Helping Differentiated-Goods Producers Succeed in Exports Markets through Good Exporting Practices: Experimental evidence from Argentina[1]

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Abstract

We evaluate a novel export consulting program implemented as a Randomized Controlled Trial by Argentina´s National Export Promotion Agency. The program is intended to help producers of differentiated goods enter and succeed in exports markets. We designed the program relying on a codification effort that resulted in a set of 20 "good exporting practices" (GEP). The GEP program disseminated those practices among businesses –both existing and prospective exporters– in the food-and-beverages sector, providing 72 hours of one-on-one consulting support. We find no discernible results for the overall set of participating firms. However, when we focus on the subset of "good selection firms" –those selected without political and administrative constraints– the results exhibit large, consistent, and significant impacts of the program on the extensive margin of exports. The results shed light on a broad set of potential interventions to help SMEs export as well as on risks to avoid when conducting this type of intervention.

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1. Introduction

Export development, particularly export diversification away from commodities, has long been viewed as a key driver for economic development (Balassa, 1978; Hausmann and Rodrik, 2003; Hausmann and Klinger, 2006; Brenton et al., 2009). Several barriers prevent firms from entering international markets, with transport costs (Limao and Venables, 2001; Hummels, 2007), tariffs (Corden, 1966; Fajgelbaum et al., 2020), and non-tariff measures (Orefice, 2016) being the most prominent. However, a more significant challenge often stems from informational and capability constraints that hinder firms producing differentiated products from succeeding in foreign markets. Domestic producers of these types of products typically lack crucial information about foreign market conditions, such as customer preferences, regulations, and distribution channels. They also struggle to develop appropriate products and adopt commercial practices to address the idiosyncrasies and requirements of these markets (Easterly and Reshef, 2010; Artopoulos et al., 2013; Urmeneta, 2018). The widespread nature of these informational and knowledge gaps underscores the need for public intervention, including the collection, processing, and dissemination of information, as well as assisting firms in leveraging this information to improve their export capabilities (Volpe Martincus, 2010; Lederman et al., 2010; Crespi et al., 2014; Cruz et al., 2018).

To address some of these barriers, a large number of public and private institutions at both the national and subnational levels support businesses' exporting efforts and specifically organize activities to enhance firms' export capabilities (Rose, 2007; Gil et al., 2008; Volpe Martincus et al., 2011). Export promotion agencies (EPAs) are typically at the forefront of these supporting activities, investing significant resources in export promotion services (EPS) to help firms overcome barriers to export. However, disentangling which services are most effective remains an open question. This paper contributes to addressing this issue by conducting a randomized controlled trial (RCT) of the Good Exporting Practices (GEP) program, an export management initiative run by Argentina´s EPA.

Artopoulos et al. (2013) find that differentiated-goods producers in developing countries must modify a wide range of business practices, from adapting products to meet foreign needs to establishing relationships with foreign distributors, when attempting to export to developed countries. However, the adoption of these practices is hindered by a lack of foreign market knowledge. Consistent with this view, Atkin et al. (2017) show that rug producers in Egypt

improve quality and productivity when their knowledge barriers are brought down by the (random) assignment of buying orders from foreign customers, who provide detailed information about a variety of product quality requirements and how to comply with them. Similarly, Mion and Opromolla (2014) and Mion et al. (2024) show that Portuguese firms enhance their export performance by hiring managers with prior experience at exporting firms, who bring the necessary foreign market knowledge and practices. Additionally, Cadot et al. (2013) find that African exporters survive longer when they focus on a product-destination combination served by more exporters, suggesting the existence of information spillovers. Based on these findings, our GEP program seeks to improve firms´ export performance by standardizing a set of good exporting practices and encouraging their adoption through management consulting.

The GEP program was designed by the authors of this paper and implemented in Argentina by the country's national EPA –the Agency for Investment and International Trade (AAICI) –, between 2017 and 2019. A total of 213 food and beverage companies participated in the program, while a subset of 107 firms was randomly selected to receive the training support. The program provided firms in the treatment group with 72 hours of consulting aimed at disseminating good exporting practices in management areas such as strategy, production, and communication, at no cost. Following Bloom et al. (2013), who standardized good management practices, we identified and codified a set of good exporting practices, allowing us to assess the degree of their adoption by participating firms both before and after the consulting intervention.

The intervention yielded mixed results. On the one hand, when we examine the impact of the program on the full sample of participating firms, we do not observe any systematic or statistically significant effects on the export outcomes considered. On the other hand, the program was implemented under budgetary execution constraints and political commitments that hindered proper participant screening. As a result, many firms included in the program were either not the targeted type –namely differentiated-goods producers– or lacked sufficient commitment to engaging in a sustained exporting effort. However, when we focus on a subset of "good selection" firms, i.e. those that produce differentiated goods and are presumed to be committed to the program (as proxied by the time of their enrollment), we find large, consistent, and statistically significant impacts, albeit only on the extensive margin of exports.

We consider three main firm-level outcome variables: export participation, the logarithm of export value, and the inverse hyperbolic sine (IHS) transformation of export value. The first variable captures impacts on the extensive margin of exports, while the second captures impacts on the intensive margin. The IHS transformation encompasses both margins, as it does not require excluding zero-valued observations. As secondary outcomes, we examine the number of destinations (extensive margin) and the average quality (intensive margin), with the latter measured as the average per capita income of destination countries. We employ both ANCOVA and difference-in-differences (DiD) specifications. When we focus on good selection firms, the results consistently show positive impacts on the outcome variables related to the extensive margin (including the IHS transformation), with the size and significance of the impacts increasing over the six post-treatment years considered. Notably, the intervention is found to increase the probability of exporting by 33 percentage points six years after the treatment.

Regarding the effect of the program on GEP adoption, we follow a similar strategy to Bloom et al. (2013) by exploiting the codification effort made as part of this project. Specifically, we use a diagnostic instrument to obtain both a baseline GEP adoption score prior to the treatment and a follow-up score upon its completion. Unfortunately, while there is some evidence of GEP adoption, the scoring noise and the fact that the follow-up survey was conducted before enough time had passed for practices to be fully adopted limit our ability to draw stronger conclusions. Nevertheless, the results are consistent with GEP adoption being the primary driver of the observed export improvements on the extensive margin.

Our paper is the first to evaluate through an RCT a consulting program fully oriented to disseminating good exporting practices. By using an RCT, we can identify the causal effect of the intervention and avoid potential endogeneity problems arising from the self-selection of firms a priori more likely to improve their export outcomes. In addition, we standardize and codify a system of good exporting practices, which are different from standard good management practices, making these practices quantifiable and facilitating their dissemination among SMEs. Our effort complements broader initiatives to standardize and codify good management practices, such as the World Management Survey developed by Bloom and Van Reenen (2007).

Overall, we hope that our findings about the program´s positive impact on properly selected beneficiary firms, as well as the absence of impacts on firms included due to improper

screening, will provide valuable insights to EPAs around the world regarding the design and implementation of more effective export-oriented capability building programs.

Related literature and the "route to exporting"

An early strand of literature examines EPAs´ general effectiveness at promoting exports. This literature finds stronger impacts on smaller firms, those with no export experience, firms exporting to new markets, and firms aiming to export new or differentiated products. In other words, impacts are more pronounced for firms facing higher informational barriers and along extensive margins, particularly for firms in developing countries attempting to enter markets in developed ones.[2]

A second strand of literature focuses on EPS specifically designed to help firms overcome informational export barriers (e.g. organizing trade fairs and missions or providing market intelligence), generally finding positive effects in the provision of these services.[3] Nonetheless, in response to the growing belief that firms should strengthen their export capabilities before engaging with potential clients abroad (Volpe Martincus, 2010; Iacovone and Javorcik, 2012), EPAs have increasingly directed their efforts and resources towards "*capability building services*", such as general export training and export consulting (Volpe Martincus, 2010; Lederman et al., 2010; Cruz et al., 2018). Given the rising importance of these types of EPS, it is crucial to identify which interventions are most effective and under what conditions they work best.

It is useful to organize the different types of capability building services along a "route to exporting" that firms go through in their way to establishing a prosperous export business. These services can target the first stage of this route by providing general training on the basic aspects of the export process –such as understanding bureaucratic procedures, exploring logistics options, or pricing export items– through conferences, seminars, or courses held either

[2] See Volpe Martincus and Carballo (2010a) for Chile, Volpe Martincus and Carballo (2008) and Van Biesebroeck et al. (2016) for Peru, Volpe Martincus and Carballo (2010b) for Uruguay, Volpe Martincus and Carballo (2010c) for Colombia, Volpe Martincus et al. (2012) for Argentina, Volpe Martincus and Carballo (2012) for Costa Rica, Cruz (2014) for Brazil, Van Biesebroeck et al. (2015) for Canada, Van Biesebroeck et al. (2016) and Broocks and Van Biesebroeck (2017) for Belgium, and Munch and Schaur (2018) for Denmark.

[3] Although most studies suggest that these services contribute to better firm-level export outcomes (Seringhaus and Rosson, 1991; Wilkinson and Brouthers, 2000a; Spence, 2003; Volpe Martincus and Carballo, 2010c; Munch and Schaur, 2018; Comi and Resmini, 2020), other studies find instead mixed or no evidence of a significant impact on export performance (Wilkinson and Brouthers, 2000a; Álvarez, 2004; Head and Reis, 2010; Cadot et al., 2015).

in classrooms or virtual settings. Several studies have evaluated the effectiveness of this type of basic training. For example, Kim et al. (2018) find no significant impact of export promotion seminars on apparel and textile SMEs in Vietnam while Breinlich et al. (2017) report mixed results –positive on the intensive margin and negative on the extensive margin– in an intervention in the UK where firms are sent an informative brochure about the benefits and potential barriers to exporting. Carvalho et al. (2024) find positive impacts on firms' intention to export in an experimental training program in Brazil where one group of firms received training on export-specific red tape, and another group additionally received training on managing demand uncertainty and financial frictions. However, only in the second case did the intervention have a statistically significant impact on export performance.

Overall, the evidence on this type of program suggests weak impacts on export performance. This may be because acquiring basic export training is necessary but not sufficient for success in export markets. Thus, programs providing basic training should not necessarily be expected to generate new exporters but instead be assessed in terms of intermediate outcomes, such us increasing firms´ willingness to engage in a committed export effort. A key advantage of this type of program is that it is relatively inexpensive, allowing for a broader reach.

A more intensive but costlier approach to building export capabilities targets firms at the second stage in the route to exporting –preparing to export– by providing them with technical assistance in the form of consulting services. This type of intervention typically involves one-on-one interactions with one or more consultants, often at the firm´s premises or in group settings, to help firms acquire export capabilities. Such support goes beyond procedural aspects of the export business by transferring knowledge on how to meet export market requirements related to product design, packaging, or quality, among other firm demands.

For instance, Cadot et al. (2015) find that a Tunisian government matching-grant program (FAMEX), which co-funded technical assistance on subjects such as product development or shaping an export-oriented business, had insignificant or even negative impacts on exports. In contrast, Figal-Garone et al. (2017) show that Diverpymex, a fully funded Argentine consulting program aimed at helping firms improve export business plans, had a significant impact on both firms' exports and the likelihood of exporting. Similarly, Alvarez (2004) finds that the assistance of specialized consultants to exporter committees organized by Chile's EPA (PROCHILE) positively impacted export participation. Meanwhile, Comi and Resmini (2020) show that a Lombardy technical assistance program aimed at supporting firms' export

processes increased export propensity but not export intensity. Finally, Volpe Martincus and Carballo (2010c) find that training and technical assistance programs offered by Colombia´s EPA (PROEXPORT) had positive and significant effects on firms' exports and number of destinations, with larger impacts when these services were combined with other EPS such as helping firms build a trade agenda and prepare for trade fairs.

A common finding of this second-stage type of program is that its impacts are positive on the extensive margin of exports but not on the intensive margin. This is not surprising, as these programs typically focus on building capabilities to overcome general informational and knowledge barriers to accessing export markets. The results of our intervention align with these findings. In an RCT setting, they confirm the potential effectiveness of this type of training program, albeit only for a subset of appropriate motivated beneficiaries exporting suitable products. Ensuring a properly implemented screening process is crucial, as this approach to providing capability building services is significantly more expensive.

