THE INTERNATIONALISATION OF SPANISH SMES: MAIN DEVELOPMENTS AND THEIR DETERMINANTS

The authors of this article are M. Jesús González Sanz and César Martín Machuca, of the Directorate General Economics, Statistics and Research.

Introduction

The buoyancy of Spanish exports in recent years largely reflects progress in the internationalisation of our productive system. The marked prolonged weakness of domestic demand during the past recession spurred a search for new markets, against a background in which the moderation of labour costs, and subsequently of financial costs, strengthened the competitive position of Spanish firms.[1]

A knowledge of the characteristics of the firms behind the recent enlargement of the Spanish economy's export base provides important information on their possible future performance. The latest evidence available is that SMEs are participating significantly in the enlargement of the export base[2] and in the geographical diversification of exports. Technological and logistic advances and the deregulation of trade have reduced export costs also for firms of this type, although, on average, their lower productivity and higher borrowing costs continue to hinder their penetration of and sustained presence in foreign markets.

The purpose of this article is to identify the main features of the process of internationalisation of SMEs in recent years and to ascertain what factors determine their propensity to export. The rest of the article is organised as follows. Section 2 describes the databases used and analyses the contribution of SMEs to the recent behaviour of exports. Section 3 estimates the factors that raise the likelihood that SMEs will export and drive their geographical diversification. Finally, conclusions are drawn.

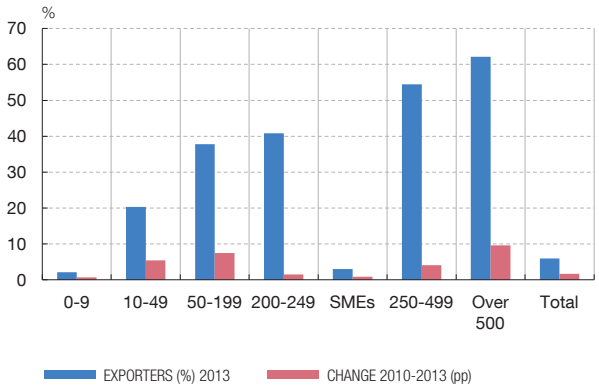
SMEs and goods exports

The analyses described below make use of firm-level information compiled by the Banco de España and of aggregate data from the tax authorities (Agencia Estatal de la Administración Tributaria, AET) and from the Spanish Institute of Foreign Trade (ICEX). The microeconomic data used by the Banco de España come from the balance of payments, the Central Balance Sheet Data Office and the annual accounts filed by Spanish firms with the mercantile registers. The resulting database was used in previous studies of the foreign sector of the Spanish economy [see Martín Machuca, Rodríguez y Tello (2009)]. The reference unit in this database is firm-country bilateral trade relations and it contains annual data for the period 2001-2013. It should be kept in mind that SMEs are underrepresented in these data.[3] This information is thus supplemented in this article by data of a more aggregate nature. The AET recently started to publish goods exports data grouped by firm size (proxied by the average number of employees) and the stable or non-stable nature of the export activity. These data are available for the period 2010-2013 and allow us to broadly gauge the relative weight of SMEs in Spanish exports. This information is supplemented by ICEX reports on export firms, available to 2014, which provide information on goods exports by export value tranche,[4] stability of export activity and destination of exports.

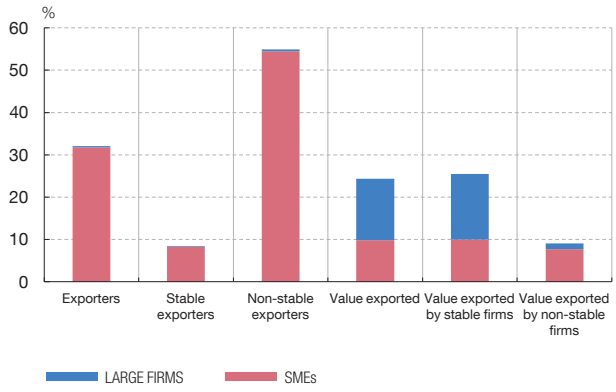
1 See García and Prades (2015).
2 For the purposes of this article, the export base is defined as the number of firms or export relationships, depending on the reference unit of the available data.
3 In 2008 the simplification threshold for transaction-country reporting of balance of payments data was raised to €50,000, which produced a break in the series. Raising the threshold significantly affects coverage of the population of small exporting firms from that year.
4 Where ICEX data are used in this study, SMEs are taken to be firms that export less than €1 million.

