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COMPETITION AND PRODUCTIVITY: WILL FOREIGN TRADE MURDER THE SPANISH MANUFACTURING MARKET?

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ABSTRACT

Whenever import tariffs are lowered and national firms face a growing competition, productivity must be enhanced in order to survive. Thanks to the ESEE survey where Spanish manufacturing firms provide information about their financial situation, the effect of an increase in import competition may be analysed. Using different econometric methods, I conclude that Spanish family firms, and especially those who are initially less productive, react to it by increasing greatly their labour productivity.

LABURPENA

Inportazioen muga-zergak murrizten direnean eta enpresa nazionalek gero eta lehia handiagoa dutenean, produktibitatea handitu egin behar da bizirik iraun ahal izateko. Espainiako manufaktura-enpresek beren finantza-egoerari buruzko informazioa ematen duten ESEE inkestari esker, inportazioen lehia handitzearen eragina azter daiteke. Metodo ekonometriko desberdinak erabiliz, ondorioztatzen dut Espainiako familia-enpresek, eta batez ere hasieran hain produktiboak ez direnek, beren lan-produktibitatea neurri handi batean handituz erantzuten dutela.

RESUMEN

Cuando se reducen los aranceles de importación y las empresas nacionales se enfrentan a una competencia creciente, la productividad debe ser aumentada para poder sobrevivir. Gracias a la encuesta ESEE, en la que las empresas manufactureras españolas proporcionan información sobre su situación financiera, se puede analizar el efecto de un aumento de la competencia de las importaciones. Utilizando diferentes métodos econométricos, concluyo que las empresas familiares españolas, y especialmente las que son inicialmente menos productivas, reaccionan aumentando en gran medida su productividad laboral.

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1 INTRODUCTION

In this Bachelor's Thesis, I analyse the effects of import competition on the productivity of Spanish manufacturing firms, both family-managed and professionally managed ones. It is inspired by the article Cheng Chen and Claudia Steinwender (2021) (henceforth referred to as the "Original Paper"), using the same data sources and bringing an alternative econometric specification.

This topic is highly relevant in many respects. On the academic side, it is a hot topic, as the "Original Paper" was published just when I started my work on this Bachelor's Thesis. Theoretically, it may help understand the relationship between import tariffs – which can be considered a good proxy of import competition – and firms' productivity level. Not only academically, but it is also of interest to governments – in trade policy design – to firms – who must know how to react to an increase in competitiveness – and to the society, since it suffers the consequences of higher competition in the economy.

I also consider it a very important topic for research, as the degree of openness of countries can affect their internal market, putting at risk domestic firms, and forcing them to make sacrifices to survive. However, it is not a topic which has been in the centre of attention of many researchers, despite the fact that it is unquestionable the important role family firms play in most economies.

The content of this Bachelor's Thesis is divided as follows. First, I review the economic theory on this topic. Second, I present the model that will be analysed, and the hypotheses I make. Third, I describe the data, which is the same as in the Original Paper. Finally, I estimate the model using the random effects and fixed effects methods, interpret parameter estimates, and hypothesis testing.

2 ECONOMIC THEORY AND LITERATURE REVIEW

The importance of the firm's manager in an organisation is undeniable since we are talking about the key decision-maker of the company (Leibenstein, 1966). In fact, each manager has different motivations, but all of them want the company to succeed. This commitment, however, can be quite different when we focus on the survival of the firm, as in many cases managers' preferences may go beyond monetary profits (Bandiera, Lemos, Prat, & Sadun, 2018). This is especially the case of the family firms' managers, for whom the firm represents more than just an economic organisation.

When the survival of a firm is at risk, managers will, overall, try to increase its efficiency in any way (Raith, 2003). Higher competition leads to a higher probability of bankruptcy, and the best answer to that situation is to be more productive.

