Financial Constraints and Exports: Evidence from Portuguese Manufacturing Firms

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Abstract

This paper analyses the links between financial constraints and firm export behaviour, at the firm level, by using data on Portuguese manufacturing enterprises. Previous empirical literature has not yet reached a consensus on these subjects and there is a great heterogeneity in measuring financial constraints. In line with a very recent trend, we approximate credit constraints by using a financial score built on eight variables. In order to assess the effects of exports on the financial status of firms we apply, for the first time to these types of studies, a propensity score matching with difference in differences. We find that new exporters show significant improvements in their financial situation.

Keywords: Exports, Propensity-Score-Matching, Financial constraints

JEL classification: F10; G32; L25

1. Introduction and brief literature revision

Managers of firms, especially in poor and developing countries, often cite financial constraints as the main impediment to their internationalization and growth. At another level, and in line with a recent trend in international finance literature, we argue that the very fact of starting to export could improve firms´ access to external financial funds. In fact, the recent empirical literature has invoked four kinds of reasons to support the argument that exports reduce financial constraints:

(i) some authors (e.g., Campa and Shaver, 2002 or Bridges and Guariglia, 2008) argue that exporting firms should in principle benefit of more stable cash flows, as they are able to enjoy from international diversification of their sales. Thus, by assuming that international business cycles are only imperfectly correlated, exporting reduces vulnerability to demand-side shocks;

(ii) in another perspective, selling in international markets can be considered as a sign of efficiency and competitiveness by domestic investors and creditors; thus, in a context

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of information asymmetries and of financial markets imperfections, exporting would represent a clear signal sent by the firm to external investors, enabling them to obtain better financing. Some authors (e.g., Ganesh-Kumar et al., 2001) find that this kind of mechanism is mainly relevant in an emerging market characterized by low institutional quality;

(iii) meanwhile, some authors (e.g., Tornell and Westermann, 2003) argue that exporting is likely to open up access to international financial markets as well, at least those pertaining to the destination countries. In fact, foreign exchange revenues represent better collateral to access external funds in foreign financial markets;

iv) finally, exporters also tend to be larger, more efficient, have larger cash flows and therefore may have an easier time getting access to external finance, or get preferential terms on their outside funds (Bernard and Jensen, 1999; Clerides et al. 1998; Delgado et al. 2002). This would justify exporting firms' investments to be less sensitive to internal funds than their domestic counterparts.

Empirically, there are few studies assessing positively the influence of exports on firms´ financial health**.** Campa and Shaver (2002) conclude that exporting can help firms to reduce their financial constraints but they do not take into account endogeneity or selection issues. Two other recent papers provide further evidence that exporting may exert a positive effect on firm financial health: Greenaway et al. (2007) and Bridges and Guariglia (2008) but none uses the methodology we employ. More recently, a few studies argue that exports have no positive effects on firms´ financial health (e.g., Bellone et al., 2010 or Manole and Spatareanu, 2010).

In what follows, we present an evaluation of the ex-post effects of exports based on a large panel of Portuguese manufacturing firms. Portugal is an interesting case study of these issues because for nearly five years there is a strong government pressure for firms to become exporters and there is also a strong hope that it will generate improvements for these firms, in particular, and for the whole country, in general; thus, any proof that exports create positive effects would generate additional motivation for exports´ support; moreover, no study, on the relationship between financial constraints and exports, existed for Portugal and it could be interesting to compare it with past or future similar studies. Our contribution is twofold. First, we propose a new way to measure the degree of financial constraints, in a development on the multivariate index proposed by Musso and Schiavo (2008), which we argue is preferable to existing methodologies of assessing financial constraints. Second, in an innovative proposal, and in order to adequately deal with selection and endogeneity issues recognized in several studies, we propose the use of Propensity Score Matching with Difference in Differences (PSM-DID) to evaluate the financial impacts of new exporting activities. We find significant improvement in the financial health of firms after entering into export markets.

We acknowledge that there is also another strand in the literature of financial constraints and exports that studies the opposite causality direction: the ex-ante financial constraints and export selection; in fact, there are some theoretical models that try to explain the causality nexus between firms´ financial constraints and export beginning (e.g. Chaney, 2005) and there are some empirical studies arguing that only the domestic firms

which are financially unconstrained are able to become new exporters (e.g. Bellone et al., 2010); nevertheless, we do not approach, in this paper, such item.