CHARACTERISTICS BY SIZE OF THE SPANISH EXPORT BASE (a) CHART 1

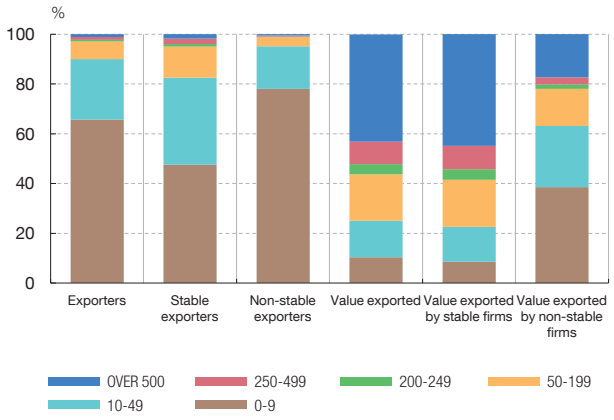
1 PROPORTION OF EXPORTING FIRMS BY TRANCHE
Percentage of total firms



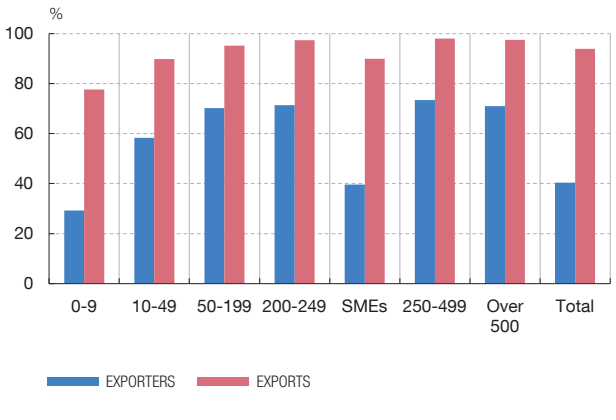
2 CONTRIBUTIONS OF SMEs AND LARGE FIRMS TO CHANGES IN THE EXPORT BASE AND IN EXPORTS
Changes between 2010-2013



3 DISTRIBUTION OF EXPORT BASE BY FIRM SIZE
Percentage of total (2013)



4 PROPORTION OF STABLE EXPORTERS AND OF THEIR EXPORTS
Proportion of the total of each firm category (2013)



SOURCES: Agencia Estatal de Administración Tributaria (AET) and Directorio Central de Empresas del INE (DIRCE).

a SMEs are firms of 0 to 249 employees.

When analysing the main features of exporting SMEs, it should be kept in mind that this group of firms is highly heterogeneous, since they include a range extending from microfirms (maximum of nine employees) to firms of up to 249 employees. This heterogeneity is reflected, according to AET data, in the high dispersion of the proportion of SMEs which export in each size tranche, since it is only 2% in microfirms and over 40% in firms with 200 to 249 employees (see Chart 1). In fact, the dispersion in the proportion of exporting firms is much more marked between microfirms and medium-sized firms than between the latter and large firms, in line with international evidence [see European Commission (2014)].

A first feature worth noting is that in all size tranches, large firms included, the internationalisation of the productive system accelerated from 2010, although the expansion of exporting SMEs largely accounts for the increase in the proportion of exporting firms to 6% of the total. Most exporting firms are SMEs; specifically, nearly 98% of the total. Also, between 2010 and 2013, SMEs explain practically all the increase in the number of exporters, be they stable or non-stable.[5]

5 A stable exporting firm is defined as a firm that has exported for at least four consecutive years.

In general terms, SMEs have made a positive contribution to the growth of total exports since the recovery of world trade in 2009, although this contribution has been less important than that of large firms, except as regards non-stable exports, which in any case represent a minority of exports. The 2014 ICEX data show that SMEs continued to consolidate their presence abroad, with an increase of 15% in the stable export base (higher than that of 11% in total stable exporting firms).

The geographical distribution of exports by Spanish firms can be approximated using ICEX data, which provide information by export value tranche. The geographical pattern of the firms classifiable as SMEs is similar to that of total Spanish exports, although the relative weight of EU markets is somewhat lower in total exports. At the same time, there is a higher concentration in markets geographically close to Spain, such as Portugal and Morocco, or with historical and cultural ties, such as Latin America. This is because, despite technological and logistic advances, these ties facilitate the geographical diversification of SMEs, which is particularly important considering that these firms still face greater difficulties in exporting to geographically or institutionally more distant markets.