The characteristics of each firm are determinant to conclude whether it is likely to ensure survival or is prone to insolvency. Features such as the type of management – familiar or professional –, the initial level of productivity – initially productive or unproductive –, or the size of the firm, will determine which decisions are taken within the firm (Schmitz, 2005).

The literature includes interesting empirical research which focuses on the effect of import competition on firms.

To begin with, the main article which I have been inspired by is Chen and Steinwender (2021). It analyses three big topics: the effects of trade liberalisation on productivity and innovation; the managers' preferences depending on their commitment to the firm; and family firms' response to a higher competitiveness. Their main conclusion is that import competition has a positive effect only on initially unproductive family firms, increasing their willingness to be more efficient, but no significant conclusion can be made for other types of firms.

An article that dates back to 2001, Block and McDonald (2001), studies the case of Australia, which concludes that lowering the border protection on the manufacturing industries enhances the domestic producers' productivity.

In another research piece, Pavcnik (2002) analyses the relationship between plant productivity and tariffs, real exchange rate, and import competition, in Chile. Using Ordinary Least Squares (POLS) and Fixed Effects (FE) methods, Pavenik (2002) finds that, as a result of trade liberalisation, plant productivity improves within the domestic competing industry.

Amiti and Konings (2007) use OLS and two-stage least squares estimation methods to conclude that, a reduction in input tariffs increases productivity by a large amount, and even more than when reducing output tariffs.

Another interesting research that was carried out on this subject was Bloom, Draca, & Van Reenen (2016). Focusing on the impact of Chinese import competition on 12 European countries and making use of long difference Instrumental Variables (IV) method, OLS and FE, it is stated that not only productivity increases, but also leads to an upgrading of technology of these European firms.

A study on the German manufacturing industries was carried out in Slavtchev, Bräuer & Mertens (2020). German firms' productivity increased in the cases where the imports came from high-income countries, which at the same time was related to technologically more advanced goods. However, imports from low- and middle-income countries did not have this positive effect.

An article published not long ago which focuses on the innovation of US firms facing Chinese competitiveness is Autor, Dorn, Hanson, Pisano, & Shu (2020). They use OLS, IV and first difference, and contrary to other findings, their results indicate that US firms could

not react in a positive way against Chinese import competition, this is, patenting and R&D expenditure both decreased.

Finally, an also recent paper Liu, Lu, Lu, & Luong (2021), which applies the difference-in-differences technique, finds that trade liberalisation has a negative impact on firm innovation.

3 DATASET DESCRIPTION

In order to make the following analyses of this paper, I use the panel of Spanish firms on the ESEE[1] survey, provided by Fundación SEPI. Each year around 1,800 firms are surveyed, and even though the survey started in 1990, we focus on the period 1993-2007, because initial inaccuracies can be found in the first three years, and 2008's crisis could be a confounding factor to the analysis I want to carry out.

The initial database I was provided with covers 1,794 firms who answered in 1993, and their answers to the survey until 2007 (missing values will appear from the moment when a firm stops answering the survey) for a total of 26,910 firm-year observations. After building dictionaries and manipulating the initial database, in Section 5 I will describe the variables constructed from this dataset, and then used in the model I define in Section 4. The following definitions refer to the raw data, once I kept only those firms which answered in 1993.

The PAFDG variable records the number of family members that were in managing positions. Firms which do not have any member of the family are considered purely professionally managed firms.

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[1] "Encuesta Sobre Estrategias Empresariales". Further details in Fundación SEPI (English version also available). A full description of each variable obtained from the survey can be found there.