The rest of the paper is organized as follows. Section 2 presents the data, discusses the shortcomings of usual strategies employed to measure financial constraints, and illustrates the methodology adopted here. In Section 3, we present propensity score matching and test the hypothesis that selling abroad improves firms´ financial health. Section 4 concludes and draws some policy implications.

2. Data and measure of financial constraints

2.1 Data description

The empirical analysis combines two data sources from the Portuguese National Statistics Institute (INE): balance sheet information (IAE) and external trade information (ECE). Datasets are linked by firms' non-revealed fiscal number. IAE provides information of firms' balance sheets from 1996-2003, and uses a survey sample of all manufacturing Portuguese firms with less than 100 workers and all the universe of firms with more than 100 workers. We have used, as variables, number of employees, turnover, exports, investment, labour cost, stock of capital, assets (and their composition), liabilities (and their composition), amortizations, own funds and earnings. To limit the effect of outliers we trim observations lying in the top and bottom 0.5% of the distribution for each the variables. Firms are classified according to their main activity, as identified by INE standard codes (CAE), which are correlated with Eurostat Nace 1.1 taxonomy; almost 65% of all firms belong to food, beverage, wearing apparel, textiles, paper, furniture and wood sectors.

Capital is proxied by tangible fixed assets at book value (net of depreciation). In turn, ECE provides information for each firm, on trade volume (exports and imports) aggregated by year and by country (destination of exports and origin of imports), and it also displays information on the types of products/sectors traded for each transaction. An export starter is a firm that begins exporting in that year but doesn´t export in the two previous years. All nominal variables are measured in 1996 Euros and are deflated using 2 digit industry-level price indices provided by INE; for capital stock we use the same deflator for all sectors; Tables A and B in Appendix present further details, namely the fact that new exporters (starters) show, in general, better financial performs than non-starters.

2.2 Measure of Financial Constraints

Given the lack of consensus and in order to account for potential problems in the use of other variables trying to measure financial constraints, we build a measure of financial health according to the methodology first proposed by Musso and Schiavo (2008) and further developed by Bellone et al. (2010). We exploit information coming from eight variables: size (total assets), profitability (return on total assets), liquidity (current asset over current liabilities), cash flow generating ability, solvency (own funds over total liabilities), trade

credit over total assets, repaying ability (financial debt over cash flow) and Total Factor Productivity (TFP)[1]. The choice of these variables is due to their recognized importance in the financial constraints literature; moreover, as recognized by Musso and Schiavo (2008), by proposing a time-varying and continuous measure of financial constraints we acknowledge the multifaceted feature of this phenomenon and more important it allows us to capture different degrees of financial constraints.

For each variable, we scale each firm/year observation for the corresponding two-digit CAE sector average and then assign to it a number corresponding to the quintiles of the distribution in which it falls. The resulting information for each of the eight variables (a number ranging from 1 to 5) is then collapsed into a single index as a simple sum of the eight numbers (*Score A*). Finally, the index is then rescaled to lie on a common 1–10 range. General statistics of Score A are presented in Table C in Appendix; firms that present the lowest Score A also show the poorest levels of liquidity, solvency and profitability.

In what concerns TFP, since it is probable that profit-maximizing firms instantly adjust their input levels each time they notice productivity shocks, productivity and input choices are likely to be correlated and thus TFP estimation involves problems. As explained by De Loecker (2010), researchers often use proxy estimators of TFP suggested by Olley and Pakes (1996) and Levinsohn and Petrin (2003); they provide them empirical models to estimate production functions using firm-level data and, more important, such proxies deal with the endogeneity of inputs, the non random exit of firms, as well as allow for persistence in the unobserved productivity shocks. Due to data limitations we could only use the semi-parametric method of Levinsohn and Petrin. Thus, we compute TFP as the residual of a Cobb-Douglas production function where the firm value added is the independent variable and capital, labor and unobservable productivity level are the dependent ones. This methodology also assumes that intermediate inputs have a monotonic positive relationship with productivity and in this way could be used as proxies. In our case, given data availability, we use as intermediate inputs the deflated values of the account "global supplies and external services" at book value; we estimate production function for every 2-digit sector separately.

