{i0}, x_{it-1}, c_i) = \Phi(y_{it-1}\rho + x_{it-1}\beta + c_i), \quad (2)$$

$$c_i|x_{it} \sim Normal(\mu + \bar{\bar{x}}_i\gamma, \sigma_\alpha^2), \quad (3)$$

where $\bar{\bar{x}}_i = \frac{1}{T-1}\sum_T^2 x_{it-1}$.

The treatment of the initial period in the dynamic probit model (2) relates to the initial conditions problem (Blundell and Smith, 1991; Honore and Kyriazidou, 2000). Wooldridge (2005) proposes a solution for nonlinear panel data models with unoberved heterogeneity whereby, in addition to model (2) an alternative for assumption (3) is as follows:

$$c_i|y_{i0}, x_{it-1} \sim Normal(\mu + y_{i0}\gamma_1 + \bar{\bar{x}}_i\gamma_2, \sigma_\alpha^2), \quad (4)$$

In this analysis, model (2) under assumption (4) is used to estimate the determinants of market entry. This is a dynamic probit model with correlated random effects that accounts for the initial conditions problem. Model (1) using the Mundlak-Chamberlain approach will be used to estimate the determinants of exit from foreign markets. The two decisions of entry and exit are not seen as necessarily symmetric since the entry decision involves sunk-costs whereas the exit decision does not[2].

The matrix of observable characteristics (in both entry and exit models) includes labour and total factor productivity as measures of efficiency which is of interest because it reflects the potential for creative destruction (Schumpeter, 1942). Less productive firms are displaced by new more productive firms, increasing the barrier to enter a market (Chun et al., 2008; Brandt et al., 2012). The age of the firm (as a proxy for experience), the size of the firm (defined in terms of employment size), the average wage (to proxy for labour quality), capital intensity, whether the firm is foreign owned (indicating an international dimension to the organisation) and liquidity and leverage ratios (to control for the financial health of the firm) are included as

[2] Thus, estimates of the determinants of exit do not feature a lagged dependent variable.

controls. All specifications control for region, industry and year, by the inclusion of appropriate dummy variables.

4 Data

4.1 Sample characteristics

The analysis focuses on UK manufacturing firms. The UK is of interest as a significant contributor to the global market in terms of exports, accounting for around 3.5% of total global exports in terms of value in 2010 (UNCTAD)[3]. Until 2008, firm level data on exports as a share of output were not routinely collected by the Office for National Statistics. The main source of export data for UK firms was Companies House data, since all firms are required by law to return these (subject to size exemptions). Companies House data is organised by Bureau van Djik and made available through FAME (Financial Analysis Made Easy). For the purposes of this paper, data were extracted from FAME for the period 2008-2015. This is a period of intense interest as it captures the recent financial crisis which has had global reprecussions.

One of the main criticisms of FAME data being used for academic purposes is that it underrepresents small and medium enterprises, since smaller firms have legal exemptions from full financial reporting[4]. By using unincorporated accounts only, this is accounted for to some extent since they better represent enterprises within large organisations, however we acknowledge that small firms are underrepresented in this database.

Our sample consists of 94,039 firm-year observations of which 63% are exporting observations of exporting firms and 37% are non-exporting observations indicative of the large firm bias within FAME[5]. In other studies that use FAME the percentage of exporters varies

[3] UNCTAD data, total trade in goods and services – exports. Available at http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=25116

[4] As export performance can be affected by demand conditions we would ideally like to control for this in our regressions. Information on the destination markets is not available in FAME. Unfortunately, this is shortcoming of all related studies employing FAME.

[5] One can attempt to compare the sample with official data (e.g. Annual Business Survey ABS). The ABS is a survey of the whole economy rather than manufacturing which is the focus of our analysis. From 2011, the

considerably. Mayer and Ottaviano (2008) report having 28% of their sample of firms exporting. Görg and Spaliara (2014) report 44%, and Greenaway et al. (2007) 62%. Given this discrepancy between official governmental data and FAME controlling for firm size is important in our analysis as this has the potential to influence the results. Thus we control for size in our regressions but also "standardize" the variables by size (i.e. using capital intensity rather than capital).

Exploration of the earlier literature establishes a landscape in which exporters are found to be in general more productive, paying higher wages, employing more capital and having better financial health. By focussing on a time period that captures the recent economic crisis and its aftermath, we are able to test whether the picture holds over a changing macroeconomic landscape. To test for differences in firm behaviour over the financial crisis, we split the sample into the Crisis period (2008 to 2010) and Post-Crisis period (2011 to 2015)[6]. For each period of analysis we present summary statistics by trade-status categories[7] (Tables 1 and 2).

Over the Crisis period (i.e Table 1) we see that continuous exporters have higher labour productivity, capital intensity and pay higher wages on average compared with continuous non-exporters (see Table A1 for definitions). However, when all export-groups are considered, those firms that cease exporting (stoppers) show surprisingly high averages of productivity, capital intensity and average wages combined with poor financial health (observed by liquidity and leverage indicators)[8]. A similar pattern emerges in the Post-Crisis period (Table 2). Stoppers again show greater average values of productivity, capital intensity and average wages but worst financial conditions.

estimate of exporters for SME and Large firms is close to 40% in ABS data. The ABS has only routinely collected data on exporting since 2011 and will provide valuable time series in the future; however, to capture pre and post crisis differences, FAME offers a more appropriate timeframe.

[6] We would like to thank an anonymous referee for proposing the breakdown of the sample to Crisis and Post-crisis periods.

[7] This breakdown is more meaningful and informative than just comparing exporting to non-exporting observation when panel data are available. This is because firms may change their export status while in the dataset.

[8] Harris and Li (2011) find stoppers having greater mean productivity and capital intensity in a sample of UK firms covering all market-based sectors.

(Table 1 around here)

(Table 2 around here)

4.2 Productivity

Economic performance may be reflected in a number of measures but traditionally, economists focus on labour productivity and total factor productivity. In this study, two measures of labour productivity were considered (in order to test the sensitivity of our findings to differences in measurement). These were firm sales per head (readily available in the data source) and as an alternative, we constructed a measure of value-added per employee. Our findings were more consistent for the value-added measure of labour productivity and we therefore report this throughout the paper.

Total Factor Productivity (TFP) is a more holistic measure derived from the production function, capturing the efficiency with which all measurable inputs are combined to produce outputs. There are a number of problems (e.g simultaneity, attrition, price bias) associated with the estimation of the production function using standard techniques (discussed in Van Beveren, 2012 and Syverson, 2011 for detailed discussions) which may bias our measurement of performance and affect the interpretation and validity of our results. As a consequence, whilst TFP is estimated using the standard OLS approach, more sophisticated techniques are generally required and are applied here.

Semi-parametric estimators of productivity have become increasingly popular since the introduction of the Olley and Pakes approach (Olley and Pakes, 1996) which incorporated investment as a proxy variable for unobserved productivity. The Olley and Pakes estimator has been adapted separately by Levinsohn and Petrin (2003) and Ackerberg, Caves and Frazer (2015) with the former uses intermediate inputs rather than investment and the latter questions the timing assumptions underlying the Olley and Pakes and Levinsohn and Petrin approaches. Wooldridge (2009) highlights the inefficiencies associated with the two-step procedure

underlying the Olley and Pakes, Levinsohn and Petrin and Ackerberg, Caves and Frazer approaches[9] and proposes a more efficient one-step estimator. Here we employ the Wooldridge (2009) estimator, using a third-degree polynomial of capital and intermediates to proxy for unobserved productivity. Firm level estimates of TFP are derived for each 2-digit manufacturing industry separately (see Table A2). Our empirical specifications include TFP estimated using pooled OLS and firm fixed-effects estimator for comparison.