The interaction between the number of exporting firms *(extensive margin)* and their unit export volume *(intensive margin)* determines the behaviour of exports in each size tranche. According to the literature, in general the long-term growth capacity of exports depends basically on the behaviour of the extensive margin, and especially on that of stable exporting firms, while their short-term growth capacity reflects mainly the behaviour of the intensive margin. Banco de España microeconomic data indicate that the contribution of SMEs to total export growth has risen appreciably since the recovery of international trade flows after the collapse between 2008 and 2009, to the point that they now contribute nearly 40% of the total, compared with 10% in the previous expansionary phase (see Chart 2). In consonance with the AET data, this increase was driven mainly by the extensive margin, while they make a minority contribution to the intensive margin.[6]

The recovery of exports between 2010 and 2013 was underpinned by the diversification to emerging markets (see Chart 3), whose potential growth is higher than that of more mature regions like the euro area. SMEs participated notably in this process, since their contribution to the total growth of Spanish exports to emerging markets was, on average, nearly 50%, achieved largely by raising the extensive margin. For its part, the intensive margin of SMEs has shown more volatile behaviour, having a minority incidence in the last two years of the sample.

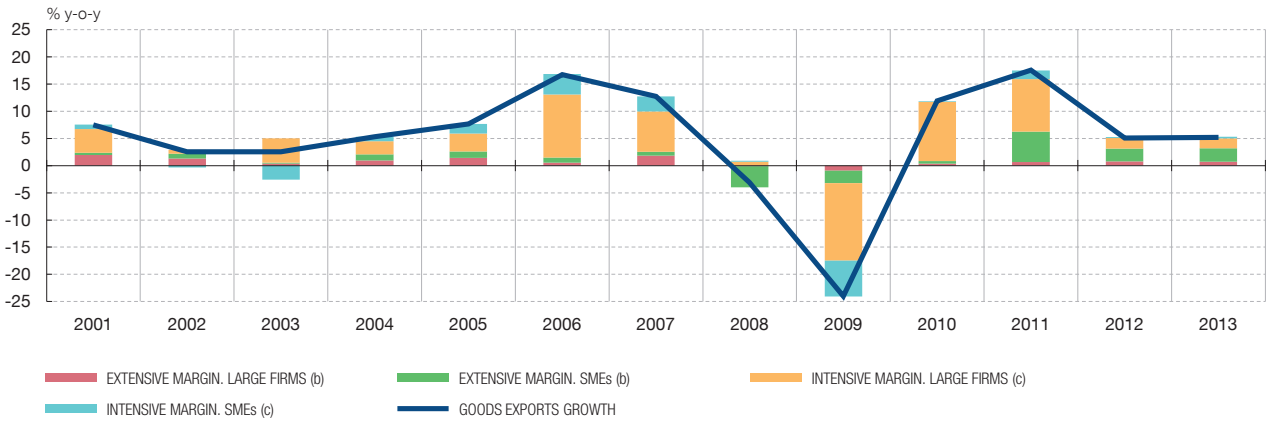
In order to analyse export margins, it is of particular interest to study entry and exit patterns in foreign markets. SMEs explain most of the dynamics of the extensive margin, due to their high turnover [in line with international evidence; see Berthou and Vicard (2015)], with foreign market entry and exit ratios that are higher than those of large firms (see Chart 4). The 2008 world trade crisis brought a sharp rise in the exit ratio of SME exports, accompanied by a strong fall in the entry ratio. From 2010, this deterioration has clearly reversed, allowing an increase in the SMEs which export on a stable basis.

The survival of SMEs in export activity is appreciably lower than that of large firms and is positively correlated with firm size (see Table 1). In this respect, SMEs continue to have

6 The empirical evidence available for Spain indicates that the increase in the intensive margin of SMEs was due particularly to those of larger size and belonging to high technological intensity sectors, since their higher efficiency and greater value added favoured their sustained presence in the international markets [see Máñez and Sanchís (2014)].