Table 1 Connection of industries from ESEE survey (NACECLIO) and TRAINS database (MFN tariffs)

	NACECLIO		MFN tariffs
1	meat related products	27	production, processing and preserving of meat and meat products
2	food and tobacco	155	manufacture of grain mill products
3	beverage	24	manufacture of beverages
4	textiles and clothing	32	manufacture of textiles
5	leather, fur, and footwear	28	tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
6	timber	1531	manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of s
7	paper	36	manufacture of paper and paper products
8	printing and publishing	29	publishing, printing and reproduction of recorded media
9	chemicals	19	Manufacture of chemicals and chemical products
10	plastic and rubber products	1511	manufacture of rubber and plastic products
11	nonmetal mineral products	31	manufacture of other non-metallic mineral products
12	basic metal products	26	manufacture of basic metals
13	fabricated metal products	30	manufacture of fabricated metal products, except machinery and equipment
14	industrial and agricultural equipment	35	manufacture of machinery and equipment n.e.c
15	office machinery, data processing, precision instruments and similar	21	manufacture of office, accounting and computing machinery
16	electric materials and accessories	25	manufacture of radio, television and communication equipment and apparatus
17	vehicles and accessories	22	manufacture of motor vehicles, trailers and semi-trailers
18	other transportation materials	17	manufacture of other transport equipment
19	furniture	20	manufacture of furniture; manufacturing n.e.c.
20	miscellaneous	34	manufacture of electrical machinery and apparatus n.e.c.

The PERTOT variable indicates the number of employees the firm has.

The VENTAS variable records firms' sales, and the COINT variable measures the value of the inputs, both in euros.

The VPV variable, however, is the variation of the sale prices of each firm for each year, whereas VPCOINT reports the same variation but in inputs. With this I can deflate the nominal production and convert it into real terms, so as to have the chance of making more accurate and reasonable comparisons.

The NACECLIO variable classifies each firm by industries, from a total of 20. Since I have industry-specific tariffs data obtained from the World Bank's TRAINS database (selecting the *ISIC Revision 3* classification) and each of them gets its own *WeightedAverage* – the tariff for each industry for each year – I identify them so I can merge both datasets (See Table 1).

4 HYPOTHESES AND MODEL

Based on the principles of economic theory and on the results of Chen and Steinwender (2021), I postulate the following hypotheses:

H1: Import competition is positively correlated with the labour productivity

An increase in import competition should lead to an increase in productivity of workers of the firms. I am not analysing in which way they are getting that increase, whether by improvements in efficiency, or a higher expenditure in R&D, but overall.

H2: Initially less productive firms will increase their productivity to a greater extent than initially more productive firms

Firms which struggle for survival during their active period try to find ways of increasing their short-term cash flow, so they will try to achieve higher and enhanced productivity.

H3: Family-managed firms increase their productivity more than professionally managed ones

Due to non-monetary profits, family-firms are more attached to the firm, so when there is an increase in import competition, they will try harder to increase the productivity of the firm than those non-family firms.

H4: Import competition has a positive impact on the productivity level of initially less productive family-managed firms

This is one of the main conclusions drawn in Chen and Steinwender (2021).

The objective of the following model is to make sense of the economic theory explained earlier and reflect it through a regression model (Equation 1). Consequently, I have defined the dependent variable as the labour productivity (*labprod*) of each firm in each year; while the regressors which have an impact on it are the level of import competition (*IMP*), the initial productivity of the firm (*labprod93*), and the type of management – family- or professionally-managed – specifying the number of family members in managing position (*PAFDG93_BI*).

Equation 1 Regression equation

$$ln(labprod_{it}) = \beta_1 \cdot IMP_{st} + \beta_2 \cdot ln(labprod93_i) + \beta_3 \cdot PAFDG93\_BI_i + \beta_4 \cdot IMP_{st} \cdot ln(labprod93_i) + \beta_5 \cdot IMP_{st}$$
$$\cdot PAFDG93\_BI_i + \beta_6 \cdot ln(labprod93_i) \cdot PAFDG93\_BI_i + \beta_7 \cdot IMP_{st} \cdot ln(labprod93_i)$$
$$\cdot PAFDG93\_BI_i + \beta_k \cdot industryFE + yearFE + firmFE + v_{it}$$

5 INITIAL DATA ANALYSIS

After having analysed the raw data, I describe more deeply the variables I include in the model suggested in Section 4.