5 Empirical results

5.1 Firm heterogeneity and foreign market entry

Tables 3 and 4 present the results of the dynamic probit model with correlated random effects (corresponding to model (2) and assumption (4)) and capture the role of foreign market entry. During the Crisis period (Table 3) our findings indicate the existence of barriers faced entering foreign markets, shown by the positive and significant coefficient on the lagged dependent variable ($Export_{t-1}$). This result holds across the various specifications. Initial conditions are modelled using the export status at the beginning of the time period (Wooldridge, 2005) and are significant across all specifications. With regards to productivity, we find that firms with higher labour productivity are more likely to export in the subsequent period, although the magnitude of the association is small (a 1 unit increase in lagged labour productivity results in a 0.005 increase in the probability of entry in the Crisis period), as indicated by the marginal effects in column (2)[10]. Total factor productivity constructed using the Wooldridge approach (TFP_Wool) is insignificant (as in Greenaway et al, 2007). We find strong significant results when using the pooled and fixed effects indices. This striking

[9] Akerberg et al (2005) explain that the coefficient on labour cannot be identified in the first stage of the Levinsohn and Petrin estimator because of the collinearity with the inverted function used to proxy unobserved productivity. The former problem can be easily addressed by using an instrumental approach in a single equation. See Wooldridge (2009) and Ornaghi and Van Beveren (2011) for a full exposition of the biases and estimation strategies.

[10] Having small marginal effects is unsurprising. Görg and Spaliara (2014) find a productivity coefficient for the UK sample between (0.002) and (0.003) which indicates a much smaller marginal effects than that presented here.

difference is the result of the biases that surround estimates from traditional approaches, compared to the Wooldridge (2009) estimator.

Our results from the Crisis sub-sample also show that older firms have lower chances of exporting, as do larger and more capital-intensive firms as well as firms that pay higher wages on average. This suggests that in challenging economic times, variables such as wages, capital, labour force and age, appear to hinder global engagement, whereas in more buoyant economic times (pre-Crisis potentially) these variables might be seen as offering comparative advantages in exporting.

To facilitate comparison with previous findings on financial downturns[11] we capture firms' financial health using both liquidity and leverage ratios. Ex-ante, we hypothesize that higher liquidity is a signal of better financial health. However, when it comes to leverage, the ex-ante hypothesis is not evident. Nickell et al. (1997) argue that higher leverage improves a firm's performance by acting as a disciplining mechanism on managers. Dennis and Mihov (2003) argue that firms with high leverage increase their chances of attracting external financing. In contrast, Görg and Spaliara (2014) argue that higher leverage will decrease the probability of attracting external funding. We do not find significant results for either leverage or liquidity in the Crisis years.

(Table 3 around here)

In the Post-Crisis period, Table 4 estimates of the lagged dependent variable ($Export_{t-1}$) are observed to be smaller than those in the crisis period (Table 3) indicative of easier access to foreign markets in less economically turbulent times. When comparing estimates of firm level characteristics between the two periods (i.e. Table 3 and Table 4) we see that only age and foreign ownership remain significant and maintain their signs. We observe a significant

[11] Other papers that use similar measures include: Whited (1992), Fazzari and Petersen (1993), Farinha and Santos (2006), Cleary et al. (2007).

discrepancy between TFP_Wool and the other two indices of TFP. TFP_Wool is our preferred measure of TFP and we observe that TFP is positively correlated with exporting in the Post-Crisis period. We infer that this is evidence of imporved productivity helping to overcome barriers and may positively affect a firm's ability to enter foreign markets, which is in line with Melitz's (2003) theoretical framework. Specifically, during the Crisis period the significant determinant of economic efficiency is labour productivity whereas in the aftermath of the Crisis period TFP becomes significant.

With regard to our measures of financial health we find that firms with a higher leverage ratio are more likely to export. This result supports the findings of Minetti and Zhu (2011). However, this result is at odds with Greenaway et al. (2007) and Stiebale (2011).

(Table 4 around here)

5.2 Firm heterogeneity and foreign market exit

The results presented here relate to a firm ceasing to export, i.e. exiting the export market. Therefore, the exit variable is conditional on a firm's overall survival after it ceases serving the foreign market. Moreover, by construction, an 'exit' event requires that the firm is serving the foreign market in the first instance, making the use of dynamic model unnecessary. Therefore, our estimates refer to a **correlated random effects probit model** (CRE) as described in section 3 (model 1 under assumption 3).

Our estimates from the Crisis period (Table 5) reveal again a difference between the TFP indices. TFP_Wool is insignificant for exit, as it was for the entry decision. Table 5 shows that firms with lower labour productivity are more likely to exit foreign markets. Specifically, a 1 unit increase in labour productivity results in a 0.011 increase in probability of exit (Table 5, column 2). In contrast, older firms and firms that pay higher wages, employ more capital, or are larger, are more likely to cease exporting. These results are robust across the various specifications presented in Table 5 and are consistent with the findings presented in Table 3.

(Table 5 around here)

Turning to the Post-Crisis period (Table 6) we find that the results are rather weak. TFP_Wool has a small negative effect on the probability of exiting the foreign market whereas labour productivity is found to be insignificant[12]. Larger and foreign owned firms are less likely to exit, whereas older firms are more likely to exit. Firms with high leverage ratios are less likely to exit which is consistent with the findings presented in Table 4 on entry. Our results are consistent with the earlier findings of Nickell et al. (1997) and Dennis and Mihov (2003), but findings differ from other empirical results, perhaps due to the economic environment under investigation but also because of the nature of our dependent variable (exit from the foreign market) which is conditional on the firm's overall survival.

(Table 6 around here)

Taken together, there is evidence to support the argument of creative destruction. Older and less productive firms will be displaced by new more productive firms in times of economic crisis. We also observe a change in the importance of productivity, from labour productivity being significant for entry and exit during the Crisis period, to total factor productivity in the Post-Crisis period. This switch is sensitive to the TFP index used in the dataset[13]. Intuitively, this productivity switch can be explained by the behaviour of firms that place more emphasis on artificially improving their labour productivity ratio by cutting on costs (i.e. mainly labour) during turbulent economic times but investing in modern organisational practices that improve productivity during economically stable times. We also find symmetry across entry and exit in the behaviour of most firm characteristics, such as average wages, capital intensity, size and foreign ownership. However, we document differences between Crisis and Post-Crisis periods

[12] We have also tested for the prolonged effect of performance measures including further lags. In all cases the results were insignificant and we chose not to present them for brevity. Results are available on request.

[13] For example the switch is not observed when employing pooled OLS or fixed effects estimators which produce poor estimates of TFP.

(the more profound being on capital intensity and size). Finally, with regards to the financial health, of the firm we find that leverage affects entry and exit symmetrically in the Post-Crisis period. We also document a switch from liquidity to leverage as a significant determinant of exit from the foreign markets as firms move away from the Crisis period.

5.3 Linear probability models

As an alternative to the correlated random effects model, linear probability models are easy to implement but cannot guarantee that the probability of the dependent variable lies between 0 and 1, which introduces potential bias in our estimates (Nickell, 1981). Nonetheless this approach has been used in the literature because it offers a way of eliminating unobserved heterogeneity c_i by using within estimators (Bernard and Jensen 1999; Greenaway et al., 2007). Although the linear probability model imposes unnatural restrictions on the dependent variable, it does not require additional restrictions on unobserved heterogeneity, as the probit model does, and in some cases provides reasonable estimates.

Here we use an ordinary least squares with fixed effects, including lags of the matrix of observables to eliminate possible simultaneity by making demand for inputs and performance conditional on the decision of entry to or exit from the foreign market[14]. Table 7 shows the estimates from the entry decision for the Crisis period (columns 1 to 4). We note that the finding for self-selection is not in-line with the probit model findings or the established literature. However, when looking at the Post-Crisis period (columns 5 to 8, Table 7) the results are similar. In Table 8 (columns 1 to 4) again the results are broadly consistent[15] with the estimates from the CRE models (Table 5 and Table 6).

(Table 7 around here)
(Table 8 around here)

[14] We would like to thank an anonymous referee for pointing out this estimation strategy to us.
[15] In the sense that significance and sign agree for most but not all variables.

Our linear specification with a lagged dependent variable allows for estimation using the Arellano and Bover (1995) estimator[16]. Results are presented in Tables 9 and 10 for foreign market entry and exit, respectively. A direct comparison of the estimates from CRE model and the Arellano and Bover estimator reveals signifficant differences overall, indicating the sensitivity of findings to the estimator choice. However findings from the CRE model are our preferred ones[17].