EXTENSIVE AND INTENSIVE MARGIN: CONTRIBUTION TO THE CHANGE IN EXPORTS (a)
2001-2013

CHART 2

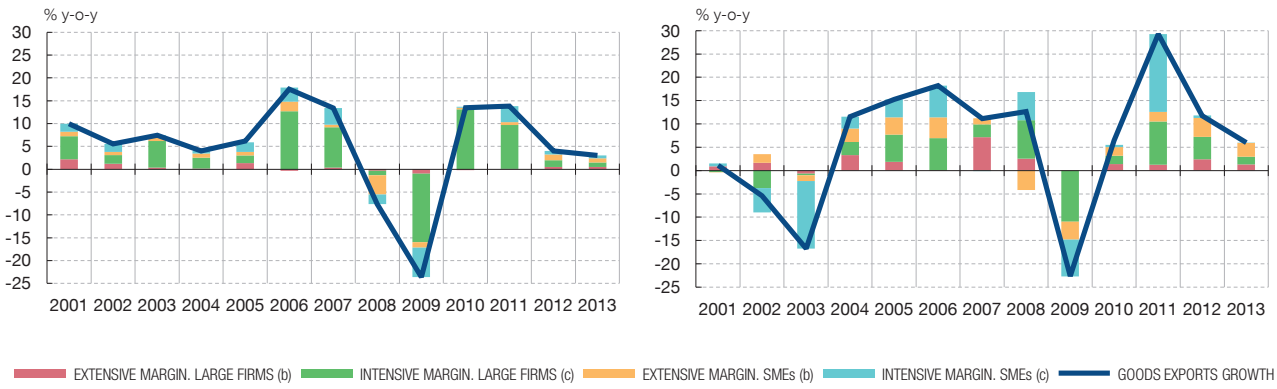


SOURCE: Banco de España, based on balance of payments, CBA and Mercantile Register statistics.

a Margins are calculated for those firms whose size is known. Large firms are those with 250 or more workers.
b El The extensive margin is defined as the contribution to the increase (decrease) in exported value derived from an increase (fall) in the number of countries to which a firm exports, or as "firm-country of destination" trade relations.
c The intensive margin is defined as the contribution to the increase (decrease) in exported value derived from an increase (fall) in the amount exported by each firm to each country.

EXTENSIVE AND INTENSIVE MARGIN OF SMEs AND LARGE FIRMS: CONTRIBUTION TO THE CHANGE IN EXPORTS (a)
2001-2013

CHART 3



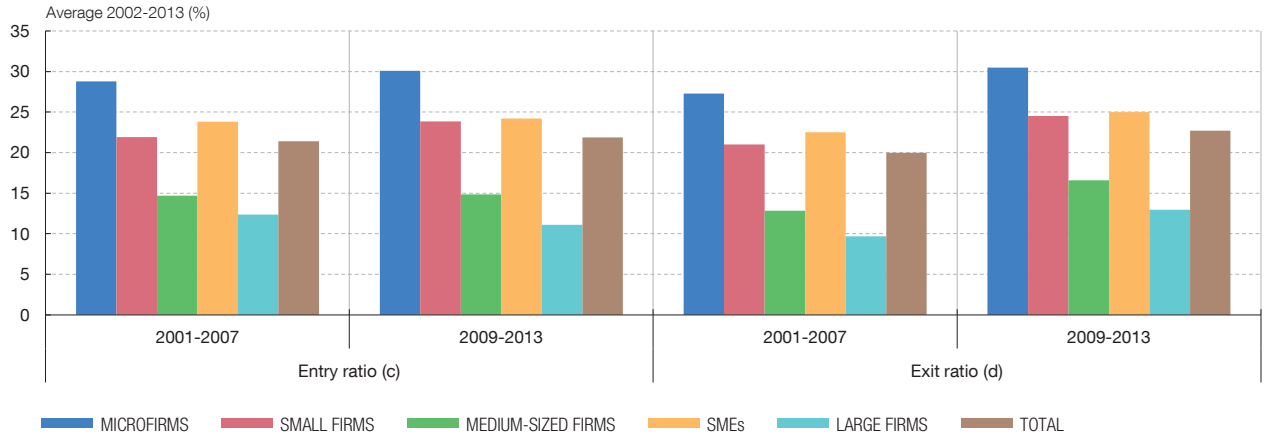
SOURCE: Banco de España, based on balance of payments, CBA and Mercantile Register statistics.

a Margins are calculated for those firms whose size is known. Large firms are those with 250 or more workers.
b The extensive margin is defined as the contribution to the increase (decrease) in exported value derived from an increase (fall) in the number of countries to which a firm exports, or as "firm-country of destination" trade relations.
c The intensive margin is defined as the contribution to the increase (decrease) in exported value derived from an increase (fall) in the amount exported by each firm to each country.

certain difficulty in sustaining themselves in the international environment [see De Lucio and Fuentes (2006)]. The empirical evidence is that stable exporters tend to be larger and more efficient (efficiency being proxied by apparent labour productivity and the performance of R&D activities) than non-stable exporters [see Galán Lucha and Martín Machuca (2012)].

