Export Promotion with Matchmaking and Grants: Evidence from Portuguese Firms

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Abstract
This paper estimates the impact on firms' foreign sales of two key policies implemented by export promotion agencies (EPAs): matchmaking in international markets and financial grants for internationalization. We use detailed data from Portuguese firms ++here+++ combined with data from balance sheets and the Portuguese EPA between 2012 and 2021. The empirical exercise aims to estimate the causal effect of these services and uses a staggered difference-in-difference estimator. We conclude that the services provided to Portuguese companies with the aim of boosting exports significantly and positively affected firm-level exports. More specifically, the financial grants for internationalization led to a significant increase in firms' total exports, with a higher effect on micro & small firms and in the "Wholesale of household goods" and "Manufacture of wearing apparel" sectors. Similarly, the matchmaking support led to a significant increase in exports. In France, the leading country where Portuguese firms most request the matchmaking, the effect is higher for micro and small firms and the "Manufacturing of other textiles" sector.

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1. Introduction

Venturing into a new foreign market is a significant decision for any firm. There are potentially high entry costs associated with establishing a commercial presence in a foreign market, and the outcome of this decision is uncertain. Although it is up to firms to take such cost-benefit analysis and decide, it may be the case that financing or providing information on potential markets by Export Promotion Agencies (EPAs) can significantly reduce these sunk costs and uncertainties. A positive outcome would be a large number of successful entries into foreign markets, thus increasing exports and, ultimately, trade gains, employment, and economic growth.

The international trade literature has documented the gains accruing from exporting firms. In the most prevalent view in the literature with heterogeneous firms, a firm chooses to be an exporter if its productivity is high enough to cover the costs of selling abroad (Roberts and Tybout 1997; Melitz 2003; Melitz and Redding 2014). This view suggests a strong self-selection of the most efficient firms in the export market. That means they would already be larger and paying higher salaries even without their presence in the export market.

On the other hand, many studies have shown that market size, i.e., firms' more extensive access to foreign markets, strongly influences their innovation and productivity. Thus, government efforts to improve firms' overseas market access can lead to more investment in innovation and productivity (De Loecker 2007; Harrison and Rodríguez-Clare 2010). This role is known in the literature as *learning-by-exporting*. Lileeva and Trefler (2010) examined the effect of the cut in US tariffs on Canadian products. They showed that after the elimination of the tariffs, the firms that started exporting or that exported more (i) increased their labor productivity, (ii) engaged in more product innovation, and (iii) adopted more advanced manufacturing technologies. Atkin *et al.* (2017) also report empirical evidence of large gains from *learning-by-exporting*. The study selected a random sample of producers of handmade carpets from a region of Egypt and provided the opportunity to export to high-income markets. Their experiment reports that the average increase in profits of treated firms was 16-26% higher than non-treated firms [1]. The authors reported that the treated firms decreased outputs. However, they increased prices, total labor hours, and profits. Therefore, these findings suggest evidence of *learning-by-exporting* and that high-income countries demand high-quality products that take longer to produce.

For this reason, increasing the number of firms selling abroad has been a real concern for policymakers. Over the policies to increase exports, in the last 20 years, EPAs have become the most popular institution to help firms become successful

1. The profit increase is expected once there is a demand shock for these treated firms. However, as argued by the authors, the reported increase due to the supply shock side was higher than other profits found in the literature when exploring supply-side interventions. See Banerjee (2013) for an example of credit access.

exporters (Srhoj *et al.* 2023). These EPAs are, in general, public institutions that receive a significant amount of resources from taxpayers, even though there are private companies that offer similar services. Therefore, the cost-benefit of government funding these institutions is a concern for researchers to assess the impact of these public institutions on firms' productivity (see Cruz *et al.* (2018) and Srhoj *et al.* (2023) for a survey).

EPAs assist firms boost exports by helping them overcome some export barriers. The main economic reason for government funding EPAs is the presence of market failures, such as information asymmetry and some externalities. The lack of information related to the high cost of learning about foreign markets and the uncertainty related to incomplete information may be a barrier to new exporters despite firms needing to be more productive to cover the fixed costs of selling abroad. Since firms do not have prior information on their probabilities of becoming successful exporters and the fact that firms avoid sunk costs, risk-averse behavior can be a barrier to firms accessing new markets. Furthermore, the positive externalities of exports come from the spillover effects to other firms with similar products (for a deeper discussion on these topics, see Copeland (2007) and Aalto and G (2020)).

Broocks and Van Biesebroeck (2017) and Munch and Schaur (2018) investigate the effect of matching services provided by EPAs on the exports of firms in Flanders (the largest Belgian region) and Denmark, respectively. The first work shows that firms benefiting from the support had an 8.5 percentage point (pp) higher probability of extra European Union export market entry than those with any EPA's support. The latter shows that for small firms, the support of the Danish EPA increased the chance of market entry by almost 8 pp as a consequence of the matchmaking service. Sales and value-added increased by 8 pp, while employment increased by 4 pp relative to control firms. Moreover, the effects of the EPAs' support were higher for micro, small and medium firms.

The present paper follows the previous works evaluating the impact of EPA on the firms' performance, specifically its intensive margin of trade, i.e., export volume. Through an event study model, we assess the effect of the two leading services provided by the Portuguese's EPA, Portugal Trade & Investment (AICEP) (i) grants for internationalization and (ii) matchmaking in international markets. These are the two most requested services from Portuguese companies. The financial aid for firms' internationalization is generally designated to cover expenses such as trade missions, attending international fairs, advertisements on international markets, and increasing production. The matchmaking support consists of detailed information about potential importers of Portuguese products. AICEP's offices worldwide collected detailed information about firms that can import Portuguese products and offered this information as a tailored report for some Portuguese firms.

Few studies have analyzed the effect of EPAs on firms' performance. The main reason is the high demand for data requirements. In general, it is necessary to observe three types of data: (i) EPA data on its services provided for the firms,

(ii) firm-level trade transaction data by destination and products, and (iii) control variables, commonly found in balance sheets information, to improve the precision of the estimates and control for some selection bias. The combination of this information at the firm level was possible for the Portuguese exporter firms for the period 2012-2021 using the firm unique identifier. Specifically, the AICEP's dataset includes information about its clients, timing, and type of support for export. The official dataset of trade transactions from the *National Institute of Statistics* (INE), the government office for national statistics, contains information on exports by firm. Finally, the official business register, Simplified Business Information (IES), offers information on some firm's characteristics.

This paper measures the impact of two services provided by the Portuguese EPA agency, grants for internationalization and matchmaking in international markets. These are the two most important services provided by AICEP, and they constitute a challenging topic for research, for several reasons. First, the impact of each of the services has to be studied at a different level of export volume. In the first support, we do not know where the companies use the benefit received to market expansion. Indeed, a company that received grants could have used it to increase production planning to access or expand into several countries. Therefore, we analyze the grants' effect on the firm's total exports. However, in matchmaking, we know for which countries the firms received this support and each matchmaking is related to a specific country. In addition, even though we can expect that the matchmaking increases the firms' total exports through the process of *learning-by-exporting*, the program may initially increase exports specifically to the country where the support was provided. In the short run, immediately following the matchmaking, firms may see an increase in exports to the country where they received the service. For these reasons, we investigate the matchmaking effect on the exports to the country with higher demand for this service: France. Second, in Portugal, the typology of exporter firms benefiting from grants, firms that display a substantially higher average volume of exports compared to those not using this service, clearly contrast with the profile of firms requesting matchmaking, for which the average export volume is smaller than the ones not using this service. Finally, a methodologically demanding approach is required to model the event studies in analysis.

In the available data, the two services in analysis are staggered from 2012 to 2021, that is, the treatment (the service provided to the client) is offered to the different firms at different moments. Moreover, the services are accounted for as a binary treatment, as only the treatment status (and not, for example, the amount of the grant) is provided by AICEP in an yearly basis. In this framework the impacts of interest are measured by using the Interaction-Weighted (IW) estimator proposed by Sun and Abraham (2021); for recent contributions of the applicability of the major staggered Differences-in-Differences (DiD) estimators see Baker et al. (2022) and de Chaisemartin and Haulfoeuille (2023). Our results suggest that the internationalization aids led to an overall increase of about 13% in the total firms' exports. The effect was greater for micro and small firms, where financial aid increased exports by 18. 9%. In sectors "Wholesale of household goods" and

"Manufacture of wearing apparel," the effect was about 36% and 47%, respectively. The assessment of the effect of AICEP's matchmaking service for France suggests an increase of about 31.6% in exports from Portugal to France. Furthermore, there is a significant size and sector heterogeneous effect. The effect on micro and small firms was about 39.8%, and for firms in the "Manufacture of other textiles" sector, matchmaking led to an increase of 137%. All these results are robust after many tests, namely parallel trends assumption, changing the actual intervention date, and placebo test where we randomly signed up firms for the control group and intervention dates.