While we emphasize that exporting differentiated goods from developing countries requires adopting a set of export-related practices distinct from standard management practices (Artopoulos et al., 2013), a parallel notion is that the latter practices still improve export performance by increasing productivity, as maintained by standard firm-heterogeneity trade models (e.g. Melitz, 2003). Recent studies support this notion. Bloom et al. (2021) show that an RCT intervention where Indian textile firms received intensive general management consulting led to improved export performance years later. Giorcelli (2019), adopting a historical perspective, shows that a natural experiment –the U.S. Technical Assistance and Productivity Program (1952–1958)– had long-term effects on firm performance, including a 29 percentage-point increase in the likelihood of exporting and a significant impact on the intensive margin of exports. More recently, Iacovone et al. (2023) find no significant effects in an RCT consulting intervention in Colombia focused on improving management practices and productivity across five practice areas: quality, productivity, labor productivity, commercial strategy, and energy efficiency.

Overall, the evidence on the indirect effect –via productivity– of management practices on exports is mixed but can be interpreted naturally. This approach may be effective in developed countries, whereas in developing countries, where firms face higher informational barriers, it may only be effective if the intervention is sufficiently intensive.

The last approach to building export capabilities targets the third stage in the route to exporting, which involves taking the necessary steps to achieve concrete sales in specific foreign markets. For instance, Buus et al. (2025) exploit a quasi-natural experiment in Denmark, where caseworkers located at embassies or consulates in destination countries approached firms to offer their services in those markets. They find that this intervention had a positive and significant effect on both exports to active destinations and the likelihood of entering new markets. Similarly, Barteska and Lee (2024) leverage the rotation of bureaucrats managing country offices at Korean´s EPA (KOTRA) to show their crucial role in helping firms increase exports to those destination. Finally, Cusolito et al. (2023) find significant effects on acquiring new customers and expanding into new markets of a capability-building program implemented as an RCT in six Western Balkan countries targeting innovative firms with approved export business plans.

This type of program targets firms that have already acquired general export capabilities and now seek to solve concrete challenges in specific export markets, such as finding new distributors or direct customers. Thus, it is unsurprising that they find stronger impacts on the intensive margin than programs designed to provide more general training or consulting. Similarly, Ali et al. (2024) provide experimental evidence for a program in Tunisia (Tasdir+), which is not a capability building program but instead offers matching grants to finance market-access fixed costs, such as marketing expenditures, participation in trade fairs, or establishing offices abroad. In line with findings for this type of program, they observe a significant impact on the intensive margin of exports but not on the export probability or variety of exported products and destinations.

One general lesson from the empirical evidence on interventions aimed at building export capabilities is that each program should clearly define its target firm profile, considering the relevant stage in the route to exporting, and rigorously screen participants to ensure alignment with the targeted profile. For instance, it is ineffective to invest resources in costly and intensive consulting interventions for firms lacking basic export-related knowledge or those that have not demonstrated sufficient commitment to developing an export business. Similarly, there is no point in offering expensive support in destination markets to firms that have not yet adopted good exporting practices. While these conclusions might seem somehow trivial, few EPAs have developed systematic diagnostic systems for the proper assignment of firms to different

export capability services along their route to exporting. The accumulated evidence suggests that developing such systems should be a priority.

Lastly, this paper is also part of a more extensive literature assessing the impact of consulting programs on business practices and firm outcomes. In general, this literature finds positive impacts on productivity and revenues. For instance, Bloom et al. (2013) show that providing consulting on modern management practices to Indian textile firms improves both their management practices and productivity. Similarly, Bruhn et al. (2018) find that one year of management consulting services provided to Mexican SMEs led to improvements in management practices and significant increases in total factor productivity, return on assets, employment, and wages. Higuchi et al. (2019) report that a Kaizen training program for Tanzanian small garment producers enhanced their management practices and overall business performance. Meanwhile, Iacovone et al. (2022) evaluate the impact of both individual- and group-based consulting interventions on Colombian auto-parts manufacturers. They find that both approaches improve management practices, although only group-based consulting resulted in increased employment. Notably, and in contrast to our GEP program, these management consulting interventions focus on a standardized and globally recognized set of management practices.

2. Good Exporting Practices

2.1 Exporting differentiated products from developing countries

Based on four case studies on the export emergence of differentiated-goods sectors in Argentina, Artopoulos et al. (2013) argue that a distinguishing feature of consistent exporters from developing countries (especially when exporting to developed countries) is their adoption of a distinct set of business practices, which differ significantly from those common in their domestic market. These practices include adapting products to meet foreign demand, enhancing production processes to improve quality, and prioritizing the establishment of long-term relationships with foreign distributors. Furthermore, Artopoulos et al. (2013) highlight that these exporters share a mindset that underscores the importance of adopting these practices and a discourse that implicitly assumes their mutual complementarity.

Rauch (1999) first highlighted the informational barriers that hinder international trade in differentiated goods. Building on this perspective, Artopoulos et al. (2013) characterize the informational and capability constraints that prevent producers in developing countries from

entering geographically and culturally distant markets in developed countries. These markets demand significant product adaptation to cater to their distinct tastes and needs, alongside compliance with a wide range of rigorous commercial standards in areas such as logistics, packaging, and invoicing. While the knowledge required to meet these standards is largely tacit and challenging to acquire, some firms successfully establish a consistent presence in those markets by adopting a new set of business practices. The international trade literature has long focused on the need to upgrade quality to access developed economies (Maskus et al., 2005; Hallak, 2006, 2010; Sutton, 2007; Verhoogen, 2008; Hallak and Sivadasan, 2013; Atkin et al., 2017). However, Artopoulos et al. (2013) emphasize the need to upgrade a substantially broader set of business practices.

Aligned with Bloom and Van Reenen's (2007) concept of management practices, we also conceive good exporting practices as a characterization of the organizational structure and behavior of the firm that represents a specific way of conducting business transcending the individuals implementing it –such as top managers or CEOs. A critical distinction between these two sets of practices, however, lies in their degree of codification. While good management practices –such as lean manufacturing principles, quality control procedures, and just-in-time inventory management– are widely recognized and extensively taught in business school in the United States, Europe, and Japan, many of the good exporting practices in our program had not been codified prior to this effort and are not yet internationally recognized or globally widespread. Consequently, the implementation of a dissemination program like GEP required codifying these practices and training consultants capable of effectively communicating them to participating firms.

2.2 The good exporting practices

In 2015, as part of a joint effort between the Argentine think tank CIPPEC and the World Bank, and with the collaboration of an external advisor experienced in export management consulting, we defined and codified a set of 20 good exporting practices (detailed in Appendix I). This work was based on the findings of Artopoulos et al. (2013), previous academic research, the expertise of the external advisor, and a thorough review of practices promoted by various export promotion agencies through programs such as PEIEX (Brazil), Export Coaching (Chile), and PIPE (Spain).

The set of good exporting practices included in the GEP program consists of 20 practices grouped into 7 areas: a) Strategy: defining the role of exports as a growth channel for the firm and planning their execution; b) Market Identification and Segmentation: analyzing and segmenting export markets, and positioning products in targeted markets; c) Product Design and Adaptation: analyzing and implementing product design and adaptations; d) Production: ensuring compliance with quality assurance standards and meeting scheduled delivery times; e) Communication: conveying corporate values, brand identity, and product attributes, including brand management, packaging, and dissemination activities with distribution channels; f) Distribution: managing logistics and selecting and maintaining distribution channels; and g) Administration: adapting the administrative structure and systems to meet foreign requirements, as well as defining pricing and financing policies for distribution channels.

3. The Intervention

3.1 General features

The Good Exporting Practices (GEP) program was an export-management consulting initiative implemented by the Argentine Agency for Investment and International Trade (AAICI, or "the Agency") between March 2017 and December 2019, with support and supervision from the Secretary of Commerce (Ministry of Production) and the World Bank. The program was innovative for the Agency, serving both as its first comprehensive capability-building initiative and as the first program it implemented using a rigorous evaluation method. The GEP program was nationwide and provided free of charge to participating firms.

A team from the Secretary of Commerce, alongside a specialist from the World Bank, supported and supervised the program throughout its implementation. This "supervisory team" included some co-authors of this paper who were serving at the Secretary of Commerce at the time. The team communicated the program’s main guidelines to the "implementation team" at AAICI and monitored the implementation process, ensuring compliance with the experimental design. Their key tasks included supervising consultants, accompanying them during diagnostic interviews and consulting meetings, and reviewing deliverables such as meeting minutes, reports, and scores. Most importantly, the supervisory team trained the program consultants in the GEP framework.

The implementation team at AAICI managed administrative and operational aspects of the program, including selecting and contracting consultants, validating participating firms, and maintaining institutional relationships with them. Other public agencies and the Center for Development Economic Studies at Universidad de San Martín collaborated on various tasks during the program.[4]

A critical decision was to focus on the food and beverages sector, facilitating the establishment of common evaluation criteria and enabling the recruitment of consultants with shared expertise. This sector was strategically significant for the Argentine Government and was not targeted by other export promotion programs. The sector comprised approximately 14,000 producers of differentiated goods, most of which were focused on the domestic market –only 4% had exported consistently between 2011 and 2015, while 93% had never exported (Argentine National Ministry of Production, 2017). The program considered only firms with 3 to 250 employees eligible for participation.

Enrollment in the Program. Enrollment in the Program. A notable feature of the enrollment process was AAICI's urgency to achieve the required number of participating firms within a short timeframe. To comply with budgetary execution constraints and political commitments, the enrollment process had to be completed in just 45 days. The Argentine Government launched various dissemination activities to raise awareness and encourage firms to enroll. AAICI promoted the program during other activities involving the food and beverages sector and organized specific dissemination events in collaboration with sectoral business chambers and provincial EPAs. The Agency also released newsletters in specialized media, gave radio interviews, made telephone calls to firms, and advertised through social media. The program was also officially launched at an event attended by authorities from all government entities involved and potential beneficiaries. At these events, firms were informed that the program would provide management consulting services to improve export performance at no cost, but participation would require significant commitment of time and effort from management.

The initial call for enrollment in March 2017 failed to attract the required number of firms within the allotted timeframe. After three weeks, only 77 firms had signed up for the program. In response, the Agency intensified its dissemination efforts. First, it pushed its personnel to

[4] The agencies were the National Institute of Industrial Technology (INTI), the Secretary for Productive Transformation at the National Ministry of Production, and the National Direction of Food and Beverages at the National Ministry of Agriculture, Livestock and Fishery (MAGyP).

recruit more firms. Second, it urged provincial EPAs to identify additional candidates from their networks. Third, it enlisted the Ministry of Production's call center to help disseminate the program and encourage participation. The potential consequences of these measures are discussed in greater detail in Section 6. Enrollment closed on April 17, with 279 firms signed up.

Of the 279 enrolled firms, 213 (76%) firms were deemed eligible by AAICI and participated in the random assignment process.[5] A stratified randomization was conducted in April 2017, after the enrollment period ended and before the baseline survey began. This process resulted in 107 firms being assigned to the treatment group and 106 firms to the control group.[6]

3.2 Implementation phases

The program was structured into three phases –diagnostic, consulting, and follow-up– which were implemented between June 2017 and December 2019.

Diagnostic Phase. Between June 2017 and December 2017, consultants visited the production facilities of both treatment and control firms to administer a 9-hour diagnostic survey to executive directors or area managers. The survey assessed the adoption of the program's 20 good exporting practices. Following these meetings, consultants assigned scores to each of the 20 practices, ranging from 0 (minimum) to 5 (maximum). Additionally, consultants prepared a diagnostic report for each firm, outlining the degree of adoption of each practice, identifying areas for improvement, and listing prioritized practices to focus on. However, the practice scores were not included in the diagnostic reports and were not shared with the firms.

The diagnostic phase involved 67 field consultants, all of whom were required to have at least five years of experience as generalists or specialists in areas relevant to the program's content, such as strategy or production. These consultants were either freelancers or employees of AAICI or INTI. All consultants received approximately 16 hours of training in the GEP framework and were provided with operational instructions by the program's supervisory team. In total, 125 professionals were trained.

[5] The main two reasons for non-compliance were being outside the eligible employment range and not producing food or beverages.

[6] To guarantee the transparency of the randomization, the draw was made before a public notary. All firms were invited to witness the event. See Appendix II for a detailed description of the stratification procedure.