The improvement of SME survival rates in export activity would be an essential prerequisite for raising the intensive margin, since, as seen in Chart 4, stable export firms account for the bulk that margin, largely because of their higher geographical diversification (see Chart 6). In fact, the increase in non-EU exports in recent years is basically due to firms of this type (see Chart 7). The Spanish economy still has high potential for increasing its

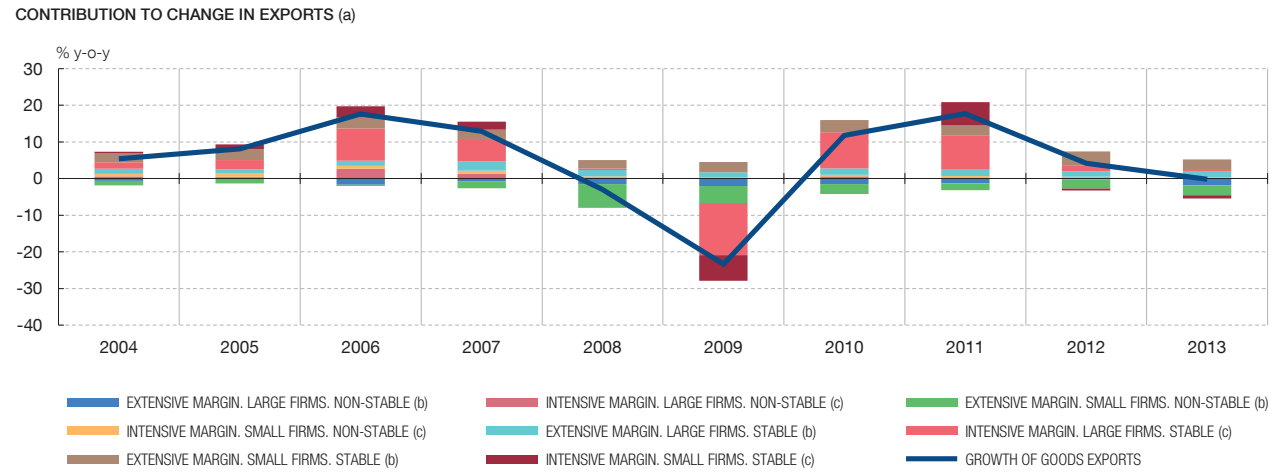
DYNAMICS OF ENTRY AND EXIT OF SPANISH FIRMS IN EXPORT ACTIVITY (a) (b) CHART 4



SOURCE: Banco de España, based on balance of payments, CBSO and Mercantile Register statistics.

a Firm size is defined on the basis of the number of employees. Thus microfirms are those with fewer than 10 employees, small firms have between 10 and 49 employees, medium-sized firms between 50 and 249 employees and large firms 250 or more employees. Firms on which there is no size information are excluded.
b The firms considered are those reporting goods transactions to the balance of payments for an amount exceeding €12,500 euros in the period 2002-2007 and exceeding €50,000 from 2008, this year being excluded because of the results are distorted by the raising of the threshold.
c Calculated as the quotient (among exporters) New firms $_n$ /(New firms $_n$ + Existing firms $_{n-1}$).
d Calculated as the quotient (among exporters) Exiting firms $_n$ /(Exiting firms $_n$ + Existing firms $_{n-1}$).

EXTENSIVE AND INTENSIVE MARGIN OF STABLE AND NON-STABLE SMEs AND LARGE FIRMS 2004-2013 CHART 5



SOURCE: Banco de España, based on balance of payments, CBA and Mercantile Register statistics.

a Margins calculated for those firms whose size is known. Large firms defined as those with 250 or more workers. A stable firm is defined as one that has exported uninterruptedly for four consecutive years.
b The extensive margin is defined as the contribution to the increase (decrease) in exported value derived from an increase (fall) in the number of countries to which a firm exports, or as "firm-country of destination" trade relations.
c The intensive margin is defined as the contribution to the increase (decrease) in exported value derived from an increase (fall) in the amount exported by each firm to each country.

geographical diversification, since in 2013 around two-thirds of firms exported only to one country and only 15% exported to more than five countries. However, this latter group of firms, which includes, among others, large multinationals, accounts for nearly 90% of total sales [see De Lucio *et al.* (2014)].