The paper is organized as follows. The next section overviews our research background, i.e., the relevant literature, describes the Portuguese' EPA, *Agência para o Investimento e Comércio Externo de Portugal* (AICEP) and the two services we are going to evaluate. Section 3 presents a set of stylized facts focused on the variables that characterize exporters, notably those taking up grants and matchmaking to enter or increase sales in overseas markets. Section ?? describes the estimator and the specification analysis empirical approach followed in this paper. The results of our empirical exercise are divided into three parts. The first (Section 2.3) presents the estimates of the effect of both the financial support and the matchmaking service, section ?? provides documents the validity of the estimated models, and section ?? details the results by firms' sector and size and include a subsection for robustness tests. Finally, Section 7 presents some concluding remarks.

2. Background

2.1. Literature review

The effectiveness of Export Promotion Programs (EPP) has been evaluated in two main approaches: (i) at the aggregate level, evaluating the effect of international diplomacy, i.e., trade missions and diplomatic offices' effects on bilateral trade flow, and (ii) using firm-level data, by explaining exports using as controls indicators of the EPAs' support and firms characteristics [2]. The first approach reports ambiguous effects. Bernard and Jensen (2004) use a panel of US manufacturing plants and find no link between government expenditure on export promotion and the probability of entry into exporting. Head and Ries (2010) analyzed the trade missions carried out by the Canadian government and did not find evidence that these missions increased Canadian trade with the respective country. Other studies still analyzing at the aggregate level find a significant effect of EPP on exports. Rose (2007) reports a positive effect of opening an Embassy on export performance in the US.

2. Van Biesebroeck *et al.* (2016) and Srhoj *et al.* (2023) have a theoretical discussion and an empirical summary on EPP's effectiveness

Similarly, Gil-Pareja *et al.* (2015) shows a positive effect of the regional export promotion office on aggregate exports in Spain. Hayakawa *et al.* (2014) also found a positive effect of opening an EPA for Japan and Korea. Their work concludes that opening an EPA in a country has a similar effect to a free trade agreement (FTA) with the same country.

On the other hand, studies using firm-level data with exports as the dependent variable and EPP as an explanatory variable, togheter with controls, have been unanimous in their findings, suggesting a positive effect of EPP on firms' international market performance. Multiple studies have reported a positive effect on entering a new market and in the intensive margin of trade, i.e., increasing the exports for overseas countries already served, especially for micro, small and medium firms.

Works analyzing grants for entering the international market also report a positive effect. Comi and Resmini (2020) investigate the impact of EPPs (grants, vouchers for attending international fairs, trade missions, and external counseling) in Italy using the DiD estimator. They show that firms assisted by these EPPs presented higher export propensity and export intensity when compared with non-assisted firms, with higher effects on micro, small and already exporting firms. With Croatian firm's data, Srhoj and Walde (2020) analyzes the effect of an export-oriented grant designed to anticipate the joining of a country to the European Union. These grants aim to support firms in two main activities: (i) Commercial activities, like international market entry consulting and attending international fairs, and (ii) technology development. They found that the EPP positively affected firms' export value, total sales, value-added, and profit but did not affect employment. Grants for technological development had more economic impact than commercial activities, and the cost-benefit analysis indicates that the value added created by the EPP is 39. 5% higher than costs.

Cruz (2014) studied if firms supported by the Brazilian government's EPA (*Apex*) have a higher chance of entering a international market. Using matching DiD, the author estimates that the support led to a market entry probability around 2.5 times higher than nontreated manufacturers. Similarly, Makioka (2021) investigated the causal effect of the matching service on the exports of Japanese companies. Specifically, the author studied the effect of attending a trade fair and its support program provided by the Japanese EPA on the export behavior of firms. The author utilizes DiD matching estimation and fixed effect estimation approaches and reports that the support provided by the Japanese EPA increased the export probability by 9.6 percentage points during the year after a firm attended a trade fair. In addition, he reports that firms increase, on average, their exports by 25.41% during the year after the fair.

In a different context, Van Biesebroeck *et al.* (2016) investigate whether EPA-supported firms during the global recession that started in 2009 performed better during the crisis and whether they recovered faster. They used the matching of propensity scores on data from firms supported by the Flanders Investment and Trade (FIT) and Peru's National Public Export Promotion Organization

(PROMPERU) from 2006 to 2011. The activities provided by the EPAs they analyzed were local resolution of specific transaction problems, subsidies for foreign market prospecting, market information, and help attending international fairs. They report that the firms that received EPAs' help did better during the crisis, i.e., kept better export levels, were more likely to survive on the export market, and recovered faster after the crises than those that did not receive the support. For Belgium, the effect was more substantial for exports outside the EU. Furthermore, the cost-benefit analysis showed that these EPPs covered their costs.

Van Biesebroeck *et al.* (2015) did a similar empirical exercise to ours. They evaluated the trade promotion services provided by the Canadian Trade Commissioner Service (TCS) on the export performance of Canadian firms [3]. They merged three datasets containing all active exporters between 1999 and 2006, the statistics about firms' exports, business register, and the TCS's clients dataset. Through a DiD estimator, the authors find that the TCS' services significantly affected volume export to countries already served by the firms, on average 17.9%. However, they did not find an effect on the expansion of new products or the increase of new destination countries for exports. Furthermore, the EPP takes a few years to significantly affect the intensive margin of exports, and this effect is more significant to older firms and firms that export to a larger number of markets.

Similarly, Buus *et al.* (2022) study the effect of matchmaking services provided by the Danish EPA. Although they report that the Danish EPA's matchmaking increased firms' exports within markets, the service did not affect firms' prices, quality, markups, or marginal costs. The authors provide a detailed discussion of how EPAs impact firms' employment, sales, and productivity.

In Portugal, some researchers have been studying the effects of the European Structural and Investment Funds that aim to reduce regional inequalities between members of the European Union. For this reason, one of the primary goals of the fund in the last decade was to increase productivity and the firms' competitiveness abroad. Using the DiD estimator on a panel sample of Portuguese firms from 2006 to 2019, Cabral and Campos (2023) shows that the EU program positively affected Portuguese firms' intensive trade margin. The authors report that after three years, the value of exports in terms of the turnover of the firms that received support was 3.6 percentage points higher than in the control group. Similarly, the empirical work of Martins (2021) and Alexandre (2021) also reports a positive effect of the European's EPP on employment, total sales, value added, productivity, and firms' exports.

3. the services evaluated by the authors are information on a market prospect, key contacts search, local company information, visits information, face-to-face briefing and trouble shooting

2.2. The Portuguese Export Promotion Agency - AICEP

The role of AICEP is similar to other EPAs (Cruz *et al.* 2018; Srhoj *et al.* 2023); it is a government agency funded by public funds with offices in around 50 countries. By 2019, the agency had 464 employees, of which 318 were working from Portugal and 138 worldwide. Of these 138, 11 were in Africa, 10 in North America, 10 in South America, 17 in Asia and Oceania, 67 in Western Europe, 16 in Eastern and Central Europe, and 7 in the Maghreb and Middle East (Castela 2021). Until April 2024, AICEP was under the Ministry of Foreign Affairs when it was reintegrated into the Ministry of Economy.

AICEP works to boost Portuguese exports by building a country's image worldwide, analyzing political conditions, and international law. AICEP also provides services to Portuguese firms, such as grants for market entry and expansion, market research (publications, surveys), training, technical regulations, trade fairs, exhibitions, missions, and partner search / matchmaking (meetings, detailed contact database, and other market entry assistance).