5.1 VARIABLES DESCRIPTION

The dependent variable is the natural logarithm of labour productivity, this is, *ln_labprod*. Productivity – *labprod* – has been calculated as the quotient between the net output of the firm in real terms divided by the number of workers in the firm. I use the logarithm of the productivity because I am mainly interested in the semi-elasticity between the regressors and the dependent variable. Its value ranges from 0.95 to 15.32, being its mean 10.14 (see Table 2).

The first regressor used is the import competition (*IMP*), which I proxy by the negative of import tariffs for each industry and year. This makes sense because a reduction in import tariffs creates an increase in market competitiveness. We can say that this variable implicitly controls for industry to a certain extent, since specific tariffs data for each industry are available. Overall, having a look at the evolution of the import tariffs, they have been reduced by 0.27 percentage points on average, so import competition has increased by 0.27 p.p. on average.

The second regressor is the initial level of productivity – *ln_labprod93* –, which is obtained from the value of *labprod* of each firm for the year 1993. Its value ranges from 4.76 to 13.42, being its mean 10.01.

Thanks to the variable *PAFDG93_BI*, I can "*distinguish between family-managed and professionally-managed firms because the survey includes a variable that gives the number of "owners and working relatives who hold managing positions." We classify firms as family-managed firms (or family firms, in short) if this number is bigger than or equal to one in the first year of our sample, 1993*" (Chen & Steinwender, 2021, p. 7). According to this specification, 54.56% of the firms are professionally managed, and 45.44% are family-managed firms.

To see if there is any interaction between the import competition, initial level of productivity, and management type I add interaction terms in the Equation 1.

As in the Original Paper, I also control for industry-, year- and firm-fixed effects.

5.2 REPLICATION OF FIGURES AND TABLES FROM THE ORIGINAL PAPER

By replicating some of the figures and tables which were presented in the Original Paper, I am able to confirm that I am using the same database.

Table 2 Descriptive statistics of main variables

	Min	Max	Mean	Std dev.	Median
ln_labprod	.9537617	15.31819	10.14258	.8793199	10.18439
IMP	-1.56	7.23	.2692857	-.7418611	.07
ln_labprod93	4.763328	13.41531	10.00554	.7460918	10.0571
PAFDG93_BI	0 (dummy)	1 (dummy)	.454448	.4979296	0

As it can be seen in Figure 1, data about import tariffs used in this model has been correctly selected, though I found some problems with the data about food and tobacco, and miscellaneous, because such categories were not equally separated in both datasets, leading to difficulties in finding which data they chose eventually in the Original Paper. Despite that setback, all the data we obtained seems consistent, this is, tariffs have, overall, decreased along these 15 years.

I find that the number of non-family firms is higher than family-firms across the sample, as it can be observed in Table 3. In fact, only in 2007 the number of family firms surveyed was higher than professionally managed ones.

When it comes to the family firms in our database for 1993, more than half of them had just one family manager (Figure 2); and in some industries such as fabricated metal products and timber, family firms are especially important because there were more family firms in those industries than professionally managed firms (Figure 3). Moreover, firms who count with one family member in non-managing positions are the most common type of firm where there is at least one family member (Figure 4).

The initial level of productivity also appears to be different for family and non-family firms. In 1993, professionally managed firms were, on average, more productive than family firms (Figure 5).