(Table 9 around here)
(Table 10 around here)

6 Conclusions

This paper examines both entry into, and exit from, foreign markets. While in terms of entry, the self-selection hypothesis is well documented, evidence for the Post-Crisis landscape is currently absent. Empirical evidence on exit from overseas markets is a strand of the firm survival literature (i.e. the complete death of the firm) but there still remains little evidence on exit from foreign markets, conditional on firm survival. Here we use data on the Crisis (2008 to 2010) and Post-Crisis periods (2011 to 2015) to examine whether the determinants of entry into, and exit from, foreign markets change under different macroeconomic conditions.

Our findings indicate that higher productivity is associated with a higher probability of entry and a lower probability of exit, consistent with a priori expectations; however, the economic significance of productivity is rather small – a 1 unit increase in lagged labour productivity results in a 0.005 increase in the probability of entry in the Crisis period (Table 3, column 2) – which is consistent with both the UK and international literature[18]. In the case of Crisis period exit, we see that a 1 unit increase in labour productivity results in a 0.011 increase in probability of exit (Table 5, column 2). Our findings also indicate that different performance

[16] We would like to thank an anonymous referee for encouraging us to adopt this estimation strategy.

[17] This is in-line with the vast majority of the literature.

[18] For example, in a recent study from Elliott et al., (2016) the marginal effect of TFP on the probability to import is only 0.006 for Chinese data. Gorg and Spaliara (2014) present estimate coefficients of TFP on the probability to export that range from 0.002 to 0.004 for UK and French data.

measures are associated with the entry and exit decision as we move from the Crisis to the Post-Crisis-period. Labour productivity is more relevant in the case of the Crisis period, but in the case of the Post-Crisis period Total Factor Productivity is found to be significant. During the Crisis period, we find the roles of age and size are consistent for entry and exit but this does not hold for the Post-Crisis period. In addition, our findings suggest that the average wage variable captures cost-related issues variable rather than acting as a proxy for human capital, since it is negative in the case of entry but positive in the case of exit. During the crisis periods, Average Wages have negative sign for the self-selection Table 3 and positive for the Exit Table 5. This change in sign for the two specification is consistent with the argument that average wage are seen as costs rather than as proxy for Human capital. More specifically, based on the findings of Table 3 an increase in average wage decreases the probability to export in the following year and increases the probability to Exit (Table 5) for firms already in the foreign markets. Post-crisis, we do not have significant association (Table 4) and therefore nothing can be said here; however we get a positive correlation again for the Exit specification (Table 6). Therefore, the wage coefficient is robust during the Post crisis period for our exit model.

With regards to the financial health of the firm (its leverage and liquidity) the results show that liquidity is insignificant for entry and this holds for both periods. However, when looking at the probability of exit we find that firms with higher liquidity ratio have significantly lower probabilities of exit from foreign markets during the Crisis period only. Conversely, a higher leverage ratio is associated with a higher probability of entry and a lower probability of exit in the Post-Crisis period.

Our results highlight those factors influencing firm behaviour in regards to global engagement and how these change depending on the macroeconomic landscape. It is evident from our analysis that exporting firms and those which aim to remain in foreign markets need to become more cost-efficient and find ways to offset the negative effect that age has on overseas market survival (e.g. possibly through the adoption of new software technologies).

The relationship between R&D and the export decision could be an interesting avenue for future research to explore this further.

References

Ackerberg, D. A., Caves, K., & Frazer, G. (2015). Identification properties of recent production function estimators. Econometrica, 83(6), 2411-2451.

Albornoz, F., Pardo, H. F. C., Corcos, G., & Ornelas, E. (2012). Sequential exporting. Journal of International Economics, 88(1), 17-31.

Arnold, J. M., & Hussinger, K. (2005). Export behavior and firm productivity in German manufacturing: a firm-level analysis. Review of World Economics, 141(2), 219-243.

Aw, B. Y., Chung, S., & Roberts, M. J. (2000). Productivity and turnover in the export market: micro-level evidence from the Republic of Korea and Taiwan (China). The World Bank Economic Review, 14(1), 65-90.

Baldwin, J. R. and Gu, W. (2003). 'Export-market participation and productivity performance in Canadian manufacturing', Canadian Journal of Economics/Revue canadienne d'économique, Vol. 36, pp. 634-657.

Békés, G., & Muraközy, B. (2012). Temporary trade and heterogeneous firms. Journal of International Economics, 87(2), 232-246.

Bellone, F., Musso, P., Nesta, L., & Schiavo, S. (2010). Financial constraints and firm export behaviour. The World Economy, 33(3), 347-373.

Bernard, A. B., & Jensen, J. B. (1999). Exceptional exporter performance: cause, effect, or both? Journal of international economics, 47(1), 1-25.

Bernard, A. B., & Jensen, J. B. (2004). Exporting and Productivity in the USA. Oxford Review of Economic Policy, 20(3), 343-357.

Bernard, A. B., & Wagner, J. (1997). Exports and success in German manufacturing. Weltwirtschaftliches Archiv, 133(1), 134-157.

Bernard, A. B., Jensen, J. B., Redding, S. J. and Schott, P. K. (2012). 'TheEmpirics of Firm Heterogeneity and International Trade', Annu. Rev. Econ, Vol. 4, pp. 283-313.

Blundell, R., & Smith, R. J. (1991). Initial conditions and efficient estimation in dynamic panel data models. Univ. College London, Department of Economics.

Brandt, L., Van Biesebroeck, J., & Zhang, Y. (2012). Creative accounting or creative destruction? Firm-level productivity growth in Chinese manufacturing. Journal of development economics, 97(2), 339-351.

Bridges, S., & Guariglia, A. (2008). Financial constraints, global engagement, and firm survival in the United Kingdom: evidence from micro data. Scottish Journal of Political Economy, 55(4), 444-464.

Castellani, D. (2002). Export behavior and productivity growth: Evidence from Italian manufacturing firms. Weltwirtschaftliches Archiv, 138(4), 605-628.

Chamberlain, G. (1980). Analysis of Covariance with Qualitative Data. The Review of Economic Studies, 47(1), 225-238.

Chun, H., Kim, J. W., Morck, R., & Yeung, B. (2008). Creative destruction and firm-specific performance heterogeneity. Journal of Financial Economics, 89(1), 109-135.

Cleary, S., Povel, P., & Raith, M. (2007). The U-shaped investment curve: Theory and evidence. Journal of financial and quantitative analysis, 42(1), 1.

Clerides, S. K., Lach, S., & Tybout, J. R. (1998). Is learning by exporting important? Micro-dynamic evidence from Colombia, Mexico, and Morocco. Quarterly journal of Economics, 903-947.

Delgado, M. A., Farinas, J. C., & Ruano, S. (2002). Firm productivity and export markets: a non-parametric approach. Journal of international Economics, 57(2), 397-422.

De Loecker, J. (2007). Do exports generate higher productivity? Evidence from Slovenia. Journal of international economics, 73(1), 69-98.

Denis, D. J., & Mihov, V. T. (2003). The choice among bank debt, non-bank private debt, and public debt: evidence from new corporate borrowings. Journal of financial Economics, 70(1), 3-28.

Díaz-Mora, C., Córcoles, D., & Gandoy, R. (2015). Exit from exporting: Does being a two-way trader matter?. Economics, 9(20), 1.

Dixit, A. (1989a). 'Hysteresis, import penetration, and exchange rate pass-through', The Quarterly Journal of Economics, pp. 205-228.

Dixit, A. (1989b). 'Entry and exit decisions under uncertainty', Journal of Political Economy, pp. 620-638.

Dunne, P., & Hughes, A. (1994). Age, size, growth and survival: UK companies in the 1980s. The Journal of Industrial Economics, 115-140.

Eaton, J., Eslava, M., Kugler, M., & Tybout, J. (2008). The margins of entry into export markets: evidence from Colombia.

Eaton, J., Jinkins, D., Tybout, J., & Xu, D. (2016, October). Two-sided Search in International Markets. In 2016 Annual Meeting of the Society for Economic Dynamics.