AICEP also works as the Portuguese Investment Promotion Agency (IPA), promoting Portugal as an attractive investment destination and carrying out various marketing and services generally categorized into four core activities: image building, investment generation, investment facilitation and retention, and policy advocacy. Some examples of these activities are marketing on social media and international fairs, investor targeting administrative support, and facilities to enable the dialogue between government and investors, either to solve problems and influence policies[4]. Our research delves into the pivotal role of AICEP's leading services for Portuguese firms aiming to boost Portuguese exports, namely its matchmaking offerings in the export market and grants for internationalization. These two services are the most directly requested from Portuguese firms for AICEP and are described in the next setctions.

2.3. Grants for internationalization

The Portuguese EPA works to fund companies that aim to enter the export market or expand their existing exports. The financial aid AICEP provides is explicitly earmarked for the internationalization of Portuguese companies, facilitating their participation in international fairs, trade missions, overseas marketing, and increased production. These grants are financed by the European Regional Development Fund (ERDF), a finite resource and are allocated by AICEP for the most promising projects of internationalization presented by the firms. In terms of available information, for each company we have information on the treatment status, year by year. Naturally, some firms in the sample received this financial support more than once during the study period, 2012-2021. Notice that

4. For a deeper discussion on the role of IPAs, see OCDE (2018)

the country (countries) in which the firms allocated the funds to market entry or increase their exports is not known. For this reason, we evaluate the effect of AICEP grants on the total volume of firm exports.

2.4. Matchmaking in export market

Concerning the matchmaking services for Portuguese firms, our focus is on the comprehensive database of contacts that includes details on potential importers of Portuguese products that are delivered to AICEP's clients. This service operates bidirectionally: AICEP clients can request matchmaking through their Key Account Manager (KAM), and KAMs can proactively offer this service to companies. Unfortunately, we do not have information on whether a firm requested the service or whether the KAM proactively offered it. Importantly, the number of interactions with Portuguese firms that KAMs have, including matchmaking provision, is one of the components that AICEP uses to assess the KAM's performance.

Therefore, after the firm requests the service or it is offered by its KAM, the AICEP's headquarters in Portugal forwards the request to the respective offices worldwide. These offices then compile the information into a customized report that is delivered to the firms. Each company can request this service up to three times at once. For example, a company may want to enter or expand its sales to Germany, France, Brazil, and China. The firm has to pick three countries and request for its AICEP's key account manager and may request the service for the fourth country when it receives one of the three already requested services. The entire process, i.e., from requesting the service to receiving the report, takes 20 business days on average.

Our evaluation of AICEP's matchmaking services is focused on the direct impact it has on the firm's exports. We know for which countries the Portuguese firms received matchmaking services and we have detailed data on the firm's exports by country. This allows us to assess whether AICEP's matchmaking support has increased the exports to the country where the firm received the service.

3. Data

3.1. Data sources

Two unique datasets were gathered for the Portuguese exporting firms by a similar approach, one to analyse financial support and other to analyse matchmaking services concerning France. The former includes the total number of exporting firms in Portugal and the latter is focused on firms exporting to France. Information from three different sources is merged: (i) the Statistics Portugal - INE (*Institute Nacional de Estatstica*) dataset on export firms; (ii) the Simplified Corporate Information - IES (*Informaço empresarial simplificada*); and (iii) the AICEP client dataset. We merge the datasets using the unique identifier at the firm level.

The INE dataset contains micro-level information on Portuguese exports. Firms declare export information to the customs authority, which provides this information to statistical authorities. INE does a sample check of the accuracy of this information for firms that export as of 250,000.00 euros. Therefore, the accuracy of this dataset is higher for medium and large enterprises. The INE dataset has detailed information on firms' exports, such as values, products, and destinations. The IES data set contains firms' mandatory annual declared information to the tax administration and the statistical authorities. The information consists of economic, financial, and accounting balances for the respective fiscal year and covers the population of Portuguese non-financial corporations. Firms report detailed balance sheets and information on important variables such as the number of employees, the cost of inputs, and turnover. Finally, the AICEP dataset includes information about its clients and the services provided to them. The dataset has detailed information about the timing of the services and the country to which the firms requested support, as we discussed in Section 2.2.

3.2. Treatment condition and comparison firms

To mitigate the heterogeneity caused by varying intensities of treatment among firms, we restricted our analysis to firms that received AICEP support for a maximum of two consecutive years. This approach ensures that firms with different levels of treatment exposure, such as those receiving support intermittently over several years, do not skew our results. In addition, the methodological approach followed in this paper assumes that the treatments are absorbing; that is, over time, the firm is classified as treated once the treatment occurs. This absorbing nature of the treatment corresponds to a situation where the impact of the intervention at a given moment prevails in time afterward (Sun and Abraham 2021).

For instance, a firm receiving AICEP support in both 2015 and 2016 is included in our treatment group. However, a firm receiving support in 2015 and again in 2017 is excluded from our sample. We consider the support provided within two consecutive years as a single treatment. This is reasonable, since a firm can receive the matchmaking and only use it withing a few months. Beyond this period, two consecutive years, the varying treatment intensity complicates the isolation of AICEP's impact in our staggered treatment setup.

In order to assess the impact of matchmaking, we evaluate its effect in the country with the majority of matchmaking provided by AICEP. This support may have a long-term effect, that is, a significant effect on the firm's total exports through the process of *learning-by-exporting*. However, we focus on its short-run effect, increasing exports to the country where the firms received the matchmaking.

Regarding grants for internationalization, we lack information about the specific countries where the firms used the aid to expand exports. Indeed, a firm can use this financial support to expand sales into several countries. Thus, we evaluate the program's effectiveness in increasing the firm's overall sales abroad. In other words, we estimate the effect of the grants on the total firm's exports.

AICEP does not have strict criteria for offering matchmaking support to its clients. This service is provided to firms with a higher potential for increasing sales in international markets and the capacity to bear the sunk costs of acquiring more international partners and clients. In contrast, grants for internationalization are available through a public call open to all Portuguese companies. Due to limited resources, AICEP allocates financial aid to the most promising internationalization projects, specifically those deemed by AICEP analysts to have the greatest potential to increase overseas sales.

To assess these effects, we use Portuguese goods exporters who have not received AICEP support as the comparison group. This approach is reasonable for evaluating grants for internationalization, since these grants are available to all Portuguese companies, not just AICEP clients. This comparison group remains valid for matchmaking because AICEP served a high share of exporter firms, approximately 75% of Portuguese goods exporters in the period, meaning these firms could request matchmaking support anytime.

3.3. Data description

This section provides a preliminary analysis of the available variables. First, the discussion centers on our primary variable, the export value of Portuguese firms, to evaluate the effect of the Portuguese EPA services on the Portuguese firm's sales abroad. Then, the descriptive statistics of the control variables are also addressed.

The results of the export value of the firms are disaggregated for the treated and control firms in Table 1 for financial support (columns (1)-(3) and matchmaking (columns (4)-(6)). Moreover, Figures A.1 and A.2 in the Appendix show the mean of the logged exports across the period in analysis and the distribution of the export value in analysis for the same disaggregation.

It is important to note the proportion of treated and not-treated firms in 2012-2021. Both datasets share the feature of a small proportion of treated firms. For the grant (matchmaking) dataset in 2012, only 0. 222% (0. 187%) of the firms received support. This pattern of a small proportion of cases is consistent throughout the period in analysis. However, it becomes more attenuated, especially for matchmaking, in such a way that in 2022, 4.39% (7.48%) of the firms benefit from grants (matchmaking services).