3. Export and finance: ex-post benefits

3.1 Methodology

Ideally, the effects (on financial or economic levels) of becoming an exporter should be measured by comparing a firm's performance, some years after starting to export to what their hypothetical performance would have been at the same time had they never begun to export. Under the impossibility of such a measure, matching methods aim to evaluate the Average Treatment effect on the Treated (ATT), which means in practice, to evaluate

[1] The reason why TFP is included as an indirect indicator of financial constraints is due to our conviction that economic efficiency is highly correlated with financial health of firms.

the better as possible the effects of a treatment model, where treatment is the export entry. Thus, conceptually, we aim to measure the ATT, the average effects of a "treatment", as the decision to start exporting on starters' performances, by computing:

$$ATT = E\left[Y_{i,t}(1) - Y_{i,t}(0) \mid D_i = 1 \right] = E\left[Y_{i,t}(1) \mid D_i = 1 \right] - E\left[Y_{i,t}(0) \mid D_i = 1 \right] \quad (1)$$

where $Y_{i,t}(1)$ is the outcome (financial or other) of a starter firm i at t given it began exporting at a certain time; $Y_{i,t}(0)$ is the outcome of i at t given it did not begin exporting at the stated time; D is the decision made by i if it was starting to export (1) or not (0). In practice, we can only compute $E\left[Y_{i,t}(0) \mid D_i = 0 \right]$ thus, the solution is to replace the unobservable $E\left[Y_{i,t}(0) \mid D_i = 1 \right]$ with the observable $E\left[Y_{i,t}(0) \mid D_i = 0 \right]$; i.e., we use as the effect measure $E\left[Y_{i,t}(1) \mid D_i = 1 \right] - E\left[Y_{i,t}(0) \mid D_i = 0 \right]$ which originates a selection bias in the ATT computation.

Matching techniques pair each new exporting firm, in each year – on the basis of some observable variables, named as covariates – with a larger control group of most similar firms that stay non-exporters until that year. Given the variety of observable variables (covariates) that can be used to pair starters with non-starters (e.g., productivity, size, ownership, capital, sector, liquidity, general financial health), a problem of dimension of treatable variables arises. In line with Rosenbaum and Rubin (1983), this problem is solved by computing an average index: the "propensity score". Using this index from a large group of non-treated firms, we can find those that are the most similar to starters in the pre-treatment period.

In the first phase and in the purpose of estimating the propensity score, we chose as covariates to identify the probability of a firm beginning to export: TFP, size measured by the logarithm of total assets, a dummy controlling for small firms (with fewer than 20 employees), capital stock, investment, dummies indicating whether the firm has R&D workers, if the firm has a foreign share of capital, if the firm imports, liquidity ratio, leverage ratio, financial health (*Score A*), loans and also sectoral dummies[2]. We assume each one year lagged variables to affect export entry decision and the outcomes of starters and controls. In order to compute the propensity scoring the choice of the functional form seems to be robust since the binary treatment with logit or probit regressions yields similar results. In a second phase, we must match starters (treated firms) with controls (non-treated firms) by using the estimated propensity scores. To achieve it, there are several algorithms, which differ due to the different weighting regimes used to assess the importance of each control for each treated firm. We tested two of these weighting schemes: kernel matching

[2] Although not reported, we also tested the use of higher order polynomials, some interaction terms and other propensity score models. It was done in order to assess if Score A was affected; we conclude it was not.

and nearest neighbour matching[3]. Given that the different methods reach different points on the frontier of the trade-off between quality and quantity of the matches, and, in line with Caliendo and Kopeinig (2008), neither of them is a priori superior, we use both[4]; in fact, their joint consideration offers a way to assess the robustness of the estimates. Given the narrowness of our database, we perform the referred matching by pooling all cohorts of starters, given we have ensured it does not affect the matching quality. Complementarily, in order to assess matching quality, we compare the average level of the covariates before and after matching and look for differences between treated and control units; results of after-matching balancing tests (in Table D in Appendix) indicate that there are no significant differences between matched and control firms in terms of covariates; such evidence suggests the robustness of the matching implemented.