Consulting Phase. Between April 2018 and December 2018, firms assigned to the treatment group received 72 hours of individualized consulting over a six-month period. The 72-hour duration represented the maximum time that could be afforded within the program's budget. Each consulting intervention cost approximately $3,000 (USD) per firm.[7]

The consulting phase was organized into four modules: "Strategy" (abusing terminology), "Product Design," "Production," and "Communication." While the last three modules were more specific, all modules incorporated a holistic view of the entire GEP framework. Specialized field consultants were assigned to each module, and the modules were then combined into eight "assistance packages," each comprising 72 consulting hours. Based on the areas for improvement identified in the diagnostic report, the diagnostic consultant, in collaboration with members of the supervisory and implementation teams, selected the assistance package deemed most suitable for the firm. This selection was then presented to the firm for validation, with the option to request an alternative package.[8]

The consulting process focused on improving export practices in the context of designing and implementing a work plan aimed at achieving a specific export objective. Typically, the process began with a two-hour meeting to discuss the work plan, establish the objectives for the technical assistance, and identify the firm's managers who would participate. Subsequently, the consultant and the firm met every two weeks to assess progress and adjust the work plan as needed (generally 12 follow-up meetings, each lasting about two hours). The remaining 46 hours were dedicated to implementing the work plan. For instance, firms that received the 72-hour "Strategy" package developed an export business plan with the consultant, who guided them in crafting an export strategy, evaluating foreign markets, and selecting target markets. Any further efforts to penetrate these markets were undertaken after the completion of the consulting period.

Seventy-four field consultants were hired for this phase, many of whom had also participated in the diagnostic phase. These consultants were either freelance specialists or employed by

[7] The intensity and cost of this intervention contrasts with those of similar RCT interventions, such as Iacovone et al. (2022), where the cost per individual consulting (190 hours) was $30,000, and Bloom et al. (2013), where the cost of the consulting (508 hours) was $250,000.

[8] The assistance packages were: i) Strategy: 72 hours (32 firms); ii) Production: 72 hours (5 firms); iii) Communication: 72 hours (2 firms); iv) Strategy: 48 hours, and Communication: 24 hours (25 firms); v) Strategy: 24 hours, and Product Design: 48 hours (5 firms); vi) Strategy: 24 hours, and Production: 48 hours (9 firms); vii) Strategy: 24 hours, and Communication: 48 hours (4 firms); viii) Production: 24 hours, and Product Design: 48 hours (1 firm).

AAICI or MAGyP. Additionally, six lead consultants –senior professionals– were brought on to supervise the modules and advise field consultants. Lead consultants also monitored the consulting process, ensured the quality of reports, and managed complex situations requiring their expertise.

Follow-up Phase. During the follow-up phase (September 2019 to December 2019), all participating firms –including those in the control group– were visited by a consultant to complete a follow-up survey assessing their degree of GEP adoption. The same survey instrument used in the diagnostic phase was applied during this phase, and the survey was conducted during a 3-to-4-hour meeting. However, firms did not receive diagnostic reports. Seventeen consultants were hired to conduct the follow-up surveys.

4. Experimental design

4.1 Firm Characteristics

Table 1 summarizes the main characteristics of the firms participating in the program. The sample included a wide range of firm sizes, encompassing small, medium, and large firms. Approximately 60% of the firms had already exported in the baseline year (2017). The median firm in the sample exported to one destination, scored 51 points on GEP practices, employed 23 workers, and paid an average monthly salary of 17,221 pesos in 2017 (equivalent to 1,027 US dollars). Among exporting firms, the median firm recorded a log export value of 13.7 (approximately 876,000 US dollars) and exported to markets with a weighted average GDP ("export quality") of 16,976 US dollars.

In terms of sample heterogeneity, firm size varied significantly: firms at the 10th percentile employed 5 workers, while those at the 90th percentile employed 200. GEP practice scores also displayed wide variation, with firms at the 10th percentile scoring 19 points, compared to 75 points for firms at the 90th percentile. Salary differences were similarly pronounced, as firms at the 10th percentile paid 7,973 pesos (475 US dollars), whereas those at the 90th percentile paid 30,483 pesos (1,818 US dollars). Among exporters, firms at the 10th percentile reported a log export value of 10.4 (31,992 US dollars), while firms at the 90th percentile exported 305 times more, with a log value of 16.1 (9,762,016 US dollars). Regarding export quality, firms at the 10th percentile exported to markets with a weighted average GDP of 6,572 US dollars, whereas firms at the 90th percentile exported to destinations with a weighted average GDP of

50,803 US dollars. Finally, due to the screening challenges discussed in Section 6, 27.7% of the firms in the sample were producers of non-differentiated products.

4.2 Data sources

For export outcomes, we use a database of Argentina's customs administrative records, which provides firm-level information on export values (free-on-board, or FOB, values in U.S. dollars) by destination country and HS product code. The data spans the period from 2012 to 2023 with annual frequency.

To assess export performance, we focus on three main indicators. The first is a summary measure: the inverse hyperbolic sine (IHS) transformation of firms' export values. A key advantage of the IHS transformation is that it retains the large proportion of zero-valued observations that would otherwise be lost using a standard logarithmic transformation. However, a known limitation of the IHS is that it blends the extensive and intensive margins of export performance with implicit weights assigned to each margin depending on the arbitrary scaling of the transformed variable (Mullahy and Norton, 2024; Chen and Roth, 2024). In this analysis, we apply the transformation to export values expressed in their original unit, U.S. dollars.

Given the limitations of the IHS indicator, we primarily focus on two variables that separately capture the extensive and intensive margins of export performance. First, the "exporter" variable is a binary indicator that equals 1 if a firm recorded positive exports in a given year and 0 otherwise, capturing the impact on the extensive margin. Second, "ln export value" represents the natural logarithm of a firm's total export value, calculated as the sum of all FOB exports (in U.S. dollars) in a given year. This variable reflects the impact on the intensive margin and is only applicable to firms that were exporting both at the baseline and during the relevant post-treatment year.

We also consider two secondary indicators. The first is the "number of destinations," which counts the total number of countries a firm exported to in a given year. The second is "export quality," defined as the weighted average of the per-capita GDP of a firm's export destinations, with weights based on the share of FOB export value to each destination.[9] This indicator can

[9] Per-capita GDP was measured in 2017 using data from the IMF Outlook, World Bank Development Indicators, UN Statistics Division, and French National Institute of Statistics and Economic Studies (for dependent territories).

only be calculated for firms that exported both in the baseline and in the relevant year (between 91 and 116 firms) to avoid compositional changes within the intensive margin.

Additionally, we utilize administrative data from Argentina's social security agency (ANSES), which provides firm-level information on the declared number of employees and average wages. Unlike the export data, we only have access to employment and wage data up to August 2019. Therefore, to calculate annual averages for employees and wages, we include data from the last four months of the previous calendar year. For example, the annual average number of employees in 2017 –the baseline year– was calculated using employment data from September 2016 to August 2017.

As described in Section 3.2, a survey instrument was developed to systematically measure the degree of adoption of the 20 good exporting practices. Each practice was scored using a methodology that assigns an integer value between 0 (minimum) and 5 (maximum), resulting in an overall score ranging from 0 to 100.

Table 1 presents balancing tests for all pre-treatment variables. All variables are balanced between the treatment and control groups, except for the total GEP score, where baseline scores are significantly higher for firms in the control group compared to those in the treatment group. The implications of this imbalance are discussed in the following section.

4.3 Take up & attrition

Of the 213 participating firms, 183 completed the baseline survey, resulting in a take-up rate of 85.9%. The take-up rate for the consulting phase was 77.6%, with 83 out of the 107 firms assigned to the treatment group completing the 72-hour consulting intervention. None of the firms in the control group received the treatment. Finally, the take-up rate for the follow-up survey was 71.8%, with 153 out of the 213 randomized firms completing it. Only 148 firms (69.5%) completed both the baseline and follow-up surveys.

To assess whether firm attrition was random, we conducted additional balancing tests (see Appendix Table A.1). Among the sample of non-attritors, there are no statistically significant differences in pre-treatment characteristics between firms assigned to the treatment group and those assigned to the control group (Panel A). Additionally, there are no significant differences in the proportion of attritors between treated and untreated firms (Panel B). Finally, pre-

treatment outcomes for attritors and non-attritors do not differ significantly (Panel C). These findings are consistent with attrition being random.

5. Results for the full sample

As an initial descriptive step, Figure 1 compares, by year, the export participation of the 107 firms assigned to the treatment group with that of the 106 firms in the control group. The shares depicted in the figure represent the sample counterpart of the export probability for each group. The results already cast doubt on the program´s impact, as changes in export participation following the intervention do not differ much between the two groups.

Given the random assignment, we can identify the program´s causal impact using an ANCOVA specification.[10] For each post-treatment year $t = 0\ (2018), \ldots, 5\ (2023)$, we separately run the following regression on the cross-section of participating firms:

$$Y_{it} = \beta_0 + \beta_1 T_i + \beta_2 X_{i,pre} + \beta_2 Y_{i,pre} + \epsilon_{it} \qquad (1)$$

where Y_{it} is the outcome of interest for firm i in year t, T_i is a dummy variable indicating whether firm i was randomly assigned to the treatment group, X_{it} is a vector of pre-treatment controls that includes (the logarithm of) the number of employees and the average salary in 2017, $Y_{\mathrm{i,pre}}$ is the pre-treatment outcome level in 2017, and ϵ_{it} is the firm-level error term.[11]

Alternatively, we use a difference-in-difference (DiD) specification. In this case, for each post-treatment year $t = 0\ (2018), \ldots, 5\ (2023)$, we combine the cross-section of firms for that year with data from the baseline year 2017 to estimate:

$$Y_{im} = \alpha_i + \gamma_m + \beta_t T_{im} + \epsilon_{im}, \qquad m = \{2017, t\} \qquad (2)$$

where α_i are firm fixed effects, γ_m are year fixed effects (for years 2017 and *t*), and T_{im} is a dummy variable that equals one only when $m = t$ and firm i was randomly assigned to the treatment group. In both specifications, we estimate local average treatment effects (LATE) to account for partial compliance, using random assignment as an instrumental variable for treatment take-up.

[10] We use ANCOVA as our baseline specification due to gains in statistical power relative to diff-in-diff estimation (McKenzie, 2012). However, for robustness purposes we also estimate using diff-in-diff.
[11] We lose 18 observations due to lack of data for the control variables.

Table 2 reports the results for our three primary outcomes variables: the IHS-transformed export value (which combines extensive and intensive margins), the export probability (extensive margin), and the logarithm of export value[12] (intensive margin). The ANCOVA estimates, for years 2018 to 2023, are displayed in Panel A.[13] Across all years, the estimated coefficients on the treatment dummy are statistically insignificant for all three outcomes. Also, the coefficient signs are inconsistent. In contrast, the control variables –number of employees, average salary, and the lagged dependent variable– consistently show positive effects although only the latter is statistically significant across all years. The DiD estimates in panel B yield similar results, showing no significant or consistent impact of the treatment on export performance. Appendix Table A.2 reports results for the secondary outcomes, including the number of export destinations and export quality, with no apparent effects observed.

To further examine program effects, we conduct an event study by introducing leads to extend the pre-treatment period back to 2012. Specifically, we pool observations across years and estimate:

$$Y_{it} = \alpha_i + \gamma_t + \sum_{l=-6}^{-2} \beta^l T_{it}^l + \sum_{m=0}^{5} \beta^m T_{it}^m + \epsilon_{it} \quad (3)$$

where T_{it}^l are the leads (five years before treatment) and T_{it}^m are the lags (six years after treatment). Expanding the pre-treatment period allows us to test the parallel trends assumption. Figure 2 displays results for each outcome variable with confidence intervals at the 10% level. The results indicate no significant differences between treated and control groups before the intervention, a pattern that persists in all post-treatment years, aligning with Figure 1.

We also explore heterogeneous treatment effects by firm size and initial GEP adoption. Specifically, we construct dummy variables distinguishing firms above the median number of employees[14] and firms above the median baseline GEP score and interact these variables with the treatment dummy. Theoretically, the expected effect is ambiguous: while smaller firms and

[12] For ln export value the number of observations drops drastically as we can only include firms with non-zero exports both in the baseline year and in the year under consideration.
[13] Since the technical assistance lasted until December 2018, it is a priori unlikely that the program had any effect during 2018. For example, most firms receiving the Strategy package built a business plan targeted to enter a certain foreign market that would only start to be implemented in 2019.
[14] We have employment data for 195 firms. The median number of employees at the baseline is 22.5. Out of the 97 firms below the median 48 are in the control group and 49 in the treatment group, whereas out of the 98 firms above (or equal) the median 50 are in the control group and 48 in the treatment group.

those with lower initial GEP adoption might benefit more, they may also be further from the "export threshold", making the intervention insufficient.

Table 3 presents the results. In panel A, no meaningful treatment effects emerge for either large or small firms across any outcome variable, except for a consistently negative coefficient on ln export value for small firms, which is significant only in the first and last years. In panel B, for firms with lower initial GEP adoption, we observe a positive and growing effect on IHS export value and export probability, which becomes statistically significant only in 2023. However, there is no effect on ln export value. These results suggest potential heterogeneity in treatment effects but lack conclusive strength, with some evidence of a stronger impact on the extensive margin (IHS exports and export probability) for firms with lower initial GEP adoption.