Figure 1 EU import tariffs over time from the Original Paper (left) and replication using Stata (right)
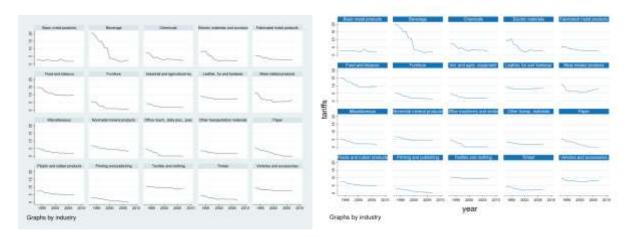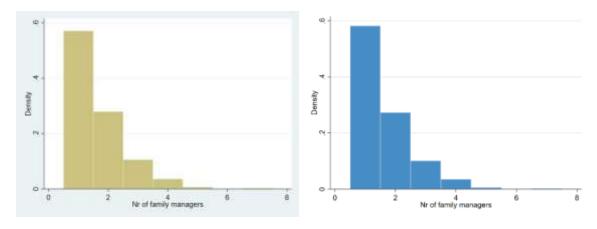

Table 3 Number of family firms in sample, across time. Original Paper (left) and extracted from replication (right)

Year	Non-family firms	Family firms
1993	1,018	848
1994	1,092	784
1995	973	725
1996	950	766
1997	1,121	799
1998	1,188	588
1999	1,087	667
2000	1,300	570
2001	1,129	595
2002	1,127	581
2003	809	571
2004	801	573
2005	1,052	859
2006	1,038	985
2007	984	1,029

YEAR	PAFDG_BI 0	1	Total
1993	1,018	848	1,866
1994	1,092	784	1,876
1995	973	725	1,698
1996	950	766	1,716
1997	1,121	799	1,920
1998	1,188	588	1,776
1999	1,087	667	1,754
2000	1,300	570	1,870
2001	1,129	595	1,724
2002	1,127	581	1,708
2003	809	571	1,380
2004	801	573	1,374
2005	1,052	859	1,911
2006	1,038	985	2,023
2007	984	1,029	2,013
Total	15,669	10,940	26,609

Figure 2 Number of family managers per family firm, 1993. Original Paper (left) and self-made (right)

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Figure 3 Distribution of family firms across industries, 1993. Original Paper (left) and replication (right)
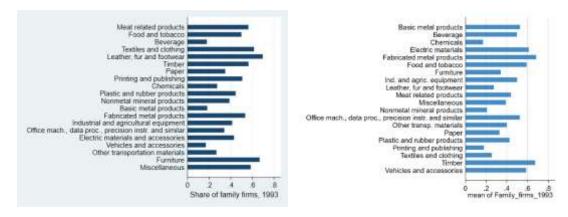

Figure 4 Number of family members in non-managing positions for firms that have any,1993. Original Paper (left) and replication (right)
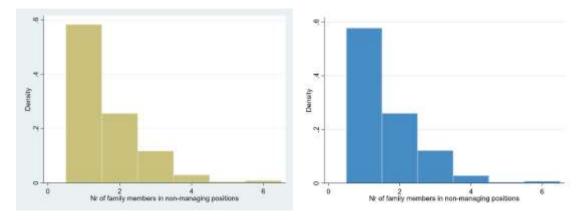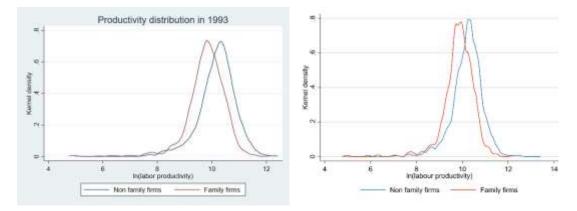

Figure 5 Distribution of initial labour productivity, by type of firm, 1993. Original Paper (left) and replication (right)
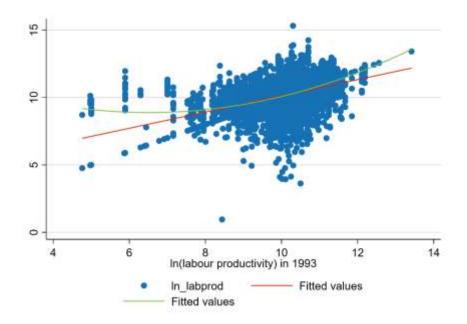
Table 4 Table of correlations

	ln_labprod	IMP	ln_labprod93	PAFDG93_BI
ln_labprod	1.0000			
IMP	0.0726	1.0000		
ln_labprod93	0.4731	0.0377	1.0000	
PAFDG93_BI	-0.1957	-0.0115	-0.2440	1.0000

5.3 ASSOCIATION BETWEEN VARIABLES AND GRAPHICAL ANALYSIS

Finally, I analyse the association between the dependent variable and the regressors by making use of graphs and correlations.