Nevertheless, in spite of all precautions when performing PSM, the self-selection bias may still exist, due to the bias coming from unobservables. In fact, if there are unobservable variables affecting both "assignment" into exporting and the outcome variable simultaneously, a hidden-bias may arise. A method for dealing with time-invariant unobservable bias is to add a differences-in-differences (DID) estimator to PSM. According to Blundell and Costa Dias (2000), this approach can improve the quality of non-experimental evaluation. Using DID, we compare differences in outcomes before and after the treatment (i.e., export entry) for the treated group – starters – to the same differences computed for the untreated group – controls. Naturally, without the treatment, the differences across both groups should not exist. Thus, to evaluate the impact of exporting on new exporters' performances (ATT), we performed the PSM-DID estimator applying at every period after the entry into the export markets with respect to the year prior to entry (*t-1*); such implemented estimator could be written as

$$M^{PSM-DID} = \frac{1}{n_i}\sum_{D_i=1}\left[\left(Y_{i,Post} - Y_{i,pre}\right) - \sum_{D_j=0} w_{i,j}\left(Y_{j,Post} - Y_{j,pre}\right)\right] \qquad (2)$$

In (2), Y is the required outcome (in logarithms, *ln*, instead of absolute values to obtain differences in growth rates between starters and non-starters); Post and pre denote that the variable is in the post-entry and pre-entry period; D_i=1 (D_j=0) denotes the group of starters (non-starters) in the region of common support; n_i is the number of treated units on the common support; $w_{i,j}$ is the weight of the j^{th} observation of controls in constructing the counterfactual to the i^{th} treated firm. When using the nearest neighbour algorithm each treated firms is matched with a single control, but using Kernel means that all controls, in

[3] Kernel matching is a nonparametric matching estimator that compares the outcome of each treated firm to a weighted average of the outcomes of all the untreated firms of the control group, with the highest weight being placed on those with scores closest to the treated firm. Nearest neighbor matching chooses a single firm from the comparison group as a match for a treated one in terms of the closest propensity score.

[4] Nevertheless, we only report kernel algorithm results.

the common support region, are weighted for matching each treated firm. We considered a maximum of six years after the starting year and thus we calculated ATT effects from *t* to *t+6*. As mentioned, by using *ln*, values in Table 1 are percentage point differences in growth rates between starters and controls for *Score A*, observed cumulatively from *t-1* to the end of that year.

Propensity score matching was performed either by the program psmatch2 (developed by Leuven and Sianesi, 2003) and by the programs[5] pscore and attnd(w) / attk (developed by Becker and Ichino, 2002). For both programs we used either nearest neighbour matching and Kernel matching. When using Kernel matching, standard errors are obtained by bootstrapping the entire estimation framework, including the propensity-score computation stage.

3.2 Results

Table 1 shows that the effect of exports on financial health (*Score A*) is positive and statistically significant from one year after export entry up to four years later; in fact, the growth of *Score A,* is higher for starters relative to control firms, for each year and always compared with pre-entry period. That growth advantage of starters, in financial health, is of 3 to 4 percentage points, compared with non-starters and reaches a maximum in the fourth year after exports begin.

These positive effects of new exporting activity seem to spread to efficiency (TFP growth of starters is also higher for four years) and to other financial variables such as solvency (for two years), cash flow, financial debt share on total liabilities and bond share in total liabilities. In fact, there is some evidence that starters are more able to reach higher growth in cash flow and are also more able to obtain higher increase in the importance of financial debt and of bond debt, suggesting that exports improve firms´ ability to obtain financial credit. In addition, in the first two years after entry we notice starters to have a disadvantage in what concerns the growth in the return on assets (ROA); a similar fact is observed in cash flow growth for the same period. Such results could suggest that new exporters take some time to recover from sunk entry costs of exporting; moreover, the cash flow generating ability of starters begins to growth in a superior path only four years after export entry, thus "rewarding" new exporters for their "investment" in foreign markets. The fact that ROA never shows exporters´ superiority may be due to the fact that the increase in returns is inferior to the increase in assets associated with foreign competition.

At another level, other sign of increased financial health of starters is presented by the decreasing share of trade credit relative to domestic firms; in fact, some years after entry the new exporters clearly decrease their trade credit share, relative to domestic firms; thus, suggesting new exporters get higher abilities to finance them from banks or directly from the markets (bonds) thus reducing their dependence from suppliers.

[5] We only report results from psmatch2; other results are available upon request.