We also assess the program´s impact on GEP adoption. Figure 3 displays the average GEP scores before (light blue bars) and after (blue bars) the program for the treatment (right) and control (left) groups. Both groups show an increase in GEP adoption, though the treatment group exhibits a 10-percentage-point increase (23%), compared to a 4-percentage-point increase (8%) in the control group.[15]

In Table 4, we statistically evaluate the program´s impact on GEP adoption using both ANCOVA (panel A) and DiD (panel B). The first column reports inconsistent results between the two specifications. Under ANCOVA, the difference between groups is not significantly significant, whereas under DiD it is significant at the 10% level. A potential explanation for this discrepancy is the pre-treatment imbalance in GEP adoption (see Section 4). While the DiD coefficient essentially captures the differential effect on treated firms shown in Figure 3, the ANCOVA specification includes the lagged dependent variable, attributing part of the differential impact to a reversion-to-the-mean effect after an unusually high pre-treatment GEP average score among untreated firms.[16]

Finally, we examine whether the intervention influenced specific practice areas. To do so, we estimate both ANCOVA and DiD specifications separately for each practice area restricting the sample to firms that received treatment in that particular area. Among the seven areas contributing to the overall GEP score, strongest effects appear in Strategy, Distribution, and

[15] More detailed descriptive statistics for practice scores is available in Appendix Table A.3.
[16] We are unable to take a strong stand on this discrepancy but note that the methodological advantages of ANCOVA over DiD estimation rest on the assumption of balanced pre-treatment outcomes, which does not hold for baseline GEP scores.

Administration –consistent with these being the most frequently requested assistance packages, thus providing more observations (and degrees of freedom) for estimation. Additionally, as with the overall GEP score, the estimated impact is larger under the DiD specification, which is significant for three areas, whereas ANCOVA results are only significant for Administration.

6. Results for Good Selection firms

No single program can be expected to effectively enhance export performance for all firms. Firms differ in experience, knowledge, ambition, commitment, and various other characteristics that shape their needs, export potential, and the type of assistance –if any– that would be most suitable for them. Therefore, selecting the right firms for a given program should be a crucial part of its implementation. Unfortunately, proper screening of participating firms can be challenging in a randomized control trial (RCT), as the need to recruit a sufficient number of firms within the short timeframes imposed by budgetary cycles and political commitments often complicates the selection process. As a result, some firms may be included despite lacking the characteristics necessary to fully –or even partially– benefit from the program.

The initial implementation of the GEP program in Argentina faced this issue. First, 59 out of the 213 participating firms were not producers of differentiated goods, even though these were the program´s target. Among them were producers of legumes (13), nuts (11), and fruits and vegetables (11). While training sessions and materials consistently emphasized that the program was intended for producers of "differentiated products", the boundaries of this term´s definition may not have been sufficiently clear. In fact, there is no universally established threshold for defining a differentiated product in the literature, where the concept is generally treated as a continuous rather than a discrete product characteristic. Additionally, political considerations may have influenced AAICI to accept producers of non-differentiated goods proposed by subnational export promotion agencies from provinces heavily specialized in such goods. Regardless of the reason, the rush of the enrollment process prevented the supervisory team from identifying the high proportion of non-differentiated goods producers in time and intervening to exclude them from the program.

Second, in response to the failure of the initial call for enrollment in March 2017 to attract the required number of firms (see Section 3), certain measures were taken that may have further compromised the screening process. One such measure was increasing pressure on AAICI

recruiters, which could have led them to encourage firms to join the program without adequately assessing their interest and willingness to commit to its focus and sustained effort requirements. Furthermore, staff at the Ministry´s call center, who were later asked with attracting more firms, may not have received sufficient training to properly inform potential participants about the program´s methodology and expectations.

To examine whether the inclusion of unsuitable firms affected the results, we construct two new variables that should otherwise be irrelevant. First, we identify firms whose primary product is not differentiated. For the 183 firms that underwent diagnostic assessments, we use the main product information from their diagnostic reports; for the remaining 30 undiagnosed firms, we gather this information from their websites. Following the Micro-Differentiated (Micro-D) classification (Bernini et al., 2018) for agricultural and food products, we classify products as differentiated if they are sold in small packages and non-differentiated if they are sold in bulk or in large containers. While all 213 firms were supposed to be producers of differentiated goods, we find that only 154 (72%) fit this classification, while the remaining 59 (28%) primarily produce non-differentiated ("homogeneous") goods.[17]

Panel A of Table 5 presents ANCOVA results, interacting the treatment dummy variable with dummies for differentiated and non-differentiated goods producers. When restricting the analysis to the program´s impact on differentiated-goods producers, we observe that it is consistently positive –but statistically not significant– on IHS-transformed export value and export probability. However, the impact on the logarithm of export value is neither significant nor consistently positive. These findings suggest that the program may have had an impact on differentiated-goods producers, but only on the extensive margin. Interestingly, the estimated coefficient for the "differentiated" variable (without interaction) is negative for all three outcome variables during 2020, 2021, and 2022, and significantly so for those capturing the extensive margin (ln export value is significantly negative only in 2020). The COVID-19 pandemic possibly disrupted regular export business operations –such as establishing and maintaining foreign trade relationships– which are particularly critical for differentiated products that require more intensive face-to-face interactions.

[17] Out of the 154 differentiated-goods producers, 81 (53%) are in the treatment group while 73 (47%) are in the control group, whereas out of the 59 non-differentiated goods producers, 26 (44%) are in the treatment group and 33 (56%) are in the control group (see Table 1).

A second relevant variable –one not originally anticipated to affect results– is the order in which firms enrolled in the program. As discussed earlier, the quality of information provided to potential participants may have declined as the enrollment process progressed. If that were the case, firms that joined later may have had an incomplete understanding of the program's structure and the level of effort required to benefit from it. Indeed, consultants reported that some firms displayed clear disinterest from the outset, while others complained that the program did not meet their expectations. To explore this possibility, we split the sample into two equal groups based on their enrollment date (early versus late enrollees). Panel B of Table 5 presents the results. Consistent with our hypothesis, the program's impact on IHS export value and export probability grows over time, peaking in 2023, but remains statistically insignificant for ln export value. Again, the findings suggest positive effects only on the extensive margin, which become more pronounced in later years.

Next, we focus on firms that meet both criteria: those producing differentiated goods and enrolling early. This "good selection" subset includes 77 firms (36%) –the firms best positioned to fully benefit from the program. As a descriptive exercise, Figure 4 compares export participation for treated and untreated firms within this subset before and after the intervention. A noticeable difference in export participation emerges over time, suggesting that the program may have had a substantial positive impact when applied to the right firms.

To formally assess the program's impact on good selection firms, we extend the ANCOVA specification in equation (1) by introducing an interaction term between the treatment dummy and a dummy identifying good selection firms. We also include the good selection dummy as an independent regressor to avoid omitted variable bias. Table 6.A presents the results. In the top panel, the program exhibits a positive and significant impact on IHS export value from 2020 onward (except for 2021), despite reduced statistical power due to the smaller sample size. The remaining panels indicate that this result is driven by the extensive margin, as treated firms in the good selection sample exhibit even stronger effects on export participation from 2020 onward. However, no significant effects are found for ln export value (the intensive margin).

The estimated impact on export probability is substantial. A treated good selection firm was 33 percentage points more likely to export in 2023 (five years after receiving the consulting service) than an untreated good selection firm. This effect is particularly large given that 56% of good selection firms were already exporting at baseline. Notably, since initial export survival

rates tend to be low (Cebeci et al., 2012; Fanelli et al., 2025), the observed effects on the extensive margin likely reflect both new firms entering export markets and baseline exporters continuing to export. Indeed, between 2017 and 2023, the good selection sample saw two firms enter and three exit export markets, while the bad selection sample had two new entrants but ten firms drop out.[18]

Using the DiD specification, we find qualitatively similar results (Table 6.B). There is a consistently positive impact on IHS export value and export probability, though the estimated coefficients are slightly smaller and statistically significant only for the latter outcome in the final two years. The weaker results may be due to the lower efficiency of DiD estimation compared to ANCOVA (McKenzie, 2012). Results for the secondary outcomes –number of export destinations and export quality– are reported in Appendix Table A.5. Consistent with the main findings, the program positively affects the number of export destinations (extensive margin) in later years but has no significant impact on export quality (intensive margin).[19]

An alternative approach is to restrict the sample to only good selection firms (Table 7). While this significantly reduces the number of observations to 71, thereby limiting statistical power, the results remain consistent. We continue to observe positive and significant effects on the extensive margin in later years but no impact on the intensive margin. Similarly, the event study in Figures 5.A and 5.B shows that, in most cases, confidence intervals barely include zero, suggesting an almost significant impact at the 10% level, with significance for the exporter variable in the last years. Conversely, Figure 5.C shows no effect on ln export value, with a surprisingly negative but not statistically significant coefficient in the last three years.

Finally, following Artopoulos et al. (2013) we can explore whether the program had larger impacts on exports to OECD countries. To do this, we focus on the extensive margin and define two alternative measures for the "exporter" outcome. On the one hand, we construct a variable, OECD exporter, that is only 1 when the firm exhibits any export to an OECD country.[20] On the other hand, an analogous variable, non-OECD exporter, is only 1 when the firm exports to a

[18] A similar comparison between years 2017 and 2022 yields five new exporters and two exiters among firms in the good selection sample and two new exporters and seven exiters among firms in the bad selection sample.
[19] We also used employment and average wage as alternate outcomes finding no consistent or significant impact of the program (tables available on request). This result is not surprising as we only have measures for these outcomes in year 2019, when none of the outcomes displayed discernible impacts from the program yet.
[20] We consider all OECD countries in 2019, except for Chile, which was the only South American member at the time. We exclude Chile because it shares a border, a common language, a colonial heritage, and a free trade agreement with Argentina. As a result, exporting to Chile is likely to face significantly lower barriers.

non-OECD country. Table 8 displays the results. Consistently with Artopoulos et al. (2013), we observe larger impacts on exports to OECD countries. Interestingly, however, there is still a positive impact on the extensive margin of exports to non-OECD countries, which becomes significant in the last two years. This result suggests that disseminating good exporting practices also enhances export performance oriented to developing or less distant countries.

We now turn to the role of GEP adoption as the mechanism behind the observed improvement in export outcomes for good selection firms. First, Figure 6 compares changes in GEP scores between firms assigned to the treatment and control groups. The figure shows a stronger impact on treated firms. However, Table 9 indicates that the difference is not statistically significant. Both the ANCOVA (panel A) and the DiD (panel B) estimation results yield positive estimated impacts on the overall score but with large associated standard errors. Moreover, similar impacts are observed among bad selection firms.

While GEP adoption should be the key mechanism driving improvements in export outcomes, two factors complicate the interpretation of these results. First, the follow-up survey may have been conducted too soon after the intervention (in 2019) for firms to have effectively implemented good exporting practices. This timing coincides with a period in which no discernible impact on export outcomes was observed. It is possible that firms gradually improved their adoption of export practices over time, in line with their export performance. Second, despite efforts to standardize scoring criteria among consultants, the lack of an internationally recognized GEP framework may have introduced substantial variability in scoring between the baseline diagnostic and the follow-up survey –especially since different consultants conducted each assessment. As a result, even if firms had meaningfully adopted GEP practices within the short period between the two measurements, our ability to accurately capture this progress may have been limited.[21]

Given the imprecision in estimating the program's impact on GEP adoption, it is unsurprising that we do not find a significant causal effect of GEP adoption on export outcomes. Table 10 presents the results of a regression of export outcomes on changes in GEP practices, using random assignment to the program as an instrumental variable (following Bloom et al., 2013). Despite the weakness of the instrument (as indicated by the very low F-statistic), the results

[21] Interestingly, as shown in Appendix Table A.6, the results for bad selection firms are driven by non-differentiated producers rather than by late firms. This is consistent with potential GEP adoption by non-differentiated producers despite the practices being relatively ineffective for them in contrast to late firms who would be expected to lack interest in adopting them.

still suggest a consistently positive impact of GEP adoption on the extensive margin of exports for the subset of good selection firms.

7. Discussion

Overall, our results suggest that a training intervention like the GEP program, when targeted at the right firms, can have a significant impact on export performance, though primarily on the extensive margin. According to our baseline ANCOVA estimates, the program increased the export probability of a "good selection" firm by 33 percentage points. This effect is particularly notable given that the intervention's intensity –72 hours of in-plant consulting– was relatively modest compared to other management training programs implemented as RCTs. For instance, Bloom et al.'s (2013) intervention with textile firms in India involved 508 consulting hours, while Iacovone et al.'s (2022) program for auto-part firms in Colombia included 190 hours.