The ICEX aggregated data point to an increase in stable exporting SMEs selling to non-EU markets, particularly Latin America, Africa (including most notably Morocco) and Asia

SURVIVAL IN EXPORT ACTIVITY BY SIZE (a) TABLE 1

Firms starting to export in 2001	2002	2006	2009	2013
Total (b)	49.8	17.9	7.1	4.0
Microfirms	46.3	12.7	3.6	1.3
Small firms	50.2	16.7	5.4	2.8
Medium-sized firms	59.7	28.1	14.8	8.8
SMEs	53.4	15.0	3.2	0.9
Large firms	60.2	31.3	25.8	16.4

Firms starting to export in 2009	2010	2011	2012	2013
Total (b)	41.7	27.2	20.1	16.0
Microfirms	36.1	21.4	14.9	11.5
Small firms	43.7	28.7	21.7	17.9
Medium-sized firms	54.6	41.3	33.0	28.4
SMEs	46.2	27.8	17.8	7.2
Large firms	52.4	38.9	29.4	26.2

SOURCES: Banco de España, from balance of payments statistics.

a This table analyses the firms that started their goods export activity in 2001 and continued that activity uninterruptedly during the period 2002-2013. It should be taken into account that in 2008 the simplification threshold for transaction-country reporting was raised to €50,000.
b The size of the firm is defined in terms of the number of employees. Micro-firms are those with fewer than 10 employees, small firms have 10-49 employees and medium-sized and large firms have 50-249 and 250 or more, respectively. When there is no information regarding the size of a firm it has been excluded.

(particularly China). This evidence thus indicates that the diversification de SMEs is at least partly structural and not just a temporary response to the lower dynamism of the EU economy, which, nevertheless, continues to be the main export market of Spanish firms as a whole.

Factors determining whether SMEs decide to export

As noted above, SMEs have contributed to the growth of cumulative exports since 2010 mainly through increases in the extensive margin and in the geographical diversification of exports. Once these channels have been identified, their determining factors can be investigated. To do this, we first conducted an econometric analysis of the probability of exporting and then examined, for exporting SMEs, whether they exported to developed or emerging markets.

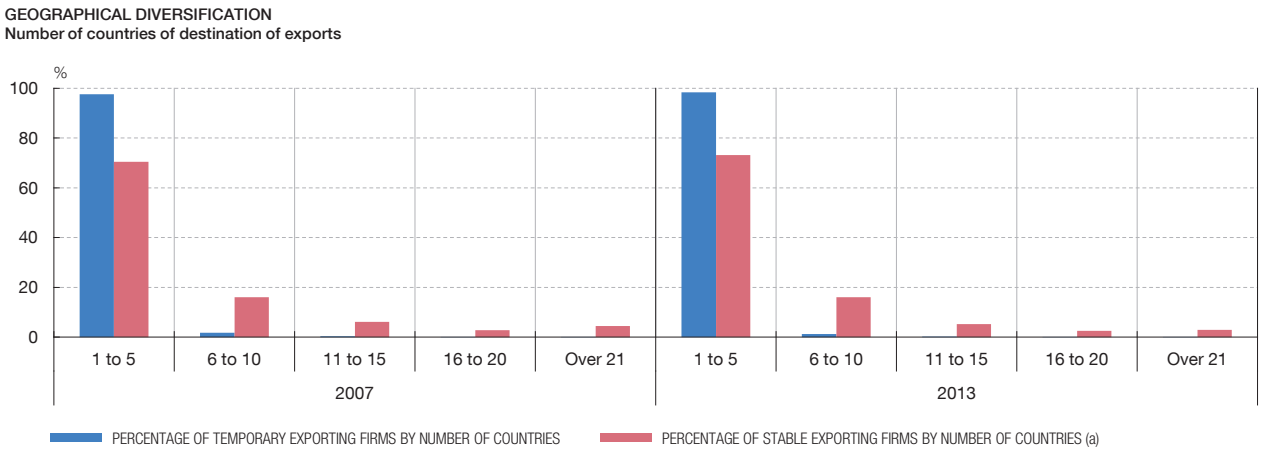
The empirical literature reports that exporting firms are larger and more efficient that non-exporting firms [see Helpman (2006)]. Also, larger firms have access to more diversified financing sources with better conditions for meeting the cost of penetrating new markets and maintaining a stable flow of sales abroad. Nevertheless, as noted above, Spanish SMEs have increased their exports considerable in recent years. The estimates in this study (made using Probit models) include variables which proxy these characteristics of exporters.