Elliott, R. J., Jabbour, L., & Zhang, L. (2016). Firm productivity and importing: Evidence from Chinese manufacturing firms. Canadian Journal of Economics/Revue canadienne d'économique, 49(3), 1086-1124.

Engel, D., Procher, V., & Schmidt, C. M. (2013). Does firm heterogeneity affect foreign market entry and exit symmetrically? Empirical evidence for French firms. Journal of Economic Behavior & Organization, 85, 35-47.

Farinha, M. L., & Santos, J. A. (2006). The survival of start-ups: Do their funding choices and bank relationships at birth matter?.

Fazzari, S. M., & Petersen, B. C. (1993). Working capital and fixed investment: new evidence on financing constraints. The RAND Journal of Economics, 328-342.

Fugazza, M., & McLaren, A. (2014). Market Access, Export Performance and Survival: Evidence from Peruvian Firms. Review of International Economics, 22(3), 599-624.

Girma, S., Greenaway, A., & Kneller, R. (2004). Does exporting increase productivity? A microeconometric analysis of matched firms. Review of International Economics, 12(5), 855-866.

Görg, H., & Spaliara, M. E. (2014). Financial Health, Exports and Firm Survival: Evidence from UK and French Firms. Economica, 81(323), 419-444.

Greenaway, D., Guariglia, A., & Kneller, R. (2007). Financial factors and exporting decisions. Journal of international economics, 73(2), 377-395.

Greenaway, D., Gullstrand, J., & Kneller, R. (2005). Exporting may not always boost firm productivity. Review of World Economics, 141(4), 561-582.

Gullstrand, J., & Persson, M. (2015). How to combine high sunk costs of exporting and low export survival. Review of World Economics, 151(1), 23-51.

Harris, R., & Li, Q. C. (2007). Learning-by-exporting? Firm-level evidence for UK manufacturing and services sectors. Department of Economics Discussion Paper, (2007-22).

Harris, R. I., & Li, Q. C. (2011). The determinants of firm exit from exporting: Evidence for the UK. International Journal of the Economics of Business, 18(3), 381-397.

Hiller, S., P. J. H. Schröder and A. Sørensen (2017). Export Market Exit and Firm Survival: Theory and First Evidence. In Globalization: Strategies and Effects, Christensen and Kowalczyk (Eds), Springer, Berlin 183-205.

Honoré, B. E., & Kyriazidou, E. (2000). Panel data discrete choice models with lagged dependent variables. Econometrica, 68(4), 839-874.

Ilmakunnas, P., & Nurmi, S. (2010). Dynamics of Export Market Entry and Exit. The Scandinavian Journal of Economics, 112(1), 101-126.

Impullitti, G., Irarrazabal, A. A., & Opromolla, L. D. (2013). A theory of entry into and exit from export markets. Journal of International Economics, 90(1), 75-90.

Levinsohn, J., & Petrin, A. (2003). Estimating production functions using inputs to control for unobservables. The Review of Economic Studies, 70(2), 317-341.

Mayer, T., & Ottaviano, G. (2008). The Happy Few: The Internationalisation of European Firms. Intereconomics-Review of European Economic Policy, 43(3), 135-148.

Melitz, M. J. (2003). The impact of trade on intra-industry reallocations and aggregate industry productivity. Econometrica, 71(6), 1695-1725.

Minetti, R., & Zhu, S. C. (2011). Credit constraints and firm export: Microeconomic evidence from Italy. Journal of International Economics, 83(2), 109-125.

Mundlak, Y. (1978). On the pooling of time series and cross section data. Econometrica: journal of the Econometric Society, 69-85.

Nickell, S. (1981). Biases in dynamic models with fixed effects. Econometrica: Journal of the Econometric Society, 1417-1426.

Nickell, S., Nicolitsas, D., & Dryden, N. (1997). What makes firms perform well?. European economic review, 41(3), 783-796.

Olley, S., & Pakes, A. (1996). The dynamics of productivity in the telecomunications equipment industry. Econometrica, 64, 1263-97.

Onori, D. (2015). Competition and Growth: Reinterpreting their Relationship. The Manchester School, 83(4), 398-422.

Ornaghi, C., & Van Beveren, I. (2011). Semi-parametric estimation of production functions: a sensitivity analysis. LICOS Discussion Paper Series, 287.

Richardson, J. D., & Rindal, K. (1996). Why Exports Really Matter—More. Institute for International Economics and The Manufacturing Institute, Washington, DC.

Roberts, M. J., & Tybout, J. R. (1997). The decision to export in Colombia: an empirical model of entry with sunk costs. The American Economic Review, 545-564.

Schumpeter, J. (1942). Creative destruction. Capitalism, socialism and democracy, 825.

Stiebale, J. (2011). Do Financial Constraints Matter for Foreign Market Entry? A Firm-level Examination. The World Economy, 34(1), 123-153.

Syverson, C. (2011). What Determines Productivity? Journal of Economic Literature, 326-365.

Temouri, Y., Vogel, A., & Wagner, J. (2013). Self-selection into export markets by business services firms–Evidence from France, Germany and the United Kingdom. Structural Change and Economic Dynamics, 25, 146-158.

Van Beveren, I. (2012). Total factor productivity estimation: A practical review. Journal of Economic Surveys, 26(1), 98-128.

Van Biesebroeck, J. (2005). Exporting raises productivity in sub-Saharan African manufacturing firms. Journal of International economics, 67(2), 373-391.

Wagner, J. (1994). The post-entry performance of new small firms in German manufacturing industries. The Journal of Industrial Economics, 141-154.

Wagner, J. (2007). Exports and productivity: A survey of the evidence from firm-level data. The World Economy, 30(1), 60-82.

Wagner, J. (2008). Export entry, export exit and productivity in German manufacturing industries. International Journal of the Economics of Business, 15(2), 169-180.

Wagner, J. (2012). International trade and firm performance: a survey of empirical studies since 2006. Review of World Economics, 148(2), 235-267.

Whited, T. M. (1992). Debt, liquidity constraints, and corporate investment: Evidence from panel data. The Journal of Finance, 47(4), 1425-1460.

Wooldridge, J. M. (2005). Simple solutions to the initial conditions problem in dynamic, nonlinear panel data models with unobserved heterogeneity. Journal of applied econometrics, 20(1), 39-54.

Wooldridge, J. M. (2009). On estimating firm-level production functions using proxy variables to control for unobservables. Economics Letters, 104(3), 112-114.

Wooldridge, J. M. (2010). Econometric analysis of cross section and panel data. MIT press.

Table 1
Summary Statistics for the Crisis Period (2008-2010)

	Cont.Exporters		Cont.Non-Exporters		Starters		Switchers		Stoppers	
Variable	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
TFP_Wool	2.901	21.013	4.005	20.906	5.070	20.311	6.735	6.728	4.592	20.710
TFP_Pooled	0.583	3.460	-0.326	3.014	0.183	3.475	-0.116	4.225	0.883	4.150
TFP_Within	5.342	4.109	4.236	3.579	5.017	4.143	5.615	3.416	6.066	4.665
Age	8.458	2.268	9.011	0.839	7.746	3.124	7.833	2.843	8.143	2.273
Labour Prod.	13.513	4.843	12.527	5.157	13.818	5.984	15.487	6.039	15.834	6.629
Size	4.623	1.117	4.718	1.315	4.348	1.458	4.136	1.074	4.220	0.985
Capital per Emp.	10.426	4.685	9.931	3.973	10.872	5.193	12.480	5.541	12.502	5.159
Average Wage	12.417	3.701	12.068	3.715	12.903	4.442	14.102	4.386	13.969	3.977
Liquidity	0.177	0.240	0.187	0.402	0.179	0.294	0.117	0.071	0.154	0.223
Leverage	1.200	1.693	1.290	1.770	1.342	1.823	1.004	0.694	1.093	1.624
Foreign Owned	0.522	0.499	0.501	0.500	0.504	0.500	0.419	0.493	0.363	0.481
Observations	13,187		4,950		4,414		12		12,620	

Notes: Values are logged except for dummy variables and ratios financial variables are all deflated using 2010 as a base year.