The urgency to enroll firms within a short timeframe (45 days) clearly worked against the proper implementation of the GEP program in Argentina. As members of its full-time supervisory team, we can attest that all three subsequent phases –diagnostic, export management consulting, and follow-up– were executed on schedule and met their respective objectives. However, the consequences of inadequate screening of beneficiary firms can be difficult to reverse. Training programs are not universally suitable; rather, they are most effective for firms already willing to invest energy and resources in improving their performance through better management practices. Thus, the screening process is critical. This is one of the key lessons from this study for future firm training RCTs, as political pressure to move quickly in the early stages –often driven by the desire for high-profile announcements– can undermine a program's overall effectiveness.

In the case of GEP, two additional factors may have constrained the program's effectiveness. The first is the combination of the macroeconomic crisis that unfolded in Argentina in 2018 – right as the treatment phase began– and the subsequent COVID-19 pandemic, both of which likely confounded the program's impact. Argentina's GDP declined by -2.6% in 2018, -2% in 2019, and -9.9% in 2020, amid heightened foreign exchange volatility, restricted credit access, and widespread economic uncertainty. Under such conditions, even if firms adopted good exporting practices, their impact on export outcomes may have been weaker, while firms may have also deprioritized adoption efforts in response to immediate financial pressures.

Consistent with these hypotheses, we observe that the GEP program's impact strengthens only in the later years of the sample (2022 and 2023).

The second factor that may have limited the program's effectiveness is the absence of a widely accepted framework defining which business practices are most relevant for export performance in developing countries. While the 20 good exporting practices in our study – primarily based on the findings of Artopoulos et al. (2013) – are likely to generate positive outcomes, their lack of global recognition and standardization may hinder their dissemination. In particular, training consultants in the GEP framework introduces the risk that they may not fully grasp the practices or may not be sufficiently convinced of their relevance to drive meaningful changes in management behavior. Additionally, the absence of internationally recognized standards creates a weak foundation of awareness and credibility, making it more challenging for consultants to effectively promote the practices. This stands in contrast to the well-established codification and standardization of general management practices, which facilitate their dissemination.

Given the high per-firm cost of export training programs, an efficient use of the scarce resources of export promotion agencies (EPAs) may be to invest more in further standardizing and codifying good exporting practices. By doing so, EPAs could create a public good that fosters a shared language among export consultants and practitioners, ultimately facilitating their broader dissemination and adoption.

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Table 1 - Baseline characteristics

Panel A: Full sample

	Percentiles of baseline distribution						Balancing test: difference of means			
	P10	P25	P50	P75	P90	Mean	Treatment	Control	Difference	P-value
Pre-treatment outcomes										
Export value (IHS)	0	0	11.9	14.7	16.1	8.4	8.5	8.4	0.1	0.96
							(7.1)	(7.1)	(1.0)	
Exporter	0	0	1	1	1	0.6	0.60	0.60	-0.01	0.93
							(0.49)	(0.49)	(0.07)	
ln *export value*	10.4	11.9	13.7	14.8	16.1	13.3	13.5	13.2	0.2	0.56
							(2.0)	(2.2)	(0.4)	
Number of destinations	0	0	1	4	11	4	7.7	8.1	-0.5	0.82
							(9.3)	(10.1)	(2.1)	
Export quality (1000 USD)	6.6	11.3	17.0	42.0	50.8	25.4	28.8	24.4	4.4	0.24
							(18.4)	(16.2)	(3.7)	
Practices total score	19	32	51	65	75	48.5	44.4	53.1	-8.7	0.01
							(21.3)	(19.4)	(3.4)	
Pre-treatment characteristics										
Number of employees	5	10	23	71	200	85	101	69	32	0.43
							(387)	(105)	(41)	
Average salary (1000 Pesos)	8.0	11.2	17.2	23.4	30.5	18.0	17.5	18.5	-1.0	0.45
							(8.7)	(9.0)	(1.3)	
Differentiated	0	0	1	1	1	0.72	0.76	0.69	0.07	0.27
							(0.43)	(0.47)	(0.06)	
Early enrollment	0	0	0	1	1	0.50	0.47	0.53	-0.06	0.38
							(0.50)	(0.50)	(0.07)	
Good Selection	0	0	0	1	1	0.36	0.37	0.35	0.02	0.71
							(0.49)	(0.48)	(0.07)	

Figure 1 – Descriptive statistics (Full sample)

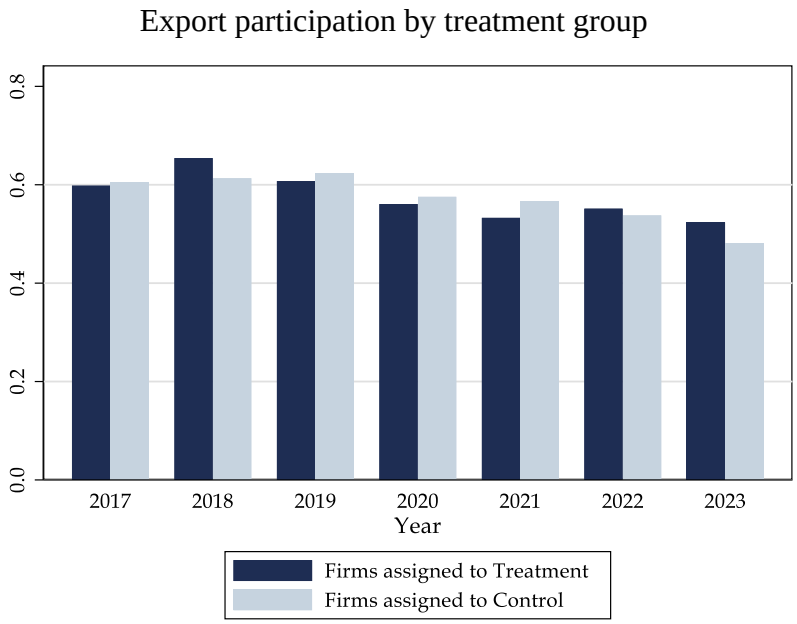


Table 2 – Impact of treatment on export performance

Panel A: ANCOVA

	Export value (IHS)					
	2018	2019	2020	2021	2022	2023
Treatment	0.464	-0.346	0.149	-0.333	0.422	0.842
	(0.614)	(0.798)	(0.901)	(0.920)	(0.954)	(1.006)
ln # *employees 2017*	0.129	0.800**	0.899**	0.947**	0.846**	1.011**
	(0.232)	(0.363)	(0.378)	(0.379)	(0.393)	(0.399)
ln *average salary 2017*	1.259*	1.311*	1.684**	1.406*	1.444	1.413
	(0.676)	(0.772)	(0.838)	(0.845)	(0.887)	(0.924)
Export value (IHS) 2017	0.797***	0.719***	0.661***	0.680***	0.651***	0.605***
	(0.046)	(0.056)	(0.063)	(0.062)	(0.064)	(0.066)
	Exporter					
	2018	2019	2020	2021	2022	2023
Treatment	0.047	-0.030	0.010	-0.026	0.038	0.085
	(0.050)	(0.062)	(0.069)	(0.070)	(0.072)	(0.074)
ln # *employees 2017*	0.001	0.049*	0.057**	0.058**	0.052*	0.065**
	(0.020)	(0.026)	(0.027)	(0.026)	(0.027)	(0.028)
ln *average salary 2017*	0.098*	0.090	0.113*	0.098	0.098	0.093
	(0.055)	(0.057)	(0.061)	(0.060)	(0.064)	(0.066)
Exporter 2017	0.736***	0.658***	0.597***	0.600***	0.581***	0.527***
	(0.055)	(0.064)	(0.069)	(0.067)	(0.068)	(0.068)
	ln export value					
	2018	2019	2020	2021	2022	2023
Treatment	-0.085	-0.052	0.046	-0.003	-0.002	-0.367
	(0.218)	(0.276)	(0.314)	(0.326)	(0.406)	(0.438)
ln # *employees 2017*	0.068	0.089	0.177*	0.231*	0.206*	0.179
	(0.084)	(0.093)	(0.103)	(0.117)	(0.109)	(0.118)
ln *average salary 2017*	0.267	0.013	0.378	0.297	0.171	-0.335
	(0.189)	(0.238)	(0.258)	(0.287)	(0.316)	(0.314)
ln *export value 2017*	0.935***	0.918***	0.816***	0.838***	0.898***	0.905***
	(0.055)	(0.067)	(0.073)	(0.066)	(0.092)	(0.088)
Observations	195/116	195/111	195/104	195/101	195/99	195/91
Strata FE	yes	yes	yes	yes	yes	yes
Control variables	yes	yes	yes	yes	yes	yes

Note: Robust standard errors in parenthesis. The number of observations is 195 for Export value (IHS) and Exporter, the lower number refers to ln export value.
*** p<0.01, ** p<0.05, * p<0.1

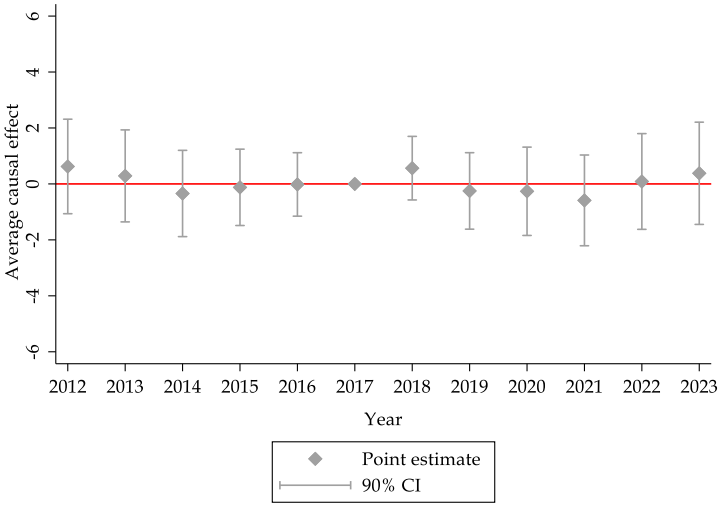
Panel B: Diff-in-Diff

	Export value (IHS)					
	2018	2019	2020	2021	2022	2023
Treatment	0.563	-0.251	-0.263	-0.588	0.087	0.380
	(0.701)	(0.843)	(0.973)	(1.000)	(1.055)	(1.127)
	Exporter					
	2018	2019	2020	2021	2022	2023
Treatment	0.060	-0.012	-0.012	-0.036	0.025	0.062
	(0.059)	(0.067)	(0.075)	(0.077)	(0.080)	(0.085)
	ln export value					
	2018	2019	2020	2021	2022	2023
Treatment	-0.065	-0.035	0.083	-0.020	0.061	-0.208
	(0.196)	(0.249)	(0.310)	(0.350)	(0.383)	(0.388)
Observations	426/240	426/230	426/212	426/206	426/202	426/186
Strata, Firm and Year FE	yes	yes	yes	yes	yes	yes

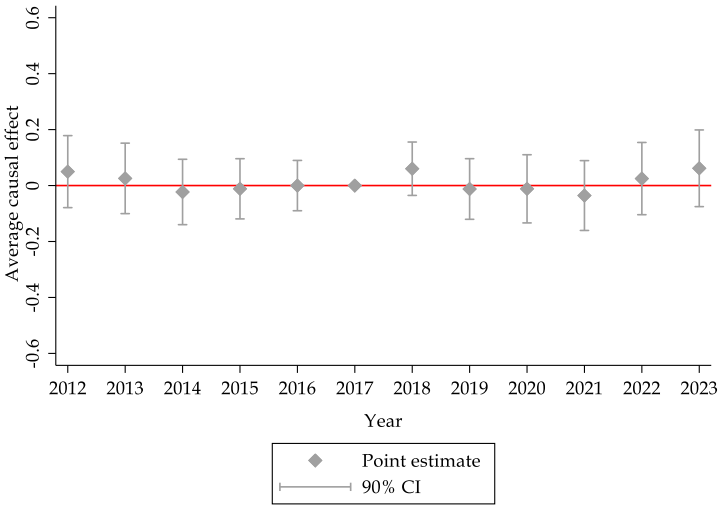
Note: Standard errors clustered at the firm level in parenthesis. The number of observations is 426 for Export value (IHS) and Exporter, the lower number refers to ln export value.
*** p<0.01, ** p<0.05, * p<0.1

Figure 2 – Event study (Full sample)

Panel A: Export value (IHS)