The results obtained (see regression 1 of Table 2)[7] show that SMEs that have foreign capital in their structure or that make foreign direct investment (FDI) are more likely to export. The advantages enjoyed by these firms are linked, inter alia, to economies of scale, organisational and institutional advantages and a deeper knowledge of foreign markets. Additionally, firms of this type usually participate more actively in international value chains. A firm's age (as a firm consolidates its business it has more opportunities to

7 The coefficients of Table 2 are the marginal impact of an increase of one unit in each independent variable on the likelihood of exporting. Thus, for example, the size coefficient in regression 1 should be interpreted as meaning that an increase of 1% in the number of workers at a firm would raise the probability of exporting by 0.1%.

EXPORTING FIRMS: GEOGRAPHICAL DIVERSIFICATION

CHART 6

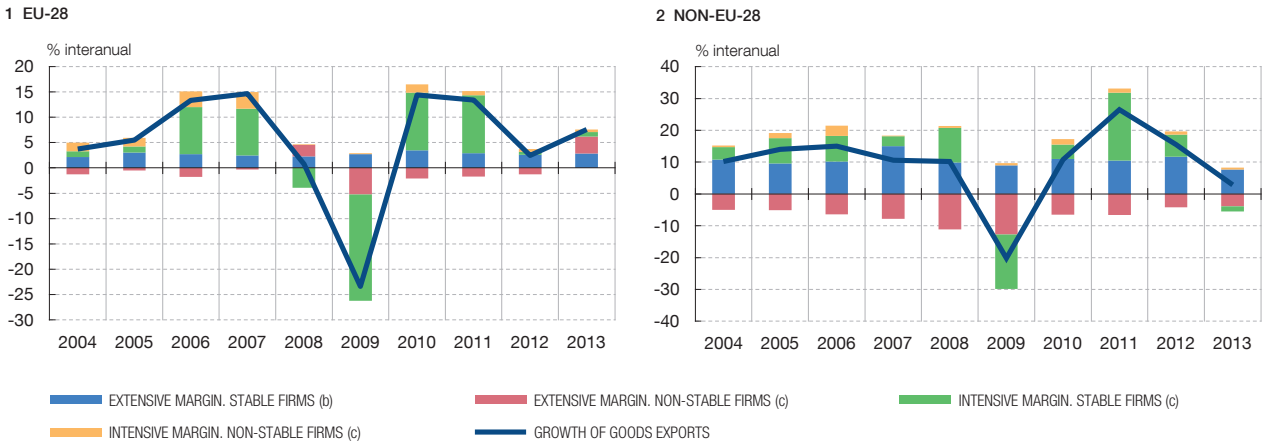


SOURCE: Banco de España.

a A stable firm is defined as one that has exported uninterruptedly for four consecutive years.

EXTENSIVE AND INTENSIVE MARGIN OF STABLE AND NON-STABLE FIRMS BY DESTINATION: CONTRIBUTION TO CHANGE IN EXPORTS (a)
2004-2013

CHART 7



SOURCE: Banco de España, based on balance of payments, CBA and Mercantile Register statistics.

a A stable firm is defined as one that has exported uninterruptedly for four consecutive years.
b The extensive margin is defined as the contribution to the increase (decrease) in exported value derived from an increase (fall) in the number of countries to which a firm exports, or as "firm-country of destination" trade relations.
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increase its size and expand abroad), size and efficiency (proxied by apparent labour productivity and belonging to high and medium-high technology sectors) also raise the likelihood of exporting, in line with the evidence found by other authors [see Mainer (2014)].

Regarding the financial position of SMEs, the evidence indicates that, above a certain threshold,[8] the level of indebtedness adversely affects the likelihood of exporting, since higher debt levels may restrict a firm's ability to meet entry costs and assume the risks entailed in penetrating foreign markets.

8 To estimate whether indebtedness adversely affects the probability of exporting above a certain level, debt was squared in the econometric specification.