Table 2
Summary Statistics for the Post-Crisis Period (2011-2015)

	Cont.Exporters		Cont.Non-Exporters		Starters		Switchers		Stoppers	
Variable	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
TFP_Wool	2.883	21.189	4.130	19.668	4.860	19.675	4.777	19.470	4.935	20.705
TFP_Pooled	0.461	3.331	-0.526	2.925	0.122	3.363	0.344	3.749	0.528	4.190
TFP_Within	5.098	3.940	3.934	3.547	4.879	4.068	5.241	4.317	5.459	4.726
Age	8.883	1.626	9.218	0.691	8.112	2.745	8.333	2.294	8.794	1.151
Labour Prod.	13.328	5.408	11.852	4.460	13.206	5.485	14.527	6.074	15.011	6.922
Size	4.656	1.130	4.764	1.311	4.377	1.453	4.196	1.108	4.279	0.999
Capital per Emp.	10.180	4.539	9.747	3.902	10.679	5.130	11.931	5.507	11.869	5.149
Average Wage	11.957	3.399	11.712	3.553	12.427	3.987	13.036	3.947	12.934	3.894
Liquidity	0.203	0.291	0.193	0.326	0.219	0.470	0.211	0.353	0.176	0.259
Leverage	1.093	1.606	1.118	1.647	1.200	1.750	0.999	1.550	1.011	1.596
Foreign Owned	0.529	0.499	0.502	0.500	0.502	0.500	0.421	0.494	0.366	0.482
Observations	22,282		8,430		7,000		4,042		17,096	

Notes: Values are logged except for dummy variables and ratios Financial variables are all deflated using 2010 as a base year.

Table 3
Self-Selection estimates and marginal effects for the Crisis period (2008-2010)

VARIABLES	(1) Coef.	(2) dx/dy	(3) Coef.	(4) dx/dy	(5) Coef.	(6) dx/dy	(7) Coef.	(8) dx/dy
Export(t-1)	1.874***	0.421***	1.870***	0.420***	1.864***	0.419***	1.857***	0.418***
	(0.036)	(0.006)	(0.036)	(0.006)	(0.036)	(0.006)	(0.035)	(0.006)
Export(2008)	0.393***	0.088***	0.397***	0.089***	0.401***	0.090***	0.420***	0.094***
	(0.037)	(0.008)	(0.037)	(0.008)	(0.037)	(0.008)	(0.036)	(0.008)
Labour Prod.(t-1)	0.024***	0.005***						
	(0.005)	(0.001)						
Average Wage(t-1)	-0.058***	-0.013***	-0.058***	-0.013***	-0.058***	-0.013***	-0.058***	-0.013***
	(0.007)	(0.002)	(0.007)	(0.002)	(0.007)	(0.002)	(0.007)	(0.002)
Capital per Emp. (t-1)	-0.028***	-0.006***	-0.026***	-0.006***	-0.026***	-0.006***	-0.027***	-0.006***
	(0.006)	(0.001)	(0.006)	(0.001)	(0.006)	(0.001)	(0.006)	(0.001)
Age(t-1)	-0.363***	-0.081***	-0.365***	-0.082***	-0.365***	-0.082***	-0.369***	-0.083***
	(0.036)	(0.008)	(0.036)	(0.008)	(0.036)	(0.008)	(0.036)	(0.008)
Size(t-1)	-0.352***	-0.079***	-0.358***	-0.080***	-0.353***	-0.079***	-0.354***	-0.080***
	(0.098)	(0.022)	(0.099)	(0.022)	(0.099)	(0.022)	(0.098)	(0.022)
Liquidity(t-1)	0.107	0.024	0.109	0.024	0.107	0.024	0.108	0.024
	(0.087)	(0.020)	(0.086)	(0.019)	(0.086)	(0.019)	(0.088)	(0.020)
Leverage(t-1)	0.021	0.005	0.020	0.005	0.020	0.004	0.021	0.005
	(0.016)	(0.004)	(0.016)	(0.004)	(0.016)	(0.004)	(0.016)	(0.004)
Foreign Owned	0.061***	0.014***	0.060***	0.013***	0.061***	0.014***	0.061***	0.014***
	(0.022)	(0.005)	(0.022)	(0.005)	(0.022)	(0.005)	(0.022)	(0.005)
Multinational	0.071*	0.016*	0.072*	0.016*	0.073*	0.016*	0.075*	0.017*
	(0.039)	(0.009)	(0.039)	(0.009)	(0.039)	(0.009)	(0.039)	(0.009)
Enterprise Group	0.074***	0.017***	0.073***	0.016***	0.073***	0.016***	0.070***	0.016***
	(0.026)	(0.006)	(0.026)	(0.006)	(0.026)	(0.006)	(0.026)	(0.006)
TFP_Pooled(t-1)			0.023***	0.005***				
			(0.005)	(0.001)				
TFP_Within(t-1)					0.014***	0.003***		
					(0.004)	(0.001)		
TFP_Wool(t-1)							0.000	0.000
							(0.001)	(0.000)
Constant	-1.449***		-1.317***		-1.369***		-1.353***	
	(0.119)		(0.118)		(0.118)		(0.118)	
Observations	23,670		23,670		23,670		23,670	
Log-likelihood	-9356		-9353		-9362		-9382	

Notes: Industry, Time, Region dummies and averages of time varying covariates to model unobserved heterogeneity are included in all specifications but not reported to improve presentation. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 4
Self-Selection, estimates and marginal effects for the Post-Crisis period (2011-2015)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Coef.	dx/dy	Coef.	dx/dy	Coef.	dx/dy	Coef.	dx/dy
Export(t-1)	2.342***	0.358***	2.341***	0.358***	2.341***	0.358***	2.342***	0.358***
	(0.026)	(0.003)	(0.026)	(0.003)	(0.026)	(0.003)	(0.026)	(0.003)
Export(2008)	0.409***	0.063***	0.404***	0.062***	0.405***	0.062***	0.405***	0.062***
	(0.025)	(0.004)	(0.025)	(0.004)	(0.025)	(0.004)	(0.025)	(0.004)
Labour Prod.(t-1)	-0.003	-0.000						
	(0.004)	(0.001)						
Average Wage(t-1)	-0.008	-0.001	-0.009*	-0.001*	-0.009	-0.001	-0.009	-0.001
	(0.005)	(0.001)	(0.005)	(0.001)	(0.005)	(0.001)	(0.005)	(0.001)
Capital per Emp. (t-1)	-0.004	-0.001	-0.004	-0.001	-0.004	-0.001	-0.004	-0.001
	(0.005)	(0.001)	(0.005)	(0.001)	(0.005)	(0.001)	(0.005)	(0.001)
Age(t-1)	-0.270***	-0.041***	-0.272***	-0.042***	-0.271***	-0.041***	-0.271***	-0.041***
	(0.060)	(0.009)	(0.061)	(0.009)	(0.061)	(0.009)	(0.060)	(0.009)
Size(t-1)	0.043	0.007	0.046	0.007	0.045	0.007	0.047	0.007
	(0.052)	(0.008)	(0.052)	(0.008)	(0.052)	(0.008)	(0.052)	(0.008)
Liquidity(t-1)	0.053	0.008	0.054	0.008	0.054	0.008	0.053	0.008
	(0.055)	(0.008)	(0.055)	(0.008)	(0.055)	(0.008)	(0.055)	(0.008)
Leverage(t-1)	0.027**	0.004**	0.028**	0.004**	0.028**	0.004**	0.028**	0.004**
	(0.012)	(0.002)	(0.012)	(0.002)	(0.012)	(0.002)	(0.012)	(0.002)
Foreign Owned	0.079***	0.012***	0.079***	0.012***	0.079***	0.012***	0.080***	0.012***
	(0.018)	(0.003)	(0.018)	(0.003)	(0.018)	(0.003)	(0.018)	(0.003)
Multinational	0.035	0.005	0.033	0.005	0.034	0.005	0.034	0.005
	(0.031)	(0.005)	(0.031)	(0.005)	(0.031)	(0.005)	(0.031)	(0.005)
Enterprise Group	0.098***	0.015***	0.099***	0.015***	0.099***	0.015***	0.099***	0.015***
	(0.021)	(0.003)	(0.021)	(0.003)	(0.021)	(0.003)	(0.021)	(0.003)
TFP_Pooled(t-1)			-0.006*	-0.001*				
			(0.004)	(0.001)				
TFP_Within(t-1)					-0.003	-0.001		
					(0.003)	(0.001)		
TFP_Wool(t-1)							0.001*	0.000*
							(0.001)	(0.000)
Constant	-1.262***		-1.291***		-1.293***		-1.284***	
	(0.099)		(0.098)		(0.098)		(0.098)	
Observations	46,522		46,522		46,522		46,522	
Log-likelihood	-13214		-13215		-13217		-13215	