Panel B: Exporter



Panel C: ln export value

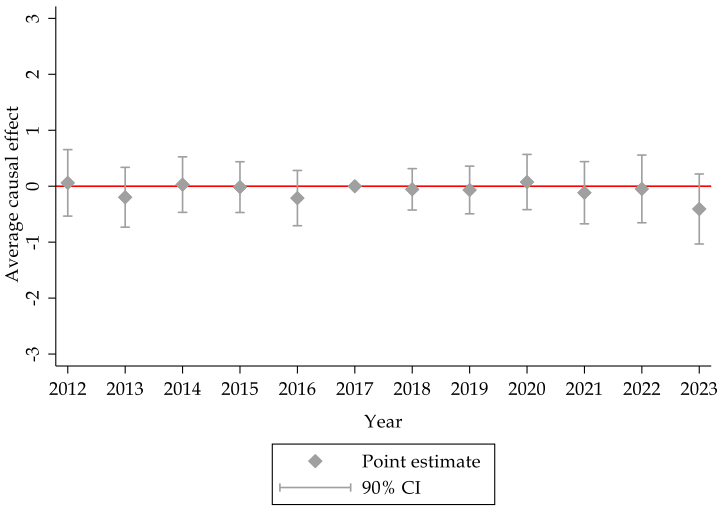


Table 3 – Heterogeneous treatment effects

Panel A: Firm size (ANCOVA)

	Export value (IHS)					
	2018	2019	2020	2021	2022	2023
*Treatment*Big firm*	0.694	0.043	0.246	0.033	0.474	1.141
	(0.959)	(1.107)	(1.380)	(1.392)	(1.419)	(1.430)
*Treatment*Small firm*	0.044	-0.616	0.149	-0.589	0.579	0.646
	(0.806)	(1.183)	(1.218)	(1.245)	(1.319)	(1.435)
Big firm	-2.285*	0.405	0.744	0.363	1.933	0.423
	(1.252)	(1.811)	(1.873)	(1.970)	(1.963)	(2.056)
	Exporter					
	2018	2019	2020	2021	2022	2023
*Treatment*Big firm*	0.053	-0.021	0.006	-0.004	0.012	0.082
	(0.076)	(0.083)	(0.105)	(0.104)	(0.106)	(0.104)
*Treatment*Small firm*	0.026	-0.033	0.021	-0.039	0.082	0.098
	(0.068)	(0.094)	(0.093)	(0.096)	(0.099)	(0.106)
Big firm	-0.151	0.046	0.081	0.047	0.223	0.098
	(0.103)	(0.139)	(0.141)	(0.153)	(0.155)	(0.163)
	ln export value					
	2018	2019	2020	2021	2022	2023
*Treatment*Big firm*	0.263	0.253	0.122	0.076	0.599	0.363
	(0.341)	(0.397)	(0.435)	(0.386)	(0.562)	(0.564)
*Treatment*Small firm*	-0.671**	-0.485	-0.150	-0.184	-0.961	-1.632**
	(0.320)	(0.417)	(0.476)	(0.592)	(0.600)	(0.680)
Big firm	-0.855	-0.182	-0.650	-0.646	-1.216	-0.575
	(0.537)	(0.580)	(0.588)	(0.701)	(0.924)	(0.815)
Observations	195/116	195/111	195/104	195/101	195/99	195/91
Strata FE	yes	yes	yes	yes	yes	yes
Control variables	yes	yes	yes	yes	yes	yes

Note: Robust standard errors in parenthesis. The number of observations is 195 for Export value (IHS) and Exporter, the lower number refers to ln export value.
*** p<0.01, ** p<0.05, * p<0.1

Panel B: GEP score (ANCOVA)

	Export value (IHS)					
	2018	2019	2020	2021	2022	2023
*Treatment*High GEP*	0.974*	0.505	0.034	-0.652	-0.162	1.067
	(0.505)	(0.979)	(1.213)	(1.251)	(1.297)	(1.219)
*Treatment*Low GEP*	0.906	0.876	1.796	1.690	2.220	3.428**
	(0.993)	(1.194)	(1.348)	(1.395)	(1.386)	(1.414)
High GEP	-0.341	0.519	1.056	2.064	2.148	2.886**
	(0.866)	(1.065)	(1.214)	(1.308)	(1.346)	(1.451)
	Exporter					
	2018	2019	2020	2021	2022	2023
*Treatment*High GEP*	0.083**	0.057	0.019	-0.039	-0.013	0.125
	(0.042)	(0.079)	(0.097)	(0.100)	(0.100)	(0.093)
*Treatment*Low GEP*	0.090	0.048	0.111	0.123	0.170	0.272***
	(0.081)	(0.094)	(0.106)	(0.108)	(0.110)	(0.101)
High GEP	-0.014	0.040	0.064	0.173	0.169	0.228**
	(0.073)	(0.089)	(0.101)	(0.105)	(0.107)	(0.104)
	ln export value					
	2018	2019	2020	2021	2022	2023
*Treatment*High GEP*	0.202	-0.075	0.053	-0.033	0.075	-0.240
	(0.259)	(0.325)	(0.292)	(0.340)	(0.399)	(0.507)
*Treatment*Low GEP*	-0.078	0.284	0.419	-0.144	-0.323	-0.532
	(0.399)	(0.554)	(0.852)	(0.913)	(0.997)	(1.409)
High GEP	-0.058	0.109	0.135	0.032	-0.136	-0.300
	(0.352)	(0.405)	(0.720)	(0.815)	(0.914)	(1.365)
Observations	137/79	137/78	137/71	137/68	137/67	137/61
Strata FE	yes	yes	yes	yes	yes	yes
Control variables	yes	yes	yes	yes	yes	yes

Note: Robust standard errors in parenthesis. The number of observations is 137 for Export value (IHS) and Exporter, the lower number refers to ln export value.
*** p<0.01, ** p<0.05, * p<0.1

Figure 3 - Descriptive statistic of GEP score (Full sample)

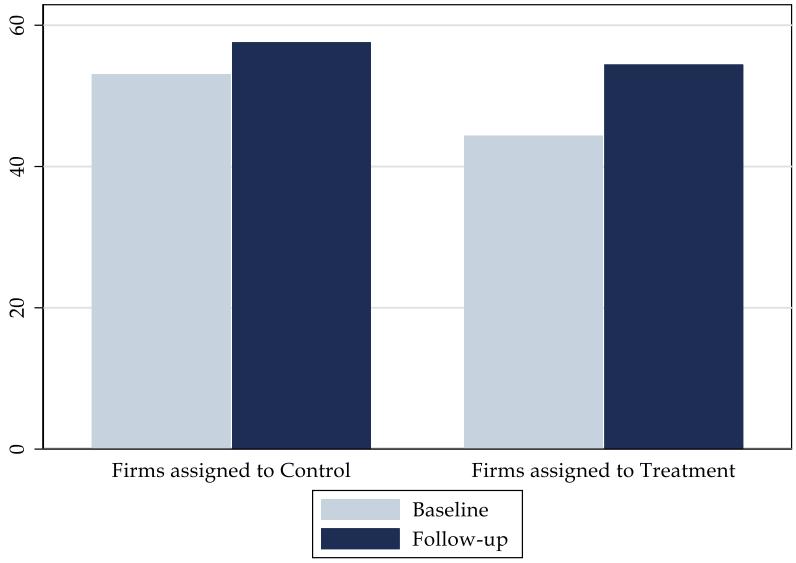


Table 4 - Impact of treatment on GEP scores

Panel A: ANCOVA

		Practice areas						
	Total score	Strategy	Market research and segmentation	Product design	Production	Communication	Distribution	Administration
Treatment	**2.194**	4.105	1.724	-6.113	-6.764	2.774	4.745	6.541*
	(3.261)	(3.622)	(4.419)	(21.647)	(6.909)	(5.782)	(4.363)	(3.340)
Observations	137	131	131	71	81	92	131	131
Strata FE	yes	yes	yes	yes	yes	yes	yes	yes
Control variables	yes	yes	yes	yes	yes	yes	yes	yes

Panel B: Diff-in-Diff

		Practice areas						
	Total score	Strategy	Market research and segmentation	Product design	Production	Communication	Distribution	Administration
Treatment	**5.630***	8.286**	6.286	7.923	-0.148	5.922	9.829**	8.143**
	(3.214)	(4.101)	(4.513)	(16.649)	(7.449)	(5.236)	(4.286)	(4.070)
Observations	296	284	284	152	172	202	284	284
Strata FE	yes	yes	yes	yes	yes	yes	yes	yes
Firm FE	yes	yes	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes	yes	yes

Note: Robust standard errors (Panel A) and standard errors clustered at the firm level (Panel B) in parenthesis.
*** p<0.01, ** p<0.05, * p<0.1

Table 5 – Impact of treatment by firm type: differentiated and early enrollment

Panel A: Differentiated (ANCOVA)

	Export value (IHS)					
	2018	2019	2020	2021	2022	2023
*Treatment*Differentiated*	0.845	0.455	1.732	1.075	1.760	1.623
	(0.780)	(0.919)	(1.060)	(1.076)	(1.102)	(1.137)
*Treatment*Non differentiated*	-0.261	-2.344	-3.938*	-3.856*	-2.986	-1.229
	(1.208)	(2.055)	(2.207)	(2.208)	(2.358)	(2.387)
Differentiated	-1.257*	-1.454	-2.534***	-2.535***	-2.261**	-1.113
	(0.735)	(0.893)	(0.962)	(0.967)	(1.017)	(1.240)
	Exporter					
	2018	2019	2020	2021	2022	2023
*Treatment*Differentiated*	0.069	0.013	0.118	0.070	0.137	0.135
	(0.064)	(0.073)	(0.082)	(0.083)	(0.085)	(0.086)
*Treatment*Non differentiated*	0.004	-0.140	-0.273*	-0.266*	-0.217	-0.044
	(0.100)	(0.150)	(0.161)	(0.159)	(0.168)	(0.166)
Differentiated	-0.067	-0.075	-0.164**	-0.173**	-0.157**	-0.074
	(0.060)	(0.071)	(0.075)	(0.076)	(0.079)	(0.090)
	ln export value					
	2018	2019	2020	2021	2022	2023
*Treatment*Differentiated*	0.016	0.070	0.355	0.242	-0.044	-0.307
	(0.289)	(0.387)	(0.439)	(0.475)	(0.543)	(0.550)
*Treatment*Non differentiated*	-0.200	-0.264	-0.317	-0.317	0.250	-0.544
	(0.298)	(0.337)	(0.379)	(0.512)	(0.574)	(0.732)
Differentiated	-0.344*	-0.196	-0.585*	-0.401	-0.278	0.042
	(0.202)	(0.281)	(0.350)	(0.442)	(0.469)	(0.647)
Observations	195/116	195/111	195/104	195/101	195/99	195/91
Strata FE	yes	Yes	yes	yes	yes	yes
Control variables	yes	Yes	yes	yes	yes	yes

Note: Robust standard errors in parenthesis. The number of observations is 195 for Export value (IHS) and Exporter, the lower number refers to ln export value.
*** p<0.01, ** p<0.05, * p<0.1

Panel B: Early enrollment (ANCOVA)

	Export value (IHS)					
	2018	2019	2020	2021	2022	2023
*Treatment*Early enrollment*	0.532	-0.003	1.783	1.110	1.784	2.127
	(1.159)	(1.300)	(1.444)	(1.466)	(1.497)	(1.560)
*Treatment*Late enrollment*	0.497	-0.539	-1.120	-1.482	-0.624	-0.252
	(0.700)	(0.945)	(1.063)	(1.104)	(1.233)	(1.282)
Early enrollment	0.669	0.527	-0.266	-0.464	-0.126	-0.975
	(0.685)	(0.803)	(0.873)	(0.908)	(0.911)	(1.031)
	Exporter					
	2018	2019	2020	2021	2022	2023
*Treatment*Early enrollment*	0.055	-0.002	0.168	0.123	0.183	0.216*
	(0.094)	(0.101)	(0.112)	(0.111)	(0.113)	(0.114)
*Treatment*Late enrollment*	0.046	-0.050	-0.115	-0.147*	-0.078	-0.026
	(0.059)	(0.075)	(0.081)	(0.085)	(0.093)	(0.094)
Early enrollment	0.036	0.019	-0.038	-0.070	-0.051	-0.104
	(0.056)	(0.065)	(0.069)	(0.072)	(0.071)	(0.076)
	ln export value					
	2018	2019	2020	2021	2022	2023
*Treatment*Early enrollment*	-0.025	-0.172	-0.691	-0.711	-0.480	-0.608
	(0.320)	(0.370)	(0.424)	(0.445)	(0.538)	(0.624)
*Treatment*Late enrollment*	-0.119	0.038	0.734	0.690	0.388	-0.093
	(0.272)	(0.370)	(0.482)	(0.516)	(0.584)	(0.579)
Early enrollment	0.247	0.365	0.503	0.416	0.600	-0.035
	(0.236)	(0.249)	(0.318)	(0.355)	(0.386)	(0.477)
Observations	195/116	195/111	195/104	195/101	195/99	195/91
Strata FE	yes	yes	yes	yes	yes	yes
Control variables	yes	yes	yes	yes	yes	yes