In contrast, from Table 1 and Figures A.1 and A.2, the different profile of the firms that benefit from the two services provided by AICEP emerges. Firms with higher export volumes received grants for internationalization, while those with lower export volumes benefited more from matchmaking services in France. These diferences display an attenuation form 2012 to 2022. In fact, in the previous year, the average export value of firms receiving grants (matchmaking) was 64. 66% higher (59. 1% lower) for treated firms, relative to not treated. In 2022 the corresponding percentage is 57.4% (79.4%). Notice that for the matchmaking service, the median of treated firms is higher than that of the control firms. Important to note is that Portuguese EPA grants are finance the

		Exports					
		(1)	(2)	(3)	(4)	(5)	(6)
		Grants			Matchmaking		
Year	Treatment	Mean	Median	Companies	Mean	Median	Companies
2012	No	2264.89	88.19	17559	1212.01	228.86	3729
2012	Yes	3727.61	318.55	39	715.82	96.94	7
2013	No	2252.67	84.05	18456	1214.88	233.87	3814
2013	Yes	3612.97	878.04	85	915.03	148.36	69
2014	No	2195.55	80.41	18385	1202.20	237.10	3833
2014	Yes	3127.52	676.02	156	775.51	176.76	113
2015	No	2324.11	79.77	18347	1267.43	219.89	4021
2015	Yes	3124.48	514.08	321	650.08	170.93	183
2016	No	2385.09	84.26	17540	1257.88	234.96	4118
2016	Yes	2689.75	472.48	461	715.70	179.17	220
2017	No	2598.39	92.67	17754	1345.66	231.64	4255
2017	Yes	2704.60	558.40	512	587.12	157.32	270
2018	No	2517.46	77.43	18797	1333.67	224.01	4395
2018	Yes	2668.13	461.19	579	613.04	193.87	294
2019	No	2554.60	67.10	18952	1347.59	235.04	4392
2019	Yes	2823.46	436.69	652	697.22	183.36	340
2020	No	2205.35	71.91	17704	1125.37	213.37	4451
2020	Yes	2609.99	435.13	696	776.82	182.76	368
2021	No	2027.00	60.11	11595	1054.55	153.45	3140
2021	Yes	3191.51	535.79	532	837.62	188.37	254

Table 1. Summary statistics for export values (thousands of euros, adjusted to 2012 values)

Note: Export values are in thousands of euros and 2012 values.

most promising internationalization projects presented by firms. As highlighted by Cabral and Campos (2023), micro and small firms have fewer resources to enhance their internationalization projects, and larger firms have more resources available to finance their projects. Therefore, firms receiving these grants generally have higher dimensions and export volumes than those that do not receive grants for internationalization. On the other hand, AICEP provides matchmaking in international markets for free for some of its clients when requested, but this service can also be purchased privately. Larger companies, with more resources, can afford private matchmaking services tailored to their specific needs, while smaller firms often rely on AICEP for these services.

4. Empirical strategy and robustness tests

4.1. Empirical strategy

The impact of two services of AICEP in analysis share the same methodology. Following the conventional approach, the model specification for our event studies is written as follows.

$$y_{i,t} = \gamma_i + \lambda_t + \zeta_{sec} + \delta DiD_{i,t} + X_{i,t}\beta + \varepsilon_{i,t}. \quad (1)$$

Where $y_{i,t}$ is the i'th firm natural logarithm's export in the year t, γ_i is the firm fixed effect, λ_t a time fixed effect, and ζ_{sec} is sector's control. $X_{i,t}$ is a matrix of controls with β a vector of coefficients and $\varepsilon_{i,t}$ represents the unobserved shock that is assumed to be uncorrelated with the treatment, $DiD_{i,t}$. The controls in $X_{i,t}$ are the natural logarithm of GVA per employee and the firm's size where we classify the firms into four groups: (1) micro, (2) small, (3) medium, and (4) large firms. We follow the classification of the European Commission[5]. The absorbing treatment indicator is a dummy taking value one from the year onward that the firm receives the support to export ($support_i$) service, i.e. $DiD_{i,t} = 1[t \geq support_i]$. The primary coefficient of the model (δ) indicates the average treatment effect on treated (ATT), and we cluster the standard errors at the firm level.

We estimate the model 1 by implementing the IW estimator proposed by Sun and Abraham (2021); see also Baker *et al.* (2022) for a discussion on this estimator. This estimator allows the treatment effect to differ according to the treatment time. Moreover, it corrects for the heterogeneity of the firm's responses to AICEP's support. ATT are estimated using the never-treated firms as counterfactuals. (Sun and Abraham 2021) estimator is considered an appealling and robust estimator, but it still requires two assumptions. The presence of parallel trends, that is, the firms (treated and nontreated) need to trend together before intervention. We check the validity of this assumption on our dataset by plotting nine years of pre-treatment coefficients. The second assumption is the presence of no anticipation behavior prior to treatment. According to our specifications, this means that the companies did not try to increase their exports to the country when they received the matchmaking before AICEP's support, or they were not successful in increasing sales or market entry before AICEP's intervention. The next section details on these robustness checks.

4.2. Robustness tests

4.3. Parallel trends test

One of the main prerequisites for the use of the DiD method is the assumption of a parallel trend, that is, the treatment and control groups were trending the same

5. For more information, see link.

before the intervention. If this hypothesis is not satisfied, the DiD method can not be directly applied. Following the existing literature, such as Nunn and Qian (2011); Gu *et al.* (2021); Díaz (2024), our work adopts the event study method to test the assumption of parallel trends. The test relies on a model addapted from 1:

$$y_{i,t} = \gamma_i + \lambda_t + \zeta_{sec} + \sum_{\tau=-9}^{-2} \varphi_\tau DiD_{i,t}^{\tau} + \sum_{\tau=0}^{8} \delta_\tau DiD_{i,t}^{\tau} + X_{i,t}\beta + \varepsilon_{i,t} \tag{2}$$

where $y_{i,t}$ is the i'th firm ln(export) in the year t, γ_i is the firm fixed effect, λ_t a time fixed effect, ζ_{sec} is sector's control, $X_{i,t}$ is the set of controls (the same as in equation 2) with coefficients β. $\varepsilon_{i,t}$ represents the unobserved shock that is assumed to be uncorrelated with the treatment, $DiD_{i,t}^{\tau}$, and φ_τ and δ_τ, are the coefficients of $DiD_{i,t}^{\tau}$ before and after the treatment. φ_τ and δ_τ indicate if the groups were trending the same before and after the intervention. The mechanics of the event study's parallel trend test is: (i) if the φ_τ is not significantly different from zero, then the two groups were trending the same before intervention. (ii) if the δ_τ is insignificant, the two groups trended differently after the intervention. The parallel trends null hypothesis is not rejected when the two situations happen simultaneously.

4.4. Falsification test

To check the robustness of the DiD estimates, we set up the falsification test, following the Li *et al.* (2021) and Ai *et al.* (2022) approaches. This paper changed the treatment date, i.e., the implementation of the exogenous shock. We set the treatment year to 1, 2 and 3 years before the real intervention date. The model was estimated as follows:

$$y_{i,t} = \gamma_i + \lambda_t + \zeta_{sec} + \sum_{\tau=-9}^{-2} \varphi_\tau^* fakeDiD_{i,t}^{\tau} + \sum_{\tau=0}^{8} \delta_\tau^* fakeDiD_{i,t}^{\tau} + X_{i,t}\beta + \varepsilon_{i,t}, \tag{3}$$

where the $fakeDiD_{i,t}^{\tau}$ refers to the treated group with fake intervention time.

If the estimated coefficient of $fakeDiD_{i,t}^{\tau}$, $\hat{\delta}_\tau^*$, is significant, then some external shock before the intervention had affected the firms' exports in the treatment group or an anticipatory behavior could be present. We perform the falsification test in our DiD estimations by manipulating the support date for 1, 2, and 3 years before the real intervention date.

4.5. Placebo test

We perform the placebo test to assess whether the increase in the firms' exports came from the support rather than other external factors. We randomly assign this test's control and treatment groups with the same proportion of our real dataset. Then, again, we randomly generated the treatment year AICEP gave. The model we estimate is

$$y_{i,t} = \gamma_i + \lambda_t + \zeta_{sec} + \sum_{\tau=-9}^{-2} \varphi^{\tau} fakeDiD_{i,t}^{*\tau} + \sum_{\tau=0}^{8} \delta^{\tau} fakeDiD_{i,t}^{*\tau} + X_{i,t}\beta + \varepsilon_{i,t}, \quad (4)$$

where the $fakeDiD_{i,t}^{*\tau}$ refers to the randomly assigned treated group with the respective randomly assigned intervention year.

In the placebo test, i.e., generating random intervention dates and computing the ATT through our event study model, we expect the estimated ATT to be normally distributed around zero and non-statistically significant.