Table 1: PSM-DID estimations

	t / t-1	***t+1 / t-1***	***t+2 / t-1***	***t+3 / t-1***	***t+4 / t-1***	***t+5 / t-1***	***t+6 / t-1***
TFP	0.008^{+} (0.018)	**0.026*** (0.013)	**0.045*** (0.025)	**0.039*** (0.027)	**0.059**** (0.027)	-0.002^{+} (0.044)	-0.071^{+} (0.067)
Score A	0.014^{+} (0.011)	**0.017**** (0.010)	**0.019*** (0.010)	**0.033** (0.012)	**0.039**** (0.018)	-0.008^{+} (0.024)	0.041^{+} (0.031)
Solvency	0.088^{+} (0.068)	0.003^{+} (0.007)	0.081^{+} (0.061)	**0.118*** (0.062)	**0.154*** (0.102)	-0.124^{+} (0.132)	0.144^{+} (0.172)
Liquidity	0.015^{+} (0.031)	0.022^{+} (0.032)	0.012^{+} (0.040)	-0.043^{+} (0.051)	-0.028^{+} (0.068)	0.012^{+} (0.061)	0.131^{+} (0.141)
ROA	**-0.088** (0.047)	**-0.093**** (0.064)	-0.088^{+} (0.066)	-0.107^{+} (0.098)	-0.098^{+} (0.094)	-0.192^{+} (0.132)	-0.265^{+} (0.185)
Financial Debt share	0.019^{+} (0.210)	0.131^{+} (0.102)	0.211^{+} (0.182	**0.293**** (0.213)	**0.063** (0.023)	0.021^{+} (0.042)	0.017^{+} (0.025)
Bond share	0.017^{+} (0.200)	0.127^{+} (0.100)	0.201^{+} (0.172	0.263^{+} (0.243)	**0.061** (0.025)	0.025^{+} (0.044)	0.017^{+} (0.025)
Trade credit	0.142^{+} (0.060)	0.247^{+} (0.540)	-0.347^{+} (0.650)	-0.817^{+} (0.990)	-0.188^{+} (0.890)	**-0.217*** (0.145)	-0.277^{+} (0.310
Cash Flow	**-0.057**** (0.031)	**-0.061**** (0.040)	-0.062^{+} (0.073)	**0.115*** (0.071)	**0.171** (0.058)	0.147^{+} (0.137)	0.026^{+} (0.033)
Leverage	0.001^{+} (0.021)	0.004^{+} (0.011)	0.016^{+} (0.021)	0.003^{+} (0.0151)	-0.019^{+} (0.018)	0.021^{+} (0.018)	0.039^{+} (0.029)
Number Treated	732	723	489	381	281	181	111
Number Controls	2,782	2,747	1,822	1,298	869	509	233

Source: Own calculations.

Notes: By using a Kernel algorithm and program *psmatch*2, we report bootstrapped standard errors (200 replications), the number of treated on the common support and the number of matched controls. If nothing is mentioned, coefficients are significant at 1% and coefficients significant, at least at 10% are in bold.

**means significant at least at 5%.

* means coefficients are significant at least at 10%.

$^{+}$ means coefficients are not significant.

Complementarily, we have also performed similar tests by splitting our database according to size and export intensity. In what respects size we divided data (both for treated and control groups) in "small" firms, with less than 20 employees, and "other" firms, with more than 20 employees; for each sub-group we performed the correspondent PSM-DID. Results of Table 2 show clearly that only small sized starters benefit of beginning to export; this could mean that "other" starters given their superior dimension have even prior to exporting a healthier financial situation, and which is not improved by selling abroad.

Table 2: PSM-DID for different size groups and for Score A

	***t / t*-1**	***t*+1 / *t-1***	***t+2* / *t-1***	***t+3* / *t-1***	***t+4* / *t-1***	***t+5* / *t-1***
Small firms	**0.017*** (0.010)	**0.015*** (0.010)	**0.020** (0.011)	**0.036** (0.014)	**0.029**** (0.019)	-0.020^{+} (0.030)
Big firms	0.001^{+} (0.014)	0.016^{+} (0.014)	0.018^{+} (0.019)	0.021^{+} (0.021)	0.009^{+} (0.034)	-0.016^{+} (0.033)

Source: Own calculations
Notes: See Table 1

At another level, we perform a second robustness check by splitting starters in accordance with their export intensity level (in the first two years)[6]; results of Table 3 show that to trigger the beneficial effects of exports there is no threshold of export intensity needed. These results have important policy implications given that they suggest that the simple fact of beginning to export is sufficient to improve the financial health of starters.