Note: Robust standard errors in parenthesis. The number of observations is 195 for Export value (IHS) and Exporter, the lower number refers to ln export value.
*** p<0.01, ** p<0.05, * p<0.1

Figure 4 - Descriptive statistics (Good selection sample)

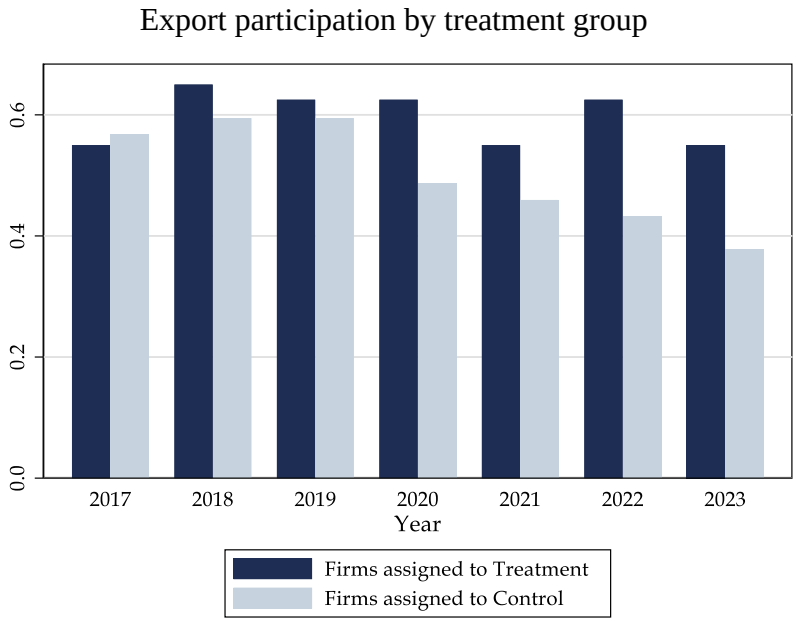


Table 6 – Impact of treatment by firm type: good selection

Panel A: Good selection (ANCOVA)

	Export value (IHS)					
	2018	2019	2020	2021	2022	2023
*Treatment*Good selection*	1.331	1.100	3.585*	2.615	4.241**	3.767**
	(1.413)	(1.564)	(1.820)	(1.808)	(1.826)	(1.801)
*Treatment*Bad selection*	0.038	-1.055	-1.502	-1.738	-1.423	-0.558
	(0.656)	(0.942)	(1.034)	(1.064)	(1.147)	(1.216)
Good selection	-0.248	-0.454	-1.877*	-1.905	-1.868*	-1.761
	(0.824)	(1.012)	(1.127)	(1.180)	(1.110)	(1.201)
	Exporter					
	2018	2019	2020	2021	2022	2023
*Treatment*Good selection*	0.110	0.060	0.305**	0.237*	0.377***	0.333**
	(0.117)	(0.124)	(0.143)	(0.138)	(0.141)	(0.136)
*Treatment*Bad selection*	0.016	-0.074	-0.132*	-0.150*	-0.125	-0.032
	(0.054)	(0.072)	(0.077)	(0.080)	(0.085)	(0.089)
Good selection	-0.020	-0.038	-0.154*	-0.181**	-0.189**	-0.174**
	(0.068)	(0.079)	(0.085)	(0.089)	(0.082)	(0.088)
	ln export value					
	2018	2019	2020	2021	2022	2023
*Treatment*Good selection*	0.129	-0.144	-0.990	-1.030	-1.156	-0.898
	(0.443)	(0.572)	(0.702)	(0.726)	(0.790)	(0.882)
*Treatment*Bad selection*	-0.182	-0.057	0.460	0.351	0.336	-0.294
	(0.241)	(0.312)	(0.375)	(0.396)	(0.476)	(0.493)
Good selection	0.065	0.403	0.500	0.631	0.940**	0.513
	(0.264)	(0.331)	(0.391)	(0.385)	(0.424)	(0.484)
Observations	195/116	195/111	195/104	195/101	195/99	195/91
Strata FE	yes	Yes	yes	yes	yes	yes
Control variables	yes	Yes	yes	yes	yes	yes

Note: Robust standard errors in parenthesis. The number of observations is 195 for Export value (IHS) and Exporter, the lower number refers to ln export value.
*** p<0.01, ** p<0.05, * p<0.1

Panel B: Good selection (Diff-in-Diff)

	Export value (IHS)					
	2018	2019	2020	2021	2022	2023
*Treatment*Good selection*	1.032	0.752	2.313	1.402	3.043	2.604
	(1.442)	(1.595)	(2.023)	(2.033)	(1.866)	(2.022)
*Treatment*Bad selection*	0.305	-0.781	-1.542	-1.562	-1.384	-0.721
	(0.773)	(0.988)	(1.076)	(1.129)	(1.294)	(1.375)
Good selection	0.408	0.416	-0.692	-0.829	-0.701	-0.649
	(0.796)	(1.016)	(1.132)	(1.245)	(1.124)	(1.323)
	Exporter					
	2018	2019	2020	2021	2022	2023
*Treatment*Good selection*	0.104	0.069	0.223	0.154	0.300*	0.270*
	(0.124)	(0.131)	(0.162)	(0.162)	(0.153)	(0.163)
*Treatment*Bad selection*	0.036	-0.054	-0.127	-0.127	-0.110	-0.040
	(0.064)	(0.077)	(0.080)	(0.085)	(0.093)	(0.099)
Good selection	0.027	0.013	-0.081	-0.108	-0.106	-0.102
	(0.069)	(0.083)	(0.090)	(0.101)	(0.090)	(0.105)
	ln export value					
	2018	2019	2020	2021	2022	2023
*Treatment*Good selection*	0.063	-0.126	-0.863	-0.734	-0.602	-0.463
	(0.447)	(0.511)	(0.686)	(0.603)	(0.712)	(0.796)
*Treatment*Bad selection*	-0.126	-0.036	0.393	0.178	0.274	-0.178
	(0.207)	(0.284)	(0.359)	(0.437)	(0.450)	(0.443)
Good selection	0.072	0.387	0.585	0.505	0.518	0.303
	(0.222)	(0.263)	(0.367)	(0.354)	(0.401)	(0.458)
Observations	426/240	426/230	426/212	426/206	426/202	426/186
Strata, Firm and Year FE	yes	yes	yes	yes	yes	yes

Note: Standard errors clustered at the firm level in parenthesis. The number of observations is 426 for Export value (IHS) and Exporter, the lower number refers to ln export value.
*** p<0.01, ** p<0.05, * p<0.1

Table 7 – Impact of treatment (Good selection sample)

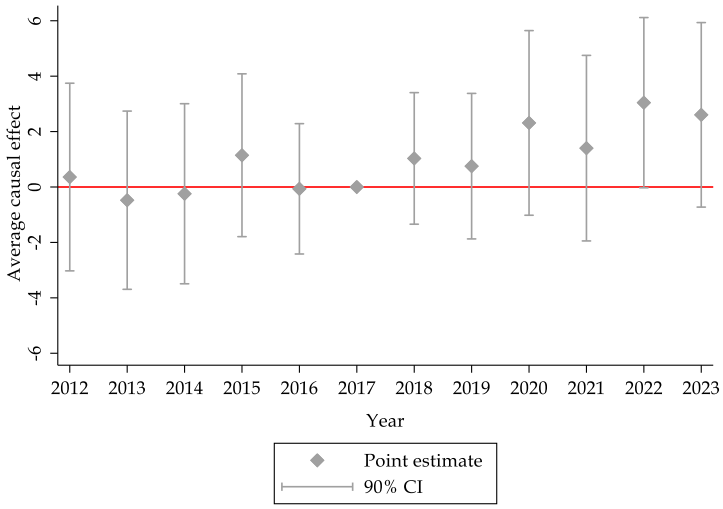
Panel A: Good selection (ANCOVA)

	Export value (IHS)					
	2018	2019	2020	2021	2022	2023
Treatment	1.416	0.446	3.288	2.096	3.954*	2.811
	(1.633)	(1.725)	(1.983)	(2.094)	(2.121)	(2.019)
	Exporter					
	2018	2019	2020	2021	2022	2023
Treatment	0.134	0.017	0.293*	0.211	0.376**	0.276*
	(0.138)	(0.137)	(0.156)	(0.160)	(0.166)	(0.156)
	ln export value					
	2018	2019	2020	2021	2022	2023
Treatment	0.072	0.104	-1.375	-1.285	-1.116	-0.434
	(0.560)	(0.846)	(1.536)	(1.357)	(1.452)	(1.422)
Observations	71/33	71/35	71/28	71/24	71/26	71/22
Strata FE	yes	yes	yes	yes	yes	yes
Control variables	yes	yes	yes	yes	yes	yes

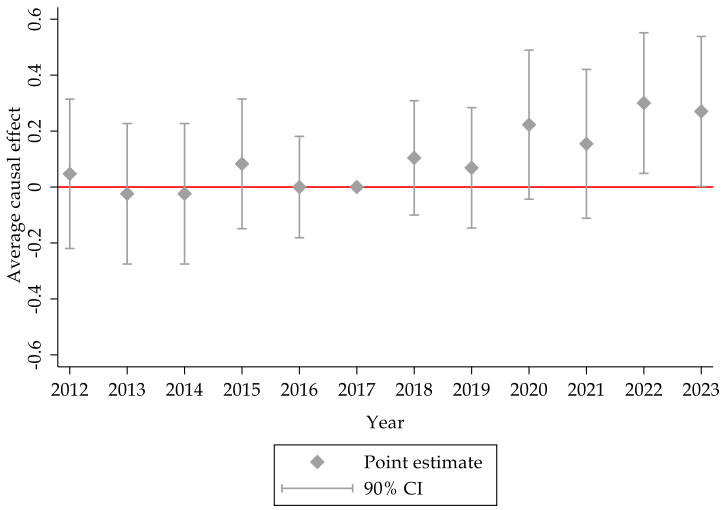
Note: Robust standard errors in parenthesis. The number of observations is 71 for Export value (IHS) and Exporter, the lower number refers to ln export value.
*** p<0.01, ** p<0.05, * p<0.1

Figure 5 – Event study (Good selection sample)

Panel A: Export value (IHS)



Panel B: Exporter



Panel C: ln export value

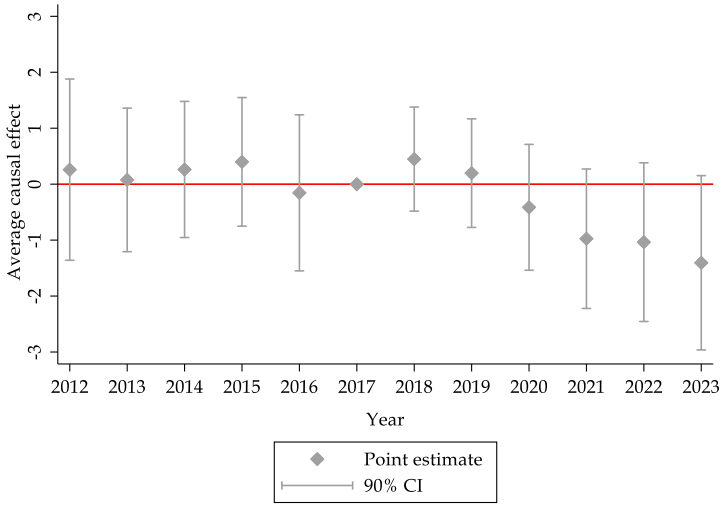


Table 8 – Impact of treatment by type of destination

Panel A: Good selection (ANCOVA)