5. Results

5.1. Global impact on exports

The results for the global impact of AICEP's two primary services for boosting Portuguese firms' exports, obtained from Equation 1, are presented in Table 2.

	lexports			
	(1)	(2)	(3)	(4)
	Grants		Matchmaking	
DiD	0.1019*	0.1226***	0.2044**	0.2749***
	(0.0542)	(0.0436)	(0.1030)	(0.0905)
Controls	No	Yes	No	Yes
Adjusted R^2	0.8139	0.8716	0.7821	0.8123
Observations	166,377	166,377	37,934	37,934

Table 2. Results on the glabal impact on export value

Note: The table reports the results of our event study model 1 with the Portuguese exporter firms of goods from 2012 to 2021 to assess the effect of AICEP primary services on the firm's total exports. We use as controls the ln of the GVA per employee, sector at three digits RACE Rev. 2 level and firms' size. The standard errors are clustered at the firm level. ***, **, and *, indicate the 1%, 5%, and 10% significance levels, respectively. The estimates control for the firms' and years' fixed effects.

The columns (1) and (2) in table 2 are related to grants and the (3) and (4) to matchmaking. The first columns of each service do not have the controls used in the model, namely for the natural logarithm of GVA per employee and size. The DiD variable of table 2 is the primary variable in our event study model; it represents the estimated Average Treatment Effect on Treated (ATT). For the grant in column (1), the estimated ATT of the model without covariates is not statistically

significant at the 5% level. However, in the model with covariates, the grants led to an increase in the treated firm's total exports by 13% $((e^{0.1226} - 1) * 100\%)$ compared with other good export firms that had not received financial support. The estimated ATT for the matchmaking in both cases is significant at 5%. Therefore, this service led to an increase in the firm's exports to France by 31.6%.

Some authors study the effect of EPA's services on firms' export volume. Van Biesebroeck *et al.* (2015) find an increase in export volume about 10% ($\pm 2.1\%$ p.p.); Van Biesebroeck *et al.* (2016) apply a DiD estimator on some EPA's services in the context of a crisis recovery and report an effect that ranges from 19.5 ($\pm 6.7\%$ p.p.) to 24.2% ($\pm 7.3\%$ p.p.) in Belgian and from 13.4% ($\pm 8.1\%$ p.p.) to 22.5% (± 6.3 p.p.) in Peru; and Martincus and Carballo (2010) analyze a bunch of services provided by the Peruan's EPA and find an increase in the export volume by 28.5% (± 5.4 p.p.).

In the context of matchmaking, specifically analyzing the effect of the Japanese EPA supporting companies to attend trade fairs, Makioka (2021) reports an increase in companies' exports by 25% (± 8 p.p.) in the year after the fair. Other authors estimate a lower effect of EPAs' matchmaking on the firms' export value. Munch and Schaur (2018) report a increase of 5.8% (± 3.3 p.p.) two years after the support, while Broocks and Van Biesebroeck (2017) find an effect of 14.4% (± 0.5 p.p.).These works estimate the increase in the total value of the exports in the firms that received similar matchmaking support. As we know from which country the firms received the support and the destination of their exports, we estimate the effect of matchmaking in France, the leading market for this support. Our strategy allows us to estimate the short-run matchmaking effect on the firms' value exports more accurately.

5.2. Heterogeneous impact on exports by firm' size and sector

Empirical works have shown that the effects of EPPs may be heterogeneous, depending on the firm's size and sectors (Martincus and Carballo 2010; Cruz 2014; Broocks and Van Biesebroeck 2017; Munch and Schaur 2018). Moreover, based on standard trade theory (Melitz 2003) and on the empirical works summarised in section 2.1, we expect that EPPs are more effective for smaller companies and have a different effect regarding sector due to their characteristics. Smaller firms are less productive and have less cash and assets available as collateral, thus less potential for a bank loan to cover sunk costs to access international markets and promote their growth (Wagner 2007).

We access the firm sector in the IES dataset defined by the Statistical Classification of Economic Activities in the European Union (Carré 2008). We use the 3-digit aggregation in our analysis. Then, we conducted our event study model for each of the top five sectors with more support in grants and matchmaking. The top five sectors supported for each service are reported in Tables B.3 and 3. Table 3 presents the sectors in which we found a significant effect. Thus, we found significant effects for sectors 463 - "Wholesale of food, beverages, and tobacco",

141 - "Manufacture of wearing apparel, except fur apparel" for grants and sector 139 - "Manufacture of other textiles" in the matchmaking.

Regarding grants for internationalization, firm size was significant only for micro and small firms. The estimated ATT, related to DiD, our primary variable in column (1), indicates that this support increased the total exports of micro and small firms by 18.1% compared to other firms that did not receive the support. This positive effect on micro and small firms is significant even at the 1% significance level. In the sectors, we found a significant impact in 463 and 141. Sector 463 saw a 35.6% increase in total exports, while sector 141 experienced an increase of approximately 47% compared to the control group.

For the matchmaking in France, the estimated DiD's coefficient in column (5) indicates that micro and small firms saw a 39.8% increase in their exports to France. Conversely, column (6) shows a significant effect for medium and large firms only at the 10% significance level and with a minor export increase of about 23.2%. We observed a heterogeneous sector effect when we applied our event study model to the primary sectors receiving matchmaking support. Notably, only the "Manufacture of other textiles" sector was statistically significant. Our event study model estimates that matchmaking increased the exports of this sector to France by 136.5% compared to firms that did not receive the same matchmaking.

6. Robustness

In the subsequent section, we perform a comprehensive series of tests on our estimated event study models. Our analysis begins with an assessment of the robustness of the estimated global effects. We then conduct tests to evaluate the robustness of the estimated impact on firm size and sector. Specifically, we examine the parallel trend assumption and perform falsification and anticipation tests to ensure the validity of our findings.

6.1. Global effect

6.1.1. ***Parallel trends test***. As discussed in 4.3, the parallel trend is the core of DiD methodology. The parallel trends between the treatment and control groups can be observed in the coefficients of the dummy treatment variables, φ_τ and δ_τ. Figure 1 represents those estimated DiD coefficients, grants on the top and matchmaking at the bottom. In both graphs, before the services, the control and treatment groups appeared to trend together. However, for grants, they trended separately for the initial three periods. This behavior means that the export variations of the control group were more significant than those of the treated group in the first three years of our sample. These differences in the first three years could be due to having less observation in this initial period; as reported in Table 1, the percentage of companies that received grants for internationalization was less than 1% in the three first years in analysis.

After receiving grant service, all estimations of the treatment's coefficient (δ_τ) are positive. Furthermore, the aid looks to affect the firms' exports with some delay since the estimated coefficient only starts to significantly different from zero after the third period since the support. However, the last two periods are insignificant due to the increase in the coefficient's standard errors.

In matchmaking, from the nine years displayed before treatment, the parallel trend indicates a spike in the second year before AICEP provides the service. It could suggest anticipatory behavior from the treated firms, which can lead to bias in our event study model estimates. We perform some tests, more precisely the falsification test, to investigate if this behavior happens in our sample. Furthermore, in the year of the intervention, the coefficient δ_τ was not different from zero. Then, the coefficient increased consistently and remained positive. It suggests evidence that the matchmaking service increased the firm's exports compared to those who did not receive the support.

6.1.2. ***Falsification test***. As we describe in Section 4.4, the implementation of the falsification test require a shift in the treatment period to 1, 2, and 3 years before the actual date. This sensitivity analysis helps determine whether external factors influenced the increase in exports for the treatment group compared to the control group before the actual treatment date. The results indicate that when we manipulate the real intervention dates with these fake dates, the supports do not significantly affect the results at the 5% significance level.

The results of Table Table B.4 indicate that false ATTs are significant for both types of support when the intervention dates are manipulated to one year before the actual dates, although only at the 10% significance level. However, these significant effects disappear when the intervention dates are set to 2 and 3 years before the actual support dates.

6.1.3. ***Placebo test***. In the placebo test, discussed in Subsection 4.5, we investigate whether the significant effect of the supports on exporters came from these interventions rather than other external factors. We ran Equation 4 on the data with fake interventions 1000 times and presented the results in Figure A.3.

Figure A.3 reports the 1,000 estimated δ^*_τ, grants on the top and matchmaking at the bottom. The mean of the estimated coefficients, as indicated in the vertical dashed line, is close to zero, while the estimated values from our event study model are 0.123 and 0.275 for grants and matchmaking, respectively. Furthermore, almost all estimates are not significant at the 5% level. These results indicate that the increase in the firm's exports came from the intervention rather than other external factors.