Notes: Industry, Time, Region dummies and averages of time varying covariates to model unobserved heterogeneity are included in all specifications but not reported to improve presentation. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 5
Foreign Market Exit Estimates and Marginal Effects for the Crisis period (2008-2010)

VARIABLES	(1) Coef.	(2) dx/dy	(3) Coef.	(4) dx/dy	(5) Coef.	(6) dx/dy	(7) Coef.	(8) dx/dy
Export Duration	-0.259***	-0.042***	-0.256***	-0.042***	-0.257***	-0.042***	-0.254***	-0.042***
	(0.008)	(0.001)	(0.008)	(0.001)	(0.008)	(0.001)	(0.008)	(0.001)
Labour Prod.(t-1)	-0.066***	-0.011***						
	(0.007)	(0.001)						
Average Wage(t-1)	0.071***	0.012***	0.067***	0.011***	0.069***	0.011***	0.067***	0.011***
	(0.006)	(0.001)	(0.006)	(0.001)	(0.006)	(0.001)	(0.006)	(0.001)
Capital per Emp. (t-1)	0.034***	0.006***	0.027***	0.004***	0.028***	0.005***	0.027***	0.005***
	(0.007)	(0.001)	(0.007)	(0.001)	(0.007)	(0.001)	(0.006)	(0.001)
Age(t-1)	0.501***	0.082***	0.508***	0.083***	0.508***	0.083***	0.514***	0.085***
	(0.065)	(0.011)	(0.065)	(0.011)	(0.065)	(0.011)	(0.065)	(0.011)
Size(t-1)	0.186	0.030	0.215*	0.035*	0.200*	0.033*	0.206*	0.034*
	(0.115)	(0.019)	(0.116)	(0.019)	(0.116)	(0.019)	(0.115)	(0.019)
Liquidity(t-1)	-0.181	-0.029	-0.178	-0.029	-0.170	-0.028	-0.199*	-0.033*
	(0.110)	(0.018)	(0.111)	(0.018)	(0.110)	(0.018)	(0.114)	(0.019)
Leverage(t-1)	-0.019	-0.003	-0.017	-0.003	-0.016	-0.003	-0.018	-0.003
	(0.019)	(0.003)	(0.019)	(0.003)	(0.019)	(0.003)	(0.020)	(0.003)
Foreign Owned	-0.085***	-0.014***	-0.086***	-0.014***	-0.085***	-0.014***	-0.087***	-0.014***
	(0.024)	(0.004)	(0.024)	(0.004)	(0.024)	(0.004)	(0.024)	(0.004)
Multinational	-0.249***	-0.041***	-0.254***	-0.042***	-0.252***	-0.041***	-0.253***	-0.042***
	(0.055)	(0.009)	(0.055)	(0.009)	(0.055)	(0.009)	(0.054)	(0.009)
Enterprise Group	-0.073**	-0.012**	-0.076***	-0.012***	-0.077***	-0.013***	-0.073**	-0.012**
	(0.029)	(0.005)	(0.029)	(0.005)	(0.029)	(0.005)	(0.028)	(0.005)
TFP_Pooled(t-1)			-0.050***	-0.008***				
			(0.006)	(0.001)				
TFP_Within(t-1)					-0.045***	-0.007***		
					(0.005)	(0.001)		
TFP_Wool(t-1)							-0.001	-0.000
							(0.001)	(0.000)
Constant	-0.624***		-0.599***		-0.616***		-0.596***	
	(0.120)		(0.118)		(0.118)		(0.117)	
Observations	21,556		21,556		21,556		21,556	
Log-likelihood	-6438		-6468		-6466		-6504	

Notes: Industry, Time, Region dummies and averages of time varying covariates to model unobserved heterogeneity are included in all specifications but not reported to improve presentation. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 6
Foreign Market Exit Estimates and Marginal Effects for the Post-Crisis period (2011-2015)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Coef.	dx/dy	Coef.	dx/dy	Coef.	dx/dy	Coef.	dx/dy
Export Duration	-0.032***	-0.003***	-0.032***	-0.003***	-0.032***	-0.003***	-0.029***	-0.002***
	(0.004)	(0.000)	(0.004)	(0.000)	(0.004)	(0.000)	(0.004)	(0.000)
Labour Prod.(t-1)	-0.002	-0.000						
	(0.003)	(0.000)						
Average Wage(t-1)	0.020***	0.002***	0.019***	0.002***	0.019***	0.002***	0.018***	0.002***
	(0.005)	(0.000)	(0.004)	(0.000)	(0.005)	(0.000)	(0.004)	(0.000)
Capital per Emp. (t-1)	0.004	0.000	0.004	0.000	0.004	0.000	0.004	0.000
	(0.005)	(0.000)	(0.005)	(0.000)	(0.005)	(0.000)	(0.005)	(0.000)
Age(t-1)	0.213***	0.018***	0.214***	0.018***	0.213***	0.018***	0.215***	0.018***
	(0.058)	(0.005)	(0.059)	(0.005)	(0.059)	(0.005)	(0.061)	(0.005)
Size(t-1)	-0.128*	-0.011*	-0.130*	-0.011*	-0.130**	-0.011**	-0.133**	-0.011**
	(0.067)	(0.006)	(0.066)	(0.005)	(0.066)	(0.006)	(0.065)	(0.005)
Liquidity(t-1)	-0.112	-0.009	-0.119	-0.010	-0.116	-0.010	-0.118	-0.010
	(0.078)	(0.006)	(0.079)	(0.007)	(0.079)	(0.007)	(0.079)	(0.007)
Leverage(t-1)	-0.051***	-0.004***	-0.052***	-0.004***	-0.053***	-0.004***	-0.052***	-0.004***
	(0.018)	(0.002)	(0.018)	(0.002)	(0.018)	(0.002)	(0.018)	(0.002)
Foreign Owned	-0.058**	-0.005**	-0.061***	-0.005***	-0.061***	-0.005***	-0.059***	-0.005***
	(0.023)	(0.002)	(0.023)	(0.002)	(0.023)	(0.002)	(0.023)	(0.002)
Multinational	-0.116**	-0.010**	-0.114**	-0.009**	-0.113**	-0.009**	-0.111**	-0.009**
	(0.051)	(0.004)	(0.051)	(0.004)	(0.051)	(0.004)	(0.051)	(0.004)
Enterprise Group	-0.094***	-0.008***	-0.096***	-0.008***	-0.097***	-0.008***	-0.097***	-0.008***
	(0.028)	(0.002)	(0.028)	(0.002)	(0.028)	(0.002)	(0.028)	(0.002)
TFP_Pooled(t-1)			0.001	0.000				
			(0.004)	(0.000)				
TFP_Within(t-1)					0.000	0.000		
					(0.003)	(0.000)		
TFP_Wool(t-1)							-0.002**	-0.000**
							(0.001)	(0.000)
Constant	-1.471***		-1.299***		-1.349***		-1.346***	
	(0.113)		(0.112)		(0.112)		(0.112)	
Observations	42,300		42,300		42,300		42,300	
Log-likelihood	-6785		-6803		-6800		-6817	

Notes: Industry, Time, Region dummies and averages of time varying covariates to model unobserved heterogeneity are included in all specifications but not reported to improve presentation. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 7
Linear Probability Model with fixed effects (Self-Selection)