PROBIT REGRESSIONS ON EXPORT ACTIVITY (a) (b) TABLE 2

	Probability of exporting (1)	Probability that the SME exports to a developed country (2)
Workforce	0.001***	
	(7.57E-06)	
Firm age	0.001***	-0.001***
	(0.000)	(0.000)
Receives FDI	0.054***	-0.019
	(0.003)	(0.020)
Carries out FDI	0.067***	-0.047***
	(0.003)	(0.014)
Average wage	-3.57E-05***	0.000
	(0.000)	(0.000)
Debt ratio	0.001***	-0.001***
	(0.000)	(0.000)
Debt ratio²	-6.24E-06***	1.08E-05***
	(1.94E-07)	(2.04E-06)
Productivity	0.0002***	0.000
	(0.000)	(0.000)
Temporary workers ratio	-0.010***	0.10***
	(0.001)	(0.009)
Medium and high technology sectors dummy	0.0397***	-0.081***
	(0.001)	(0.004)
Crisis (c)	0.006***	0.014***
	(0.000)	(0.001)
International experience (d)		-0.01***
		(0.000)
Likelihood function	50,017.4	1,368.4
Number of observations	1,622,724	65,863

SOURCE: Banco de España.

a Average marginal effects are reported. Standard errors are in brackets. *, ** and *** denote statistical significance at 10%, 5% and 1%, respectively. In regression 2 the 2-stage Heckamn procedure is used to control for selection bias.
b Microeconomic variables are lagged to control for endogeneity.
c Behaviour of domestic demand in the crisis period. In 2008 and 2009 a dummy is included to capture the impact of the collapse in world trade and of the higher reporting threshold in the first year.
d Number of countries to which the firm exported in t-1.

The estimates indicate that labour costs have a negative impact on export activity. The aggregate data suggest that the wage adjustment has had a positive effect on exports, despite the fact that the wage containment has not fed through fully to export prices [see Fernández (2014)]. Further, SMEs with more temporary employees have a lower propensity to export. In this respect, although temporary employees make for more flexible labour adjustments and may reduce labour costs, a higher presence of temporary employees may adversely affect efficiency and productivity, with the resulting adverse effect on competitiveness and exporting capacity.

The weak domestic demand in the past crisis also raised the probability of SMEs turning to exports. This result is in line with the available evidence at aggregate level, which highlights the sluggishness of private consumption as a major factor in the increase in exports during the recession [see García and Prades (2015)]. The limited availability of data

for the most recent period prevents us from investigating whether the current recovery in demand is adversely affecting the process of internationalisation of exporting SMEs.[9] However, the aggregate evidence for the euro area as a whole suggests that foreseeably the recovery of domestic demand will not adversely affect the export base to such an extent as to offset its growth during the crisis. This is because, once firms start to sell abroad, they have incentives to maintain themselves in the international markets due to the significant fixed costs involved in embarking on export activities [see Bobeica *et al.* (2015)]. In Spain, the increase in 2014 in the number of stable exporters, including SMEs, shown by the ICEX data, points in this direction.

Examination of the decision whether to export to developed or emerging countries (see regression 2 of Table 2) shows that firms that have a past history of export activity (included in the international experience variable) and that make direct investment abroad are more inclined to move into emerging markets. This may reflect, first, that firms gradually increase their geographical diversification; and second, that FDI in emerging markets is not a substitute for exports.

Conclusions

Spanish SMEs have contributed to the growth of Spanish exports since 2010 through an enlargement of the export base and have driven geographical diversification into non-EU markets, particularly those located in emerging economies, with higher long-term growth prospects than the euro area. Both factors favour the potential growth capacity of Spanish exports, especially if accompanied by improved SME survival rates in their export activities.

The estimates presented in this article emphasise the positive impact on the likelihood of SMEs engaging in exports and their diversification to emerging markets arising from internationalisation through passive and active FDI, since, among other factors, the participation of foreign capital enhances the firm's efficiency and the acquisition of firms abroad increases economies of scale and lowers the cost of access to foreign markets through exports. Additionally, firms internationalised through FDI are more likely to participate in international value chains. Other factors contributing positively to the likelihood of export activity are labour productivity, belonging to high technological intensity sectors and a relatively sound financial position. As regards the cyclical position of the Spanish economy, the available evidence is that the enlargement of the SME export base in the crisis will not be merely temporary, since the positive trend of the regular export base is continuing in the most recent period of economic recovery. In any event, against a background of growth in domestic demand, normalisation of financing conditions, progressive improvement of firms' financial health and the continuing containment of labour costs will foreseeably facilitate the sustained dynamism of Spanish SMEs' export activity.

14.12.2015.

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9 The database complied by the Banco de España ends in 2013. The update of goods exports functions yielded the result that domestic demand during the crisis contributed moderately but positively to an increase in exports from 2009 to 2013. In 2014, for which year microeconomic data are lacking, the change in the domestic demand cycle gave rise to a progressively smaller contribution from this component [see García and Prades (2015)].

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