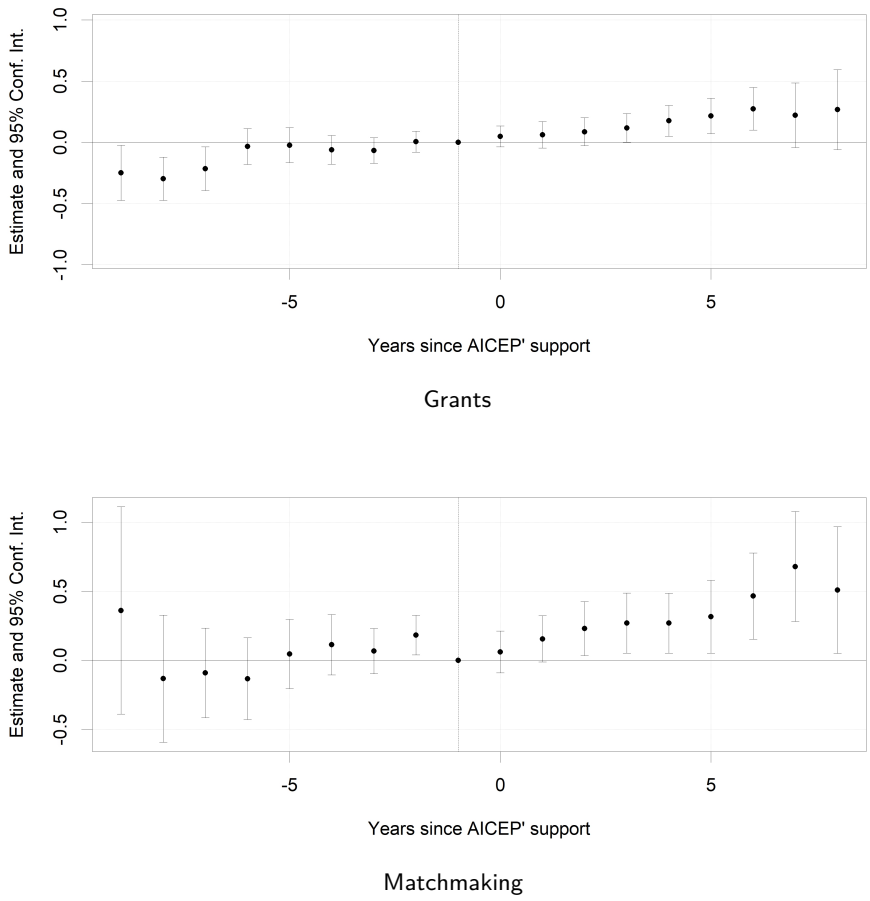


Figure 1: Parallel trend test: Grants to exports

Note: The figure reports the parallel trend test, i.e., the core coefficients of our event study model, from Equation 2: φ_τ before the support and δ_τ from the support afterward. The zero on the horizontal axis represents the time of the support. We set the period just before the support as the reference, that is, to be equal to zero. The vertical axis represents the financial aid effect's estimated coefficients and confidence intervals.

6.2. Hetegoneneous effect by firm' size and sector

In this subsection, we present the robustness test performed on the model used to estimate the heterogeneous effect of the supports on firms' exports by firm size and sector.

6.2.1. ***Parallel trends test***. Similarly as applied to the model used to estimate the global effect 6.1.1, parallel trends are tested in Figures A.4 and A.5 in the

context of the results of the heterogeneous effect, in the previous Section 6.2. We apply our event study model described in Section 4.1 to the firms that received the services.

In both figures, the estimated φ_τ appears to fluctuate around zero for the firms' sizes and sectors. In other words, the controls and treatment groups trended together before receiving the services, and only for grants to micro and small firms, two estimated coefficients statistically are different from zero at the beginning of the studied period.

The firm's exports increased immediately after the support for micro and small firms for both services; however, only for matchmaking did the exports increase consistently after AICEP's intervention. In the last two periods, they have started to become insignificant. Therefore, in both cases, the intervention effect looks minor for medium and large companies.

In the same way, the bottom plots of Figures A.4 and A.5 show that the firms of sectors 463 and 141 had a spike in their total exports just one year after receiving grants. For sector 139 that received matchmaking, the effect occurs immediately after treatment, that is, the coefficients $\hat{\delta}_\tau$ begin to increase rapidly and consistently after the intervention and remain consistently high afterward. Furthermore, the firms saw a consistent export increase after the Portuguese EPA support.

6.2.2. ***Falsification test***. Similarly to Sector 6.1.2 where we perform the falsification test for the global effect of the programs, we perform the test for the heterogeneous effect where we found a significative impact. Thus, we shift in the treatment period to 1, 2, and 3 years before the actual date, as we decribe in Section 4.4.

We report the results for grants in Table B.4 and for matchmaking in Table B.5. The results indicate that when we manipulate the real intervention dates with these fake dates, the supports do not significantly affect the results at the 5% significance level.

7. Conclusion

This paper is dedicated to exploring the impact of the Portuguese EPA's two primary services on the enhancement of Portuguese exports. These services, namely financial grants for internationalization and matchmaking in international markets, have been instrumental in elevating the export capabilities of Portuguese companies.

This empirical study is based on a comprehensive dataset from three different sources. These sources include the AICEP clients' dataset, which provides comprehensive information about its clients, timing, and the country's support for export. In addition, we incorporate the official trade transaction data set from the Instituto Nacional de Estatstica (INE), the government office of National Statistics,

and the official business register, Simplified Business Information (IES). These datasets were matched using the firms' official identifiers.

To evaluate the effect of the financial grants on the Portuguese firms' market entry or export expansion, we consider all companies that exported in the period as the control group. Similarly, we assess the effect of matchmaking on France, the leading country where Portuguese firms requested the service in the studied period, from 2012 to 2021.

Our event study model indicates that grants for internationalization led to an increase in total exports of about 12%. For micro % small firms, the effect of financial aid was even more significant, approximately 17%. In the sectors "Wholesale of household goods" and "Manufacture of wearing apparel", the effect was about 34% and 46.6%, respectively. Looking at the effect of matchmaking in France, the support increased exports to France by about 29%. Micro & small firms saw an increase in their exports by about 38%, and for firms in the "Manufacture of other textiles," the matchmaking of AICEP led to an increase of 137%.

We performed multiple tests on our event study model, more precisely, the assumption of parallel trends, falsification on the intervention date, and the placebo, where we randomly signed up firms to fake interventions. Furthermore, even though the tests indicate that the results of our event study model are robust, the assumption that the treatments given by the Portuguese EPA are not correlated to any variable left in our model's error term is still a concern. Companies that approach AICEP can have more information about the EPA's services or be more productive, more receptive to risks, and willing to venture into international markets. These behaviors could lead to bias in the estimated effect.

Our work focuses on the impact of the Portuguese EPA's leading services on the extensive trade margin, i.e., the value of exports in euros. Future works may investigate the long-term effect of these services on firms' export prices and quality, markups, marginal costs, labor level, and productivity.

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Appendix A: Figures

A.1. Description of treatment and control groups

This Appendix presents some description on the treatment and control groups for the two types of AICEP support in analysis.

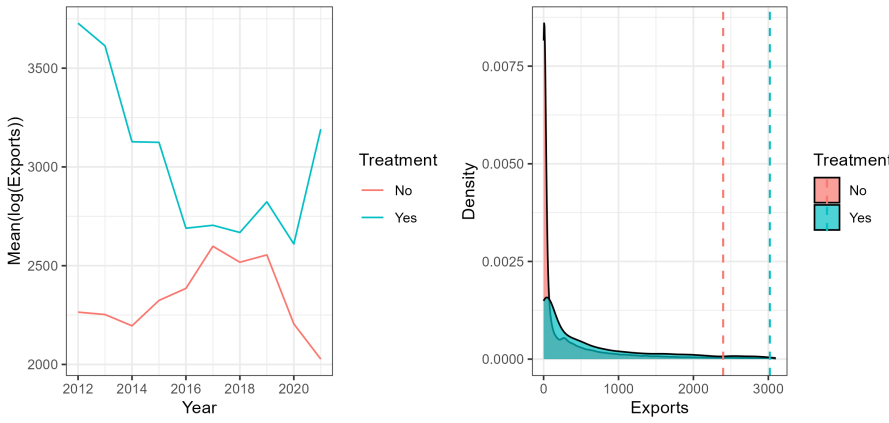


Figure A.1: Exports of treatment and control firms - grants

Note: Vertical dashed lines are the mean values and the exports are in values of 2012.