Table 3: PSM-DID for different export intensity groups and for Score A

	***t / t*-1**	***t*+1 / *t-1***	***t+2* / *t-1***	***t+3* / *t-1***	***t+4* / *t-1***	***t+5* / *t-1***
High intensity starters	- 0.01^{+} (0.011)	0.012^{+} (0.013)	0.010^{+} (0.014)	0.026^{+} (0.019)	**0.032**** (0.021)	-0.020^{+} (0.030)
Low intensity starters	0.015^{+} (0.014)	**0.011**** (0.08)	**0.016*** (0.012)	**0.026** (0.015)	0.029^{+} (0.028)	0.005^{+} (0.024)

Source: Own calculations
Notes: See Table 1

[6] We divide starters in two groups: one obtaining export intensity higher than 15% in the two first years of exporting; the other with lower export intensity.

In line with the arguments of Ganesh- Kumar et al. (2001), Campa and Shaver (2002), Greenaway et al. (2007) or Bellone et al. (2010) we argue that exports may exert a positive effect on firm financial health, namely by a revenue diversification effect (by reducing exposure to demand-side shocks) and by a signaling effect to financial markets (reducing informational asymmetries) given that the very fact of exporting could be a signal of efficiency given to creditors as only the best achieve to export.

4. Conclusions

This paper belongs to the recent stream of the literature that studies the links between exports and financial constraints. Given that the measure of financial constraints is still an ongoing issue, we propose a new way to assess the degree of financial constraints, in a development of the multivariate index proposed by Musso and Schiavo (2008).

Our main goal is to assess whether internationalization has any positive effect on financial health. Methodologically, we present, for the first time, a propensity score matching with difference in differences in order to evaluate the effects of new exports on the financial health of firms, overcoming the main handicaps of previous studies on these subjects.

We found that internationalization increases the path at which exporters improve their financial health compared to the correspondent path for non-exporters. Such positive effects are especially important for small firms and do not seem to require a threshold of export intensity.

In terms of policy evaluation these findings seem to justify the public support to new exporters given the positive properties that exports generate on financial health of firms. Nevertheless, several issues still need further discussion; we highlight two of them: the assessment on the quantitative influence of financial constraints on firm-level exports both at intensive and extensive margins, and the qualitative study of the channels through which firms improve their financial situation.

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Appendix

Table A: Number of firms studied

	1996	1997	1999	2000	2001	2002	2003
All	677	607	589	604	511	523	545
Starter	166	132	105	125	86	118	99

Source: Own calculations

Table B: Average values 1996-2003

	Control	Starter
Score A	4,75	5,45
Employees	35	93
Cap (10^6 €)	3,35	6,59
Liquidity	0.39	0,52
TFP (10^3 €)	79	156
Leverage	1,08	0,97

Source: Own calculations

Table C: General statistics of Score A

Score A	Share of all firms for each *Score* level	Liquidity Index (1 is maximum)	Solvency Ratio	ROA
2	0.1%	24%	8%	4%
3	1,5%	84%	2%	8%
4	11,6%	86%	13%	6%
5	27,4%	82%	22%	6%
6	31,8%	100%	30%	8%
7	20,5%	78%	28%	10%
8	6,4%	96%	27%	12%
9	0,7%	90%	24%	13%
Total	100%	85%	22%	8%

Source: Own calculations

Table D: Assessing the matching quality –
Comparison between treated and control: values at t-1

Unmatched sample

	TFP	Size	Capital	Invest.	Leverage	Score A	Liquid	Prop score
Treated	1023	15.67	106.97	5,40	0.86	6.09	0.60	0.26
Control	979	15.42	78.1	4,41	0.81	5.75	0.58	0.22
T test	1.19	1.56	4.67	2.17	0.97	3.65	1.70	7.59

Matched sample

	TFP	Size	Capital	Invest.	Leverage	Score A	Liquid	Prop. Score
Treated	1023	15.66	106.97	5,40	0.86	6.09	0.60	0.26
Control	1033	15.51	108.26	4,72	0.85	6.04	0.59	0.26
T test	-0.32	1.07	-0.19	0.76	0.23	0.62	0.98	0.33

Source: Own calculations