Figure 6 indicates that productivity levels are positively correlated with the initial level of productivity. In fact, 47% positive correlation between the productivity level and the initial productivity clearly shows a strong link between them (Table 4).

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6 ESTIMATION OF THE MODEL

In this section I carry out the estimation of the model – the one described in Section 4–, and after applying OLS to the panel data I am working with, I will use the Random Effects and Fixed Effects methods.

6.1 POOLED OLS

First of all, I estimate the model with the POLS method with clustered standard errors at the firm level, this is, assuming that observations may be correlated within clusters, but being independent between one another.

Looking at the results of the estimation in Table 5 column (1), import competition, initial productivity level, the management type – family or professional –, and the interactions between these variables are significant.

Equation 2 Marginal effect of import competition on the labour productivity

$$\frac{\partial ln(labprod)}{\partial IMP} = \beta_1 + \beta_4 * ln(labprod93) + \beta_5 * PAFDG93\_BI + \beta_7 * ln(labprod93) * PAFDG93\_BI$$

Equation 2 shows how the marginal effect of competition on productivity can be calculated.[2] The visual representation can be seen in Figure 7, for family managed firms and non-family ones, from which we cannot conclude there exists any significant marginal effect.
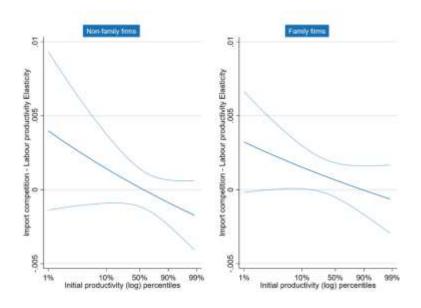
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[2] The effect of import competition on productivity is semi-elasticity, since the competition variable is expressed in percentage terms and the dependent variable is in logarithmic scale. Thus, an increase in import competition by one percentage point increases/decreases the productivity level by X% on average.

Table 5 POLS, RE and FE estimations of the model

Dep var: ln(labprod)	(1) Pooled OLS	(2) Random Effect	(3) Fixed Effect
IMP	-0.408***	0.252***	0.348***
	(0.092)	(0.033)	(0.042)
ln_labprod93	0.969***	0.459***	
	(0.014)	(0.031)	
1.PAFDG93_BI	5.263***	0.527	
	(0.688)	(0.453)	
IMP_ln_labprod93	0.039***	-0.025***	-0.034***
	(0.009)	(0.003)	(0.004)
IMP_PAFDG93_BI	0.496***	-0.056	-0.035
	(0.111)	(0.047)	(0.058)
ln_labprod93_PAFDG93_BI	-0.525***	-0.064	
	(0.069)	(0.045)	
IMP_ln_labprod93_PAFDG93_BI	-0.048***	0.006	0.003
	(0.011)	(0.005)	(0.006)
Constant		5.393***	10.131***
		(0.316)	(0.029)
Observations	12,251	12,251	12,251
R-squared	0.994		0.028
Year FE	YES	YES	YES
Firm FE	NO	NO	YES
Industry FE	YES	YES	NO
Number of Firms		1,791	1,791

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Figure 7 Marginal effect of competition on productivity, POLS Model

However, before drawing more conclusions from the Pooled OLS model, it must be checked whether there are unobserved firm specific effects. When there is unobserved heterogeneity, OLS will not be consistent and conclusions invalid, so to estimate the model other methods such as Random Effects or Fixed Effects should be used.