A.1.1. Grants for internationalization.

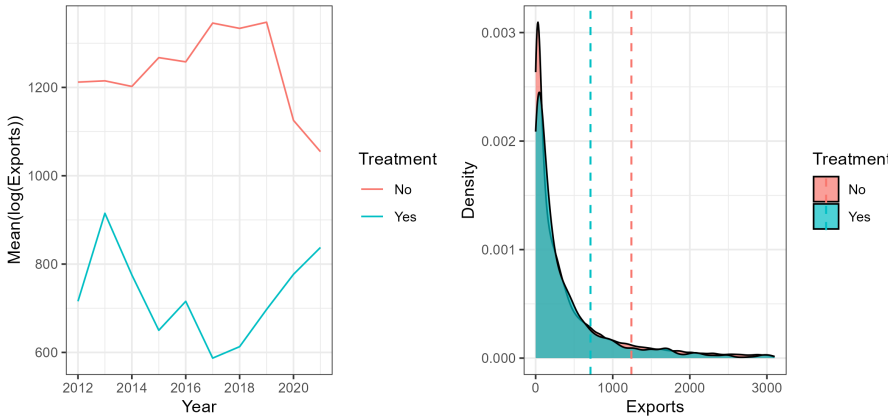


Figure A.2: Exports of treatment and control firms - matchmaking support

Note: Vertical dashed lines are the mean values and the exports are in values of 2012.

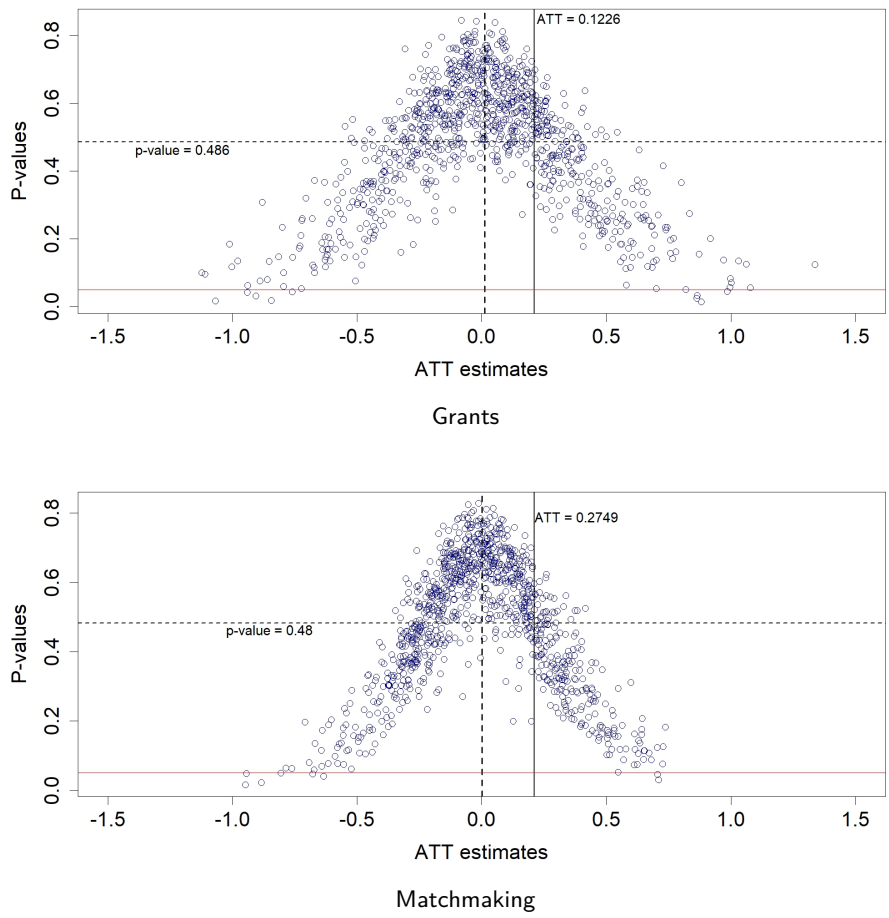


Figure A.3: Placebo test: Financial grants

Note: This figure reports the 1000 estimations of the core DiD coefficients from equation 4. The vertical dashed lines refer to the estimations from this simulation. The vertical black line is the estimation from our primary Equation 2, the dashed horizontal line is the average p-values from this simulation, and the red horizontal line refers to the 5% significance level.

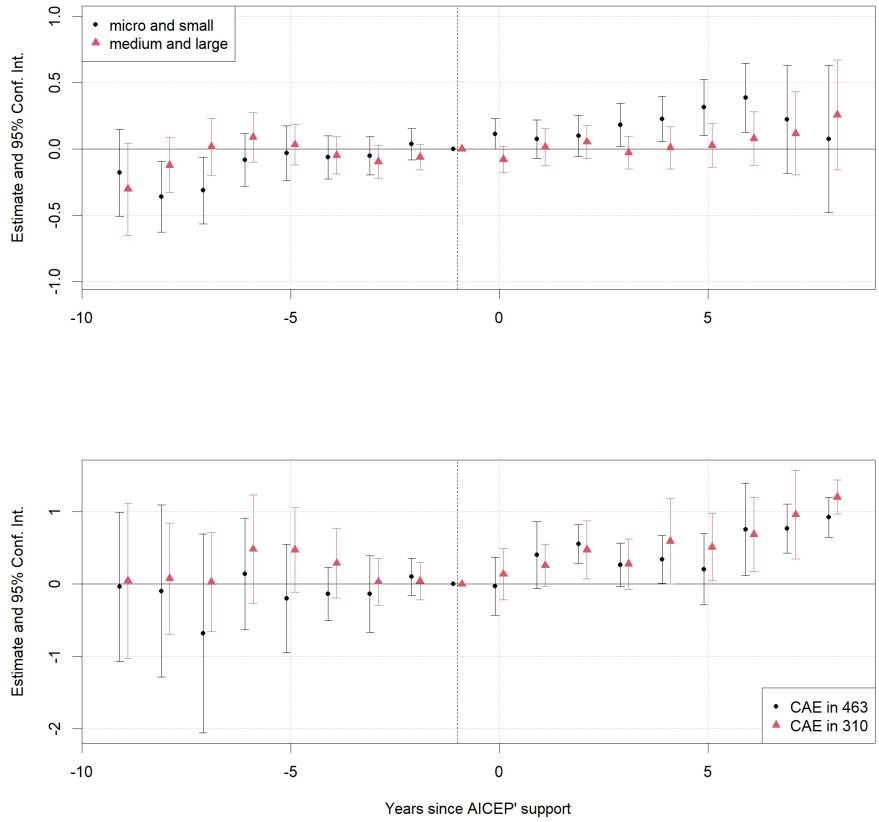


Figure A.4: Parallel trend test: Financial grants

Note: The figure reports the parallel trend test, the core coefficients of our event study model estimations, from Equation 2. φ_τ before the intervention and δ_τ from the aid afterward. In the top plot, the red triangle represents micro & small firms, and the black point represents medium & large firms. In the bottom plot, the red triangle represents the firms of Sector 310, while the black point represents Sector 410. The zero on the horizontal axis represents the time of the intervention. We set the period just before the intervention as the reference, i.e., to be equal to zero. The vertical axis represents the estimated coefficients and confidence intervals of the impact of the support.