	Crisis(2008-2010)				Post-Crisis(2011-2015)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exporter(t-1)	-0.257***	-0.253***	-0.255***	-0.253***	0.258***	0.258***	0.258***	0.258***
	(0.010)	(0.009)	(0.009)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)
Labour Prod.(t-1)	-0.003***				-0.001**			
	(0.001)				(0.000)			
Average Wage(t-1)	0.005***	0.005***	0.005***	0.005***	-0.001	-0.001*	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Capital per Emp. (t-1)	-0.002	-0.002*	-0.002*	-0.002*	-0.001**	-0.002***	-0.002**	-0.002***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Age(t-1)	-0.029***	-0.029***	-0.029***	-0.028***	-0.065***	-0.065***	-0.065***	-0.065***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.004)	(0.004)	(0.004)	(0.004)
Size(t-1)	-0.051***	-0.050***	-0.050***	-0.051***	0.010	0.011	0.011	0.011
	(0.016)	(0.016)	(0.016)	(0.016)	(0.007)	(0.007)	(0.007)	(0.007)
Liquidity(t-1)	-0.006	-0.006	-0.006	-0.006	0.006	0.006	0.006	0.006
	(0.016)	(0.016)	(0.016)	(0.016)	(0.007)	(0.007)	(0.007)	(0.007)
Leverage(t-1)	-0.000	-0.000	-0.000	-0.000	0.000	0.000	0.000	0.000
	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
TFP_Pooled(t-1)		-0.001				-0.000		
		(0.001)				(0.000)		
TFP_Within(t-1)			-0.002**				-0.000	
			(0.001)				(0.000)	
TFP_Wool(t-1)				-0.000**				0.000
				(0.000)				(0.000)
Constant	1.257***	1.217***	1.228***	1.220***	0.987***	0.976***	0.978***	0.975***
	(0.088)	(0.087)	(0.087)	(0.087)	(0.050)	(0.050)	(0.050)	(0.050)
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	23,670	23,670	23,670	23,670	59,528	59,528	59,528	59,528
R-squared	0.895	0.895	0.895	0.895	0.797	0.797	0.797	0.797

Note: All specifications with firm-specific fixed effects. Robust standards errors in parentheses, ***p<0.01, **p<0.05, *p<0.1

Table 8
Linear Probability Model with fixed effects (Foreign Market Exit)

	Crisis(2008-2010)				Post-Crisis(2011-2015)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Export Duration	-0.315***	-0.315***	-0.315***	-0.316***	-0.110***	-0.110***	-0.110***	-0.110***
	(0.011)	(0.011)	(0.011)	(0.011)	(0.003)	(0.003)	(0.003)	(0.003)
Labour Prod.(t-1)	-0.018***				-0.001**			
	(0.001)				(0.000)			
Average Wage(t-1)	0.019***	0.018***	0.018***	0.018***	0.003***	0.002***	0.002***	0.002***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Capital per Emp. (t-1)	0.007***	0.005***	0.006***	0.006***	0.000	0.000	0.000	0.000
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Age(t-1)	0.046***	0.047***	0.047***	0.048***	0.000***	0.000***	0.000***	0.000***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.000)	(0.000)	(0.000)	(0.000)
Size(t-1)	0.034	0.039	0.036	0.035	-0.008	-0.007	-0.007	-0.007
	(0.025)	(0.025)	(0.025)	(0.024)	(0.007)	(0.007)	(0.007)	(0.007)
Liquidity(t-1)	-0.023*	-0.023	-0.020	-0.026*	-0.001	-0.001	-0.001	-0.001
	(0.014)	(0.014)	(0.014)	(0.014)	(0.006)	(0.006)	(0.006)	(0.006)
Leverage(t-1)	-0.000	0.000	0.000	-0.000	-0.003**	-0.003**	-0.003**	-0.003**
	(0.003)	(0.003)	(0.003)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)
TFP_Pooled(t-1)		-0.015***				-0.001		
		(0.001)				(0.000)		
TFP_Within(t-1)			-0.014***				-0.001**	
			(0.001)				(0.000)	
TFP_Wool(t-1)				-0.000**				-0.000***
				(0.000)				(0.000)
Constant	0.131	-0.107	-0.041	-0.109	-2.387***	-2.398***	-2.395***	-2.401***
	(0.125)	(0.126)	(0.126)	(0.124)	(0.080)	(0.080)	(0.080)	(0.080)
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22,400	22,400	22,400	22,400	42,967	42,967	42,967	42,967
R-squared	0.581	0.577	0.578	0.570	0.373	0.373	0.373	0.373

Note: All specifications with firm-specific fixed effects. Robust standards errors in parentheses, ***p<0.01, **p<0.05, *p<0.1

Table 9
Linear Probability Model using the Arellano Bover (1995) estimator. (Self-selection)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Crisis(2008-2010)				Post-Crisis(2011-2015)			
Exporter(t-1)	0.370***	0.398***	0.386***	0.402***	0.665***	0.665***	0.665***	0.666***
	(0.037)	(0.034)	(0.035)	(0.033)	(0.012)	(0.012)	(0.012)	(0.012)
Labour Prod.(t-1)	0.007**				0.003***			
	(0.003)				(0.001)			
Average Wage(t-1)	0.005	0.008*	0.008*	0.008**	0.000	0.001	0.001	0.001
	(0.005)	(0.004)	(0.005)	(0.004)	(0.001)	(0.001)	(0.001)	(0.001)
Capital per Emp. (t-1)	-0.006	-0.002	-0.003	-0.002	0.002	0.002*	0.002*	0.002*
	(0.005)	(0.005)	(0.005)	(0.005)	(0.001)	(0.001)	(0.001)	(0.001)
Age(t-1)	-0.114***	-0.104***	-0.110***	-0.099***	-0.012***	-0.012***	-0.012***	-0.013***
	(0.023)	(0.020)	(0.021)	(0.020)	(0.003)	(0.003)	(0.003)	(0.003)
Size(t-1)	0.672***	0.603***	0.643***	0.569***	-0.038***	-0.040***	-0.040***	-0.040***
	(0.149)	(0.129)	(0.138)	(0.126)	(0.011)	(0.011)	(0.011)	(0.011)
Liquidity(t-1)	0.124	0.117	0.120	0.113*	-0.006	-0.006	-0.006	-0.005
	(0.078)	(0.071)	(0.076)	(0.068)	(0.012)	(0.012)	(0.012)	(0.012)
Leverage(t-1)	0.014	0.012	0.012	0.013	-0.002	-0.002	-0.002	-0.002
	(0.013)	(0.012)	(0.012)	(0.011)	(0.003)	(0.003)	(0.003)	(0.003)
TFP_Pooled(t-1)		0.006**				0.002***		
		(0.003)				(0.001)		
TFP_Within(t-1)			0.006**				0.003***	
			(0.003)				(0.001)	
TFP_Wool(t-1)				0.000				0.000
				(0.000)				(0.000)
Constant	-1.807***	-1.582***	-1.723***	-1.473***	0.461***	0.467***	0.457***	0.495***
	(0.558)	(0.474)	(0.512)	(0.461)	(0.045)	(0.043)	(0.044)	(0.043)
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22,782	22,782	22,782	22,782	42,468	42,468	42,468	42,468