6.2 RANDOM EFFECTS

The results of the estimation using the Random Effects method are displayed in Table 5 column (2). This estimation method assumes that there are unobserved individual effects uncorrelated with the explanatory variables.

Import competition, initial productivity level and the constant term are significant. Though they have a positive impact on productivity, the interaction between import competition and initial labour productivity has a negative effect.

In order to test for the joint significance of the industry dummies in the Random Effects model, I carried out a Wald test (Table 6), assessed at the mean, from which I conclude that it should stay in the model.

Around 57% of the variation between groups is explained by the model, whereas there is a small part, 3%, of the variation within the group which is explained by the model. Overall, 26% of the total variation is explained by the model.

The standard deviation of the individual effects is 0.34, and the standard deviation of the disturbance 0.59. The fraction of variance due to individual effects is 0.25, what indicates that it is necessary to include individual effects in the model.

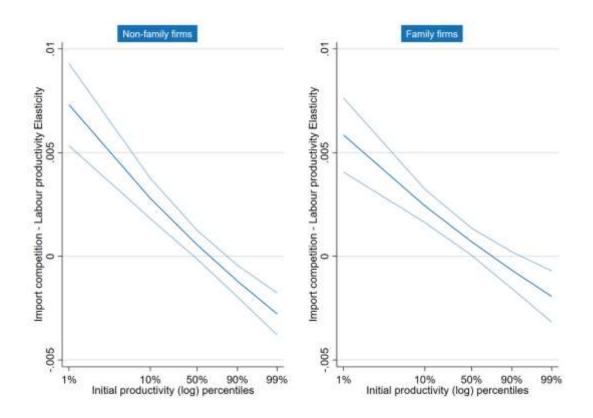*Figure 8 Marginal effect of competition on productivity, RE Model*

Table 6 Wald test for the industry dummies

chi2(19)	111.18
Prob > chi2	0.0000

More formally, I carry out a Breusch-Pagan test to test for the existence of individual specific effects. Under the null hypothesis, disturbances are homoscedastic, thus neglecting the presence of individual effects. However, the null hypothesis is rejected, and therefore I conclude that individual effects are significant.

When it comes to the marginal effects, for both family and non-family managed firms, the effect of competition on productivity is descending in initial productivity (Figure 8). Moreover, the effect for initially less productive firms is positive, whereas for initially more productive ones it is negative.

6.3 FIXED EFFECTS

Finally, I also estimated the model with the fixed effects method (Table 5 column (3)), thus allowing individual effects to be correlated with explanatory variables.

The fixed effect estimation method cannot identify the coefficients associated with time-invariant variables, this is, the initial level of productivity, the firm management type, and the industry variables. Coefficient estimates of import competition and its interaction with initial productivity level are significant, as well as very similar to the results obtained in the Random Effects model.

The marginal effect of import competition on productivity (Figure 9), for both family and non-family managed firms, is descending in initial productivity, and, as in the RE model, the effect for initially less productive firms is positive, whereas for initially more productive ones it is negative.

It is also shown that individual effects are significant, and to check whether the unobserved heterogeneity is correlated with the explanatory variables of the model, I carried out a Hausman test (Table 7). The null hypothesis is rejected, in favour of the alternative hypothesis that unobserved heterogeneity is correlated with regressors, so I conclude that individual effects and regressors are correlated.