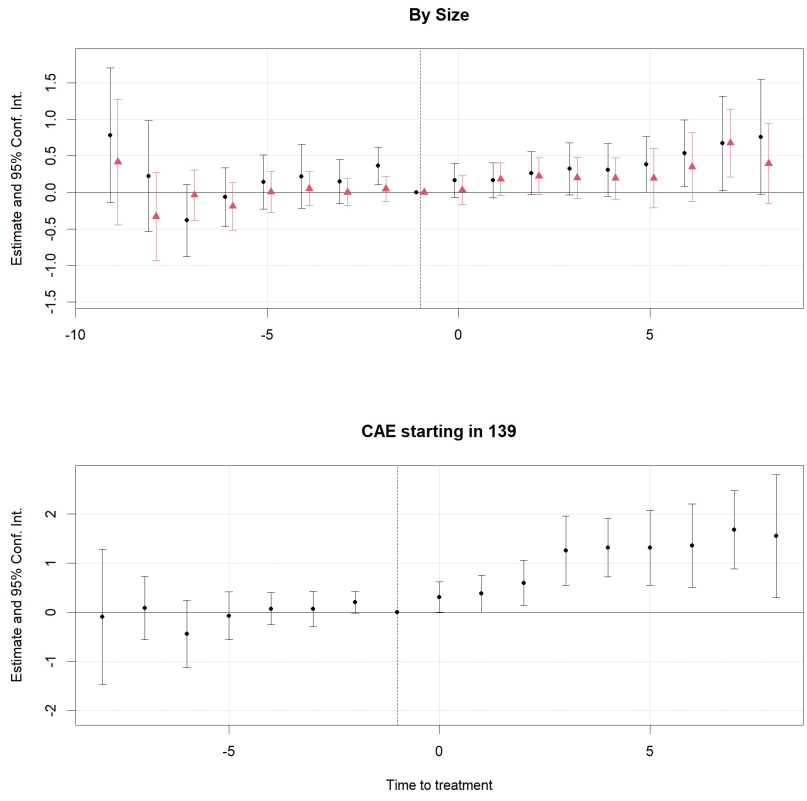


Figure A.5: Parallel trend test: Matchmaking

Note: The figure reports the parallel trend test, i.e., the core coefficients of the DiD estimation from equation 2 applied in each group, φ_τ before matchmaking support and δ_τ from the intervention afterward. The red triangle represents micro & small firms, and the black point is medium & large firms. The zero on the horizontal axis represents the time of the intervention. We set the period just before the intervention as the reference, i.e., to be equal to zero. The vertical axis represents the estimated coefficients and confidence intervals of the impact of the matchmaking support.

A.1.2. Matchmaking.

Appendix B: Tables

B.1. Descriptive statistics

	Grants			Matchmaking		
	Mean	Median	SD	Mean	Median	SD
No	16,315	106,442	361,363	45,399	24,036	165,017
Yes	194,939	125,779	66,541	36,058	24,204	64,537

Table B.1. Descriptive statistics: GVA/employee

Note: "No" and "Yes" refer to control and treatment firms, respectively.

B.2. Main sectors of the treatment group

	(1)	(2)	(3)	lexports (4)	(5)	(6)	(7)
	Grants				Matchmaking		
	Size		Sector		Size		Sector
	micro-small	mid.-large	Group 463	Group 141	micro-small	mid.-large	139
DiD	0.1667***	0.0097	0.3048**	0.3887**	0.3354**	0.209*	0.8616***
	(0.0562)	(0.0494)	(0.1376)	(0.1689)	(0.1497)	(0.1130)	(0.2164)
Sector	Yes	Yes	No	No	Yes	Yes	No
Size	No	No	Yes	Yes	No	No	Yes
Adjusted R^2	0.8431	0.9037	0.8986	0.8725	0.77889	0.84234	0.85358
Observations	135,693	30,683	6,979	4,055	21,572	16,361	1,316

Note: The table reports the results of Equation 2 applied in the two firm's size groups, micro-small and medium-large, and for the top five sectors where we found the AICEP's support effects significantly. The first four columns are related to grants service, and the last three are related to matchmaking support. Sectors 463 - "Wholesale of household goods" (3), 141 - "Manufacture of wearing apparel, except fur apparel" (4), and 139 - "Manufacture of other textiles" (7). The sector is at three digits RACE Rev. 2 level Carré (2008), and we always control for the ln of the GVA per employee. The standard errors are clustered at the firm level. ***, **, and *, indicate the 1%, 5%, and 10% significance levels, respectively. The estimates control for the firms' and years' fixed effects.

Table 3. Results by firms size and sectors

	lexports					
	(1)	(2)	(3)	(4)	(5)	(6)
		Grants			Matchmaking	
	1 year	2 years	3 years	1 year	2 years	3 years
fake DiD	0.153*	0.0318	0.0231	0.1421*	0.1083	0.0385
	(0.0814)	(0.074)	(0.0668)	(0.0837)	(0.0941)	(0.094)
Adjusted R^2	0.8934	0.8934	0.8934	0.81427	0.81425	0.81421
Observations	166,377	166,377	166,377	37,934	37,934	37,934

Table 4. Anticipatory effect

Note: The table reports the results of equation 3, where we anticipate the actual support date. Columns (1) to (3) report the financial grants and from (4) to (6) matchmaking. We always control for the ln of the GVA per employee, sector at three digits RACE Rev. 2 level and firms' size. The standard errors are clustered at the firm level. ***, **, and *, indicate the 1%, 5%, and 10% significance levels, respectively. The estimates control for the firms' and years' fixed effects.

Ranking	Group
1	141 - Manufacture of wearing apparel, except fur apparel
	141 Confeção de artigos de vestuário, exceto artigos de peles com pelo
2	464 - Wholesale of household goods
	464 - Comércio por grosso de bens de consumo, exceto alimentares, bebidas e tabaco
3	139 - Manufacture of other textiles
	139 - Fabricação de outros têxteis
4	463 - Wholesale of food, beverages and tobacco
	463 - Comércio por grosso de produtos alimentares, bebidas e tabaco
5	257 - Manufacture of cutlery, tools and general hardware
	257 - Fabricação de cutelaria, ferramentas e ferragens

Table B.2. Top 5 sectors in Matchmaking treatment group

Note: The table presents the top firm's sectors in the AICEP's matchmaking treatment. The firm's sectors are sourced in the INE dataset. We consider the 3-digit Statistical Classification of Economic Activities in the European Union (Carré 2008) as the sector.

Ranking	Group
1	464 - Wholesale of household goods
2	463 - Wholesale of food, beverages and tobacco
3	467 - Wholesale of metals and metal ores
	467 - Comércio por grosso de combustíveis, metais, materiais de construção, ferragens e outros produtos n.e.
4	469 - Non-specialized wholesale trade
	469 - Comércio por grosso não especializado
5	141 - Manufacture of wearing apparel, except fur apparel

Table B.3. Top 5 sectors in Incentives treatment group

Note: The table presents the top firm's sectors in the AICEP's finantial grants support. The firm's sectors are sourced in the INE dataset. We consider the 3-digit Statistical Classification of Economic Activities in the European Union (Carré 2008) as the sector.

	lexports								
	(1)	(2) micro and small	(3)	(4)	(5) sector 463	(6)	(7)	(8) sector 141	(9)
	1 year	2 years	3 years	1 year	2 years	3 years	1 year	2 years	3 years
fake DiD	0.1205*	0.0941	0.0914	0.3561*	0.1796*	0.1607	0.1052	0.1175	0.0208
	(0.0665)	(0.0717)	(0.0607)	(0.1935)	(0.0973)	(0.1384)	(0.1045)	(0.1263)	(0.0963)
Adjusted R^2	0.84388	0.84386	0.8438	0.8985	0.8986	0.8986	0.91222	0.91218	0.91219
Observations	135,693	135,693	135,693	6,978	6,978	6,978	6,008	6,008	6,008

Table B.4. Anticipatory effect: Financial grants

Note: The table reports the results of equation 3, where we anticipate the actual support date. Columns (1) to (3) report the financial grants and from (4) to (6) matchmaking. We always control for the ln of the GVA per employee, sector at three digits RACE Rev. 2 level and firms' size. The standard errors are clustered at the firm level. ***, **, and *, indicate the 1%, 5%, and 10% significance levels, respectively. The estimates control for the firms' and years' fixed effects.

	lexports					
	(1)	(2) micro and small	(3)	(4)	(5) sector 139	(6)
	1 year	2 years	3 years	1 year	2 years	3 years
fake DiD	0.2085*	0.1664	0.0036	0.0278	0.0378	0.0474
	(0.1124)	(0.180)	(0.1567)	(0.2387)	(0.1119)	(0.0837)
Adjusted R^2	0.77844	0.77851	0.77851	0.8238	0.8238	0.8238
Observations	24,071	24,071	24,071	766	766	766

Table B.5. Anticipatory effect: Matchmaking

Note: The table reports the results of equation 3, where we anticipate the actual support date. Columns (1) to (3) report the financial grants and from (4) to (6) matchmaking. We always control for the ln of the GVA per employee, sector at three digits RACE Rev. 2 level and firms' size. The standard errors are clustered at the firm level. ***, **, and *, indicate the 1%, 5%, and 10% significance levels, respectively. The estimates control for the firms' and years' fixed effects.