Note: Robust standards errors in parentheses, ***p<0.01, **p<0.05, *p<0.1

Table 10
Linear Probability Model using the Arellano Bover (1995) estimator. (Foreign Market Exit)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Crisis(2008-2010)				Post-Crisis(2011-2015)			
Export Duration	0.059	0.066*	0.067*	0.051	0.036***	0.036***	0.036***	0.036***
	(0.041)	(0.038)	(0.038)	(0.041)	(0.003)	(0.003)	(0.003)	(0.003)
Labour Prod.(t-1)	0.008				0.004***			
	(0.005)				(0.001)			
Average Wage(t-1)	0.004	0.004	0.004	0.005	-0.000	0.001	0.001	0.001
	(0.006)	(0.006)	(0.006)	(0.007)	(0.002)	(0.002)	(0.002)	(0.002)
Capital per Emp. (t-1)	-0.011	-0.010	-0.010	-0.010	-0.000	0.001	0.000	0.001
	(0.007)	(0.007)	(0.007)	(0.008)	(0.002)	(0.002)	(0.002)	(0.002)
Age(t-1)	-0.187***	-0.180***	-0.180***	-0.191***	-0.034***	-0.034***	-0.033***	-0.035***
	(0.035)	(0.032)	(0.033)	(0.035)	(0.005)	(0.005)	(0.005)	(0.005)
Size(t-1)	1.093***	1.033***	1.037***	1.103***	0.004	-0.001	-0.001	-0.001
	(0.230)	(0.211)	(0.214)	(0.228)	(0.019)	(0.019)	(0.019)	(0.019)
Liquidity(t-1)	0.054	0.048	0.047	0.059	-0.008	-0.009	-0.009	-0.008
	(0.110)	(0.104)	(0.105)	(0.111)	(0.016)	(0.016)	(0.016)	(0.016)
Leverage(t-1)	0.026	0.026	0.026	0.027	-0.001	-0.000	-0.000	-0.001
	(0.021)	(0.020)	(0.021)	(0.022)	(0.005)	(0.005)	(0.005)	(0.005)
TFP_Pooled(t-1)		0.008*				0.006***		
		(0.005)				(0.001)		
TFP_Within(t-1)			0.007*				0.006***	
			(0.004)				(0.001)	
TFP_Wool(t-1)				0.001				-0.000
				(0.001)				(0.000)
Constant	-2.947***	-2.657***	-2.704***	-2.840***	0.723***	0.763***	0.742***	0.774***
	(0.781)	(0.699)	(0.716)	(0.744)	(0.069)	(0.065)	(0.065)	(0.064)
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22,400	22,400	22,400	22,400	44,942	44,942	44,942	44,942

Note: Robust standards errors in parentheses, ***p<0.01, **p<0.05, *p<0.1

Table A1. Definitions

TFP_Wool	Total Factor Productivity, estimated using the Wooldridge approach
TFP_Pooled	Total Factor Productivity, estimated using clustered OLS
TFP_Within	Total Factor Productivity, estimated using fixed effects
Age	The age of the firm measured in days
Labour Prod.	Labour productivity defined as value added per employee
Size	The size of the firm is proxied by the number of employees
Capital per Emp.	Tangible and Intangible capital per employee
Average Wage	Total wages per employee
Liquidity	Current assets less current liabilities over total assets. Readily available from the dataset
Leverage	The ratio of short-term debt to current assets. Readily available from the dataset
Foreign Owned	Dummy variable that takes the value of one for foreign owned companies
In.Condition	The first year in the sample to account for the Initial Conditions problem in dynamic model
dx/dy	Stands for marginal effects at means
Cont.Exporters	The group of firms that continuously export during the period of analysis
Cont.Non-Exporters	The group of firms that do not export during the period of analysis
Starters	The group of firms that started exporting during the period of analysis and did not exit the foreign markets again
Switchers	The group of firms that enter of exit the foreign markets more than once. This group is particular because exit from foreign markets may not be genuine at all. To tackle this problem we only record an exit event when the firms have abstained for two consecutive years from foreign markets.
Stoppers	The group of firms that stopped exporting during the period of analysis and did not enter the foreign markets again
Export	Dummy variable equal to one if firm exports in time (t)
Exit	Dummy variable equal to one if the firm exited the foreign markets conditional on surviving in time (t). By construction a firm cannot have two exit events in consecutive periods. To minimize the problem of temporary exporting we require two consecutive years of absent from the foreign markets to record an exit event for switchers.
Export Duration	Years of exporting experience up to exit.
Multinational	Dummy variable to capture affiliation with a corporation with multinational activity.
Enterprise Group	Dummy variable to capture affiliation with an enterprise group

Table A2. TFP estimates using Wooldridge (2009) algorithm

	SIC07	Obs	Mean	Std. Dev.	Min	Max
1	Food	13465	11.214	21.695	-99.979	50.372
2	Beverages	1736	5.421	16.236	-84.440	48.391
3	Tobacco	142	-2.899	25.229	-71.298	30.814
4	Textiles	2453	6.699	17.137	-100.127	48.201
5	Wearing apparel	2204	3.698	19.902	-93.731	48.170
6	Leather and related goods	385	3.892	19.581	-99.916	48.905
7	Wood	2577	4.851	20.123	-98.138	48.536
8	Paper and related products	3734	4.061	18.174	-101.267	50.314
9	Printing and Production media	74	7.299	7.772	-21.710	34.274
10	Coke and refined petroleum products	333	0.965	22.204	-74.933	35.152
11	Chemicals	7790	-2.009	18.858	-101.861	48.543
12	Pharmaceutical	2707	-16.556	36.582	-101.521	49.312
13	Rubber and plastic products	8211	8.059	17.777	-98.687	50.344
14	Other non-metallic mineral products	3151	5.027	15.813	-98.452	49.595
15	Basic Metals	2909	-18.292	41.019	-102.632	49.579
16	Fabricated metal products	16560	6.626	17.657	-102.421	50.148
17	Computer, Electronic and Optical products	7736	5.037	17.459	-99.329	50.241
18	Electrical equipment	6386	5.212	16.869	-102.156	50.348
19	Machinery and equipment	11806	7.313	17.091	-101.183	50.211
20	Motor vehicles, trailers and semi-trailers	3825	3.696	15.623	-100.372	48.636
21	Other transport equipment	2688	6.242	19.886	-98.379	50.136
22	Furniture	3098	7.466	16.882	-95.429	49.709
23	Other manufacturing	17763	-0.462	18.530	-102.603	49.664
24	Repair and installation of machinery and equipment	136	3.719	14.052	-29.270	30.563

Table A3. Production function coefficients

	OLS			Within			Wooldridge		
SIC	$\widehat{\beta}_l$	$\widehat{\beta}_k$	$\widehat{\beta}_m$	$\widehat{\beta}_l$	$\widehat{\beta}_k$	$\widehat{\beta}_m$	$\widehat{\beta}_l$	$\widehat{\beta}_k$	$\widehat{\beta}_m$
1	0.39	0.31	0.44	0.31	0.20	0.19	-0.15	0.31	0.90
2	0.67	-0.03	0.31	0.30	0.11	0.26	0.12	0.01	0.31
3	-1.10	0.57	-1.01	-0.21	0.44	0.08	0.60	0.28	1.54
4	-0.43	0.69	0.74	0.04	0.17	0.79	0.17	0.02	0.24
5	-0.49	0.54	0.78	0.19	0.15	0.23	-0.44	0.12	0.36
6	-0.03	0.07	0.87	-0.02	-0.02	1.04	0.35	0.11	0.64
7	0.13	0.34	0.57	0.19	0.13	0.37	0.06	0.03	-0.52
8	0.53	0.37	0.32	0.05	0.16	0.53	0.07	0.09	-0.76
9	-1.73	0.19	1.81	0.11	0.00	1.25	0.55	0.18	1.37
10	-0.17	-0.12	0.84	1.22	0.45	-0.09	0.21	0.11	1.35
11	0.29	0.20	0.55	0.10	0.10	0.31	0.47	0.10	0.34
12	0.42	0.34	-0.02	0.15	0.09	0.76	-0.91	0.08	0.68
13	0.13	0.26	0.56	0.22	0.26	0.49	0.72	0.08	0.01
14	0.83	0.32	0.03	0.22	0.15	0.31	0.10	0.07	0.21
15	0.00	0.31	0.73	0.16	0.15	0.47	0.66	0.05	0.76
16	0.09	0.31	0.63	0.13	0.15	0.35	0.10	0.00	-1.10
17	0.10	0.23	0.76	0.16	0.19	0.22	0.24	0.00	0.44
18	0.49	0.26	0.27	0.13	0.10	0.27	0.59	0.18	1.76
19	0.04	0.23	0.71	0.16	0.13	0.47	0.53	0.06	0.11
20	0.75	0.28	0.22	0.13	0.25	0.39	0.09	0.20	0.13
21	0.04	0.47	0.72	0.22	0.12	0.38	0.87	0.04	-0.27
22	0.98	0.21	-0.09	0.10	0.13	0.51	0.10	0.11	0.30
23	0.18	0.18	0.68	0.17	0.14	0.30	0.27	0.13	0.44
24	-1.56	-0.18	0.43	-0.17	0.09	0.86	0.11	0.21	0.75

Note: Industry code as in Table A2.