6.4 FURTHER ANALYSES

Since we have concluded in Section 6.3 that FE model is preferred, I will analyse the effect of import competition in labour productivity for family firms, and for both the less (10th percentile) and more (90th percentile) productive family firms using the Fixed Effects model.

chi2(18)	83.06
Prob > chi2	0.0000

$$ln(labprod_{it}) = \beta_1 \cdot IMP_{st} + \beta_2 \cdot IMP_{st} \cdot ln(labprod93_i) + yearFE + v_{it}$$

Taking into account the significant variables from the Table 5 (3), I will define a new regression equation (Equation 3), a "reduced model".
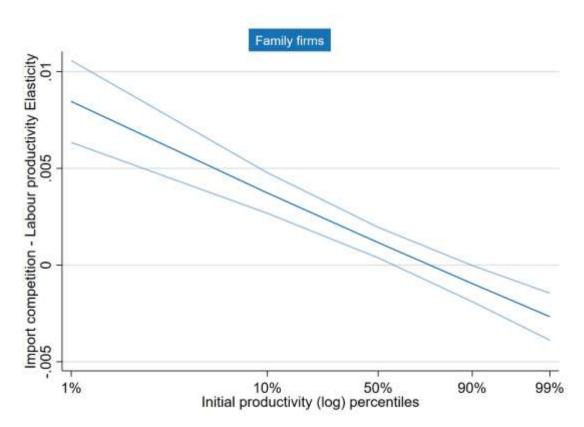
As it can be observed in Table 8, import competition has a positive impact on the labour productivity of family firms (1) and initially less productive family firms (2).

Table 8 FE estimation of the reduced model for family firms

Dep var: ln(labprod)	(1) Family firms	(2) Non-family firms	(3) Less productive family firms p10	(4) More productive family firms p90
IMP	0.318***	0.351***	0.406***	0.306*
	(0.040)	(0.043)	(0.151)	(0.156)
IMP_ln_labprod93	-0.031***	-0.034***	-0.042**	-0.026*
	(0.004)	(0.004)	(0.017)	(0.014)
Constant	9.980***	10.266***	9.012***	11.030***
	(0.041)	(0.042)	(0.232)	(0.114)
Observations	5,834	6,417	435	687
R-squared	0.039	0.023	0.242	0.052
Number of Firms	814	977	82	82
Year FE	YES	YES	YES	YES

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Figure 10 Marginal effect of competition on productivity, FE Model for family firms

In the case of initially less productive family firms (percentile 10), a positive marginal effect of competition on productivity can be seen in Figure 10.

Analysing what happens in the opposite end could also be very interesting. Therefore, I make the same analysis but for the initially more productive family firms, and results are shown in Table 8 (3). However, import competition is not significant when the analysis is restricted to the more productive family firms.

7 VERIFICATION OF HYPOTHESES

In this section I will test the hypotheses presented in Section 4 using the fixed effects estimates.

H1: Import competition is positively correlated with the labour productivity

The first hypothesis is accepted because according to the analysis made, import competition has a positive significant effect on the labour productivity of the firms. This means that when import tariffs are lowered, competition increases and Spanish firms' productivity increases.

H2: Initially less productive firms will increase their productivity to a greater extent than initially more productive firms

The second hypothesis can be approved because the interaction between import competition and the initial labour productivity is negative, this is, initially least productive firms increase their productivity to a greater extent than initially more productive ones.

H3: Family-managed firms increase their productivity more than professionally managed ones

The third hypothesis cannot be approved because the coefficient that goes with the interaction between the import competition and the management type is not significant.

H4: Import competition has a positive impact on the productivity level of initially less productive family-managed firms

It can be stated that initially less productive family-firms increase their productivity level when import tariffs are reduced and competition increases.

8 SUMMARY

The results obtained in this thesis are consistent with the conclusions drawn in Chen and Steinwender (2021), though some additional conclusions can be made.

As it is stated in Chen and Steinwender (2021), "We find that family-managed firms with initially low productivity show significant productivity increases after a reduction of import tariffs. This is in contrast to initially very productive family firms […], whose productivity is not affected by import competition". This Bachelor's Thesis supports the findings from the Original Paper, though we also conclude that firms, whether family or professionally managed, they react positively to an increase in import competition.

Briefly, family firms, and especially, initially less productive family firms are inclined to increase their productivity when import tariffs are lowered and competition rises.

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