	OECD exporter					
	2018	2019	2020	2021	2022	2023
*Treatment*Good selection*	-0.028	0.085	0.088	0.171	0.320***	0.328***
	(0.094)	(0.090)	(0.119)	(0.117)	(0.120)	(0.121)
*Treatment*Bad selection*	-0.046	-0.014	-0.068	-0.064	-0.048	-0.031
	(0.066)	(0.075)	(0.076)	(0.074)	(0.076)	(0.091)
Good selection	-0.000	-0.036	-0.096	-0.105	-0.170**	-0.193**
	(0.061)	(0.065)	(0.073)	(0.081)	(0.070)	(0.079)
	Non-OECD exporter					
	2018	2019	2020	2021	2022	2023
*Treatment*Good selection*	0.127	0.036	0.189	0.203	0.263*	0.258*
	(0.146)	(0.145)	(0.150)	(0.132)	(0.136)	(0.134)
*Treatment*Bad selection*	0.033	-0.064	-0.074	-0.118	-0.055	-0.022
	(0.066)	(0.081)	(0.085)	(0.090)	(0.094)	(0.094)
Good selection	-0.000	0.021	-0.124	-0.201**	-0.122	-0.101
	(0.086)	(0.094)	(0.089)	(0.086)	(0.083)	(0.087)
Observations	195	195	195	195	195	195
Strata FE	yes	Yes	yes	yes	yes	yes
Control variables	yes	Yes	yes	yes	yes	yes

Note: Robust standard errors in parenthesis.
*** p<0.01, ** p<0.05, * p<0.1

Figure 6 - Descriptive statistic of GEP score (Good selection sample)

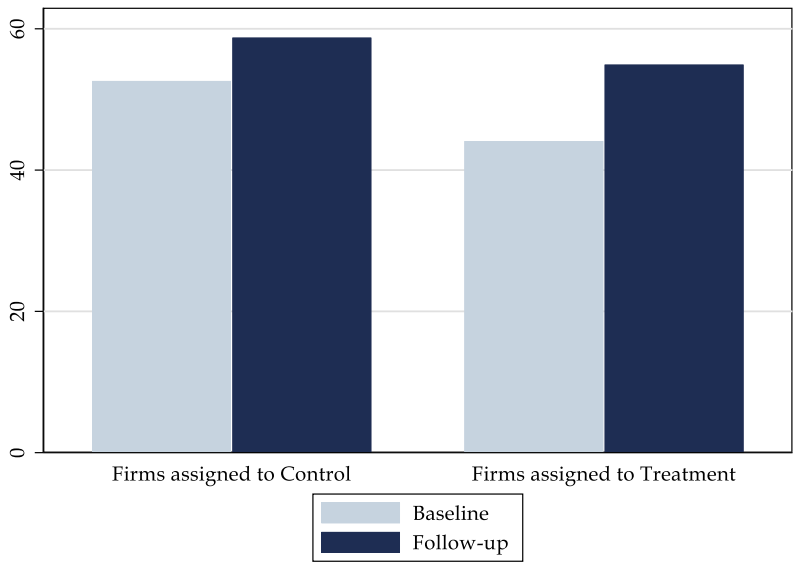


Table 9 – Impact of treatment on GEP scores by firm type: good selection

Panel A: Good selection (ANCOVA)

		Practices						
	Total score	Strategy	Market research and segmentation	Product design	Production	Communication	Distribution	Administration
*Treatment*Good selection*	**1.422**	7.093	-3.452	15.983	1.215	0.488	2.061	6.334
	(4.485)	(5.676)	(6.585)	(37.906)	(9.043)	(9.688)	(5.909)	(5.478)
*Treatment*Bad selection*	**2.463**	2.658	4.387	-14.920	-11.168	3.171	6.031	6.673
	(4.525)	(4.859)	(6.005)	(27.765)	(9.200)	(7.676)	(6.121)	(4.468)
Good selection	**2.124**	-3.756	4.934	-6.351	0.089	6.652	3.445	-0.097
	(4.779)	(5.190)	(6.549)	(7.668)	(4.818)	(5.935)	(6.229)	(5.513)
Observations	137	131	131	71	81	92	131	131
Strata FE	yes	yes	yes	yes	yes	yes	yes	yes
Control variables	yes	yes	yes	yes	yes	yes	yes	yes

Panel B: Good selection (Diff-in-Diff)

		Practices						
	Total score	Strategy	Market research and segmentation	Product design	Production	Communication	Distribution	Administration
*Treatment*Good selection*	**4.870**	9.327*	0.288	40.833	7.333	4.848	6.635	5.865
	(4.567)	(5.165)	(6.415)	(62.809)	(13.641)	(8.813)	(6.253)	(7.013)
*Treatment*Bad selection*	**5.951**	7.882	9.497	-2.411	-4.507	5.997	11.379**	9.323*
	(4.283)	(5.680)	(6.032)	(16.391)	(8.651)	(6.375)	(5.677)	(5.023)
Good selection	**2.423**	-3.103	4.876	-6.161	1.974	5.626	4.940	2.429
	(4.527)	(5.337)	(5.917)	(7.658)	(5.775)	(5.580)	(5.976)	(6.350)
Observations	296	284	284	152	172	202	284	284
Strata, Firm and Year FE	yes	yes	yes	yes	yes	yes	yes	yes

Note: Robust standard errors in parenthesis (Panel A) and standard errors clustered at the firm level (Panel B) in parenthesis.
*** p<0.01, ** p<0.05, * p<0.1

Table 10 – Impact of change in practices by firm type: good selection

Panel A: Good selection (ANCOVA)

	Export value (IHS)					
	2018	2019	2020	2021	2022	2023
*Diff practices*Good selection*	0.682	0.632	1.063	0.853	1.008	0.929
	(0.724)	(0.680)	(1.165)	(0.976)	(1.137)	(1.112)
*Diff practices*Bad selection*	0.056	-0.029	-0.095	-0.172	-0.104	0.159
	(0.158)	(0.176)	(0.250)	(0.272)	(0.259)	(0.266)
Good selection	-5.048	-5.013	-8.980	-8.270	-8.409	-6.222
	(5.441)	(5.059)	(8.755)	(7.353)	(8.579)	(8.471)
F-Statistic	1.102	1.102	1.102	1.102	1.102	1.102
	Exporter					
	2018	2019	2020	2021	2022	2023
*Diff practices*Good selection*	0.056	0.044	0.088	0.071	0.087	0.078
	(0.062)	(0.048)	(0.099)	(0.083)	(0.099)	(0.095)
*Diff practices*Bad selection*	0.006	-0.002	-0.011	-0.016	-0.012	0.015
	(0.013)	(0.014)	(0.022)	(0.023)	(0.022)	(0.022)
Good selection	-0.417	-0.365	-0.762	-0.707	-0.755	-0.520
	(0.476)	(0.369)	(0.762)	(0.645)	(0.774)	(0.741)
F-Statistic	1.004	1.004	1.004	1.004	1.004	1.004
	ln export value					
	2018	2019	2020	2021	2022	2023
*Diff practices*Good selection*	0.177	0.114	0.361	0.071	0.220	0.283
	(0.782)	(0.462)	(2.285)	(0.292)	(0.424)	(5.102)
*Diff practices*Bad selection*	-0.019	0.058	0.190	-0.018	-0.007	-0.236
	(0.327)	(0.178)	(1.237)	(0.123)	(0.160)	(2.441)
Good selection	-1.183	0.316	-0.540	-0.765	-1.742	-4.494
	(8.971)	(4.746)	(7.057)	(2.565)	(5.127)	(62.790)
F-Statistic	0.019	0.091	0.012	0.132	0.183	0.003
Observations	137/79	137/78	137/71	137/68	137/67	137/61
Strata FE	yes	Yes	yes	yes	yes	yes
Control variables	yes	Yes	yes	yes	yes	yes

Note: Robust standard errors in parenthesis. The number of observations is 137 for Export value (IHS) and Exporter, the lower number refers to ln export value. The change in practices is instrumented by the random assignment of the treatment.
*** p<0.01, ** p<0.05, * p<0.1

Appendix I

20 good exporting practices

Area A: Strategy

The "Strategy" area includes defining the role of exports and planning export activities as a growth channel for the firm.

Practice 1: Definition of the export role. This practice involves defining and explaining the role of exports within the firm's business strategy. Exporting may serve as a channel for growth, risk diversification, or the placement of surplus products from the domestic market, among other purposes. Clearly articulating the role of exports allows firms to integrate them effectively into their overall business strategy.

Practice 2: Planning the export business as a growth channel for the firm. This practice involves systematically planning export activities by assessing, processing, and analyzing the firm's capabilities and resources. It includes identifying the need to develop them, setting objectives across functional areas, and continuously monitoring the implementation of these plans. Defining strategic priorities – such as the relative importance of domestic versus export markets– and the specific objectives of exporting helps align all areas of the firm. Establishing these priorities fosters commitment across departments and provides clear objectives to guide their operations.

Area B: Market identification and segmentation

The "Market identification and segmentation" area covers the analysis of both potential and current export markets. It includes market evaluation, segmentation, and defining positioning within selected markets.

Practice 3: Market evaluation. This practice involves systematically analyzing foreign markets to select target markets. It requires gathering information on demand, distribution channels, competition, pricing, regulations, and market growth prospects. Selecting a target market involves determining which markets to enter. Exporting firms must thoroughly understand external markets to make strategic decisions regarding market entry, product offerings, positioning, and distribution channels (Barkema et al., 1997; Milesi et al., 2007). Unlike in domestic markets –where firms often have an inherent understanding of market conditions– export markets require systematic research to compensate for the lack of firsthand experience.

Practice 4: Market segmentation. This practice involves analyzing buyer groups using various segmentation criteria, including geographic, demographic, psychographic (e.g., social class, lifestyle,

personality), and behavioral factors (e.g., purchase occasions, usage rates, desired benefits). It requires a deep understanding of target markets, including functional, symbolic, and aspirational consumer needs, as well as preferences, tastes, and consumption habits. Effective segmentation enables firms to assess how well their products meet market demands and identify necessary adjustments. Additionally, segmentation informs product design, improving product-market fit and ultimately enhancing export performance.

Practice 5: Defining the positioning in the selected market. This practice entails identifying the unique attributes that differentiate the firm's products from competitors. It requires understanding consumer needs –both functional and symbolic–and defining how the product will address them. Clear positioning serves as a strategic guide for production, communication, and distribution decisions. By explicitly defining what sets its products apart, a firm ensures consistency in messaging, branding, and marketing efforts. Successful positioning also relies on a thorough analysis of the target market segment to align differentiation strategies with consumer expectations.

Area C: Product design and adaptation

The "Product design and adaptation" area focuses on analyzing export products, including reviewing and adapting product designs.

Practice 6: Definition of the product design. This practice involves planning the design of products for foreign markets based on prior market segmentation and positioning strategies. It includes evaluating a product's export potential, developing new products, or modifying existing ones to meet international consumer preferences. Additionally, it considers technical requirements such as certifications and regulatory approvals. Reviewing product design is essential for firms, as it determines the feasibility of adapting domestically marketed products for export. Addressing cultural and market-specific differences in product design ensures greater alignment with foreign consumers. This process requires close collaboration with the production department to maintain product quality throughout manufacturing (Artopoulos et al., 2013). Effective product design enhances both productivity and export performance (Milesi et al., 2007; Atkin et al., 2017).

Practice 7: Adaptation of the product design. This practice involves implementing the decisions made during the product design review. It includes professionally designing and developing new products or modifying existing ones. Firms must employ design professionals and utilize specialized tools to tailor products to foreign market preferences while documenting all design decisions. Professionalized product design is critical for exporters, as it enables them to create differentiated products based on market analysis while considering production and supply constraints (Milesi et al., 2007; Artopoulos et al., 2011, 2013; González et al., 2012; Atkin et al., 2017). Product design adaptation may also necessitate improvements in production processes to enhance overall product quality.

Area D: Production

The "Production" area includes practices related to the supply of inputs and production processes. This area includes the practices of production planning, assuring product quality and generating of commitments with suppliers.

Practice 8: Production planning. This practice involves organizing production to meet the delivery and replenishment timelines required by foreign markets. Developed markets, in particular, have strict delivery schedules, and many industries operate on fixed commercial calendars that exporters must adhere to. To ensure timely deliveries, firms should implement production planning and inventory management systems and gather data on product demand cycles.

Practice 9: Ensuring the quality of the products. This practice focuses on producing goods that meet international quality standards while maintaining consistency over time. Exporters must adapt their inputs and production processes to meet these requirements. Unlike domestic markets in developing countries –where defective products may go unsanctioned– foreign consumers demand high-quality standards and reject subpar goods (Artopoulos et al., 2012; Atkin et al., 2017). Ensuring consistent quality improves productivity and export performance. Studies highlight product quality as a key determinant of export success (Milesi et al., 2007; Easterly & Reshef, 2010).

Practice 10: Fostering commitment with suppliers. This practice involves establishing long-term relationships with suppliers to ensure timely delivery and product quality. Reliable suppliers help firms maintain consistent input quality, meet production schedules, and fulfill export orders on time. Strengthening supplier relationships also facilitates joint product development efforts, expanding production possibilities. Close collaboration with suppliers fosters innovation by enabling a continuous exchange of information on new materials and components. A best practice for exporters is to invest in building both professional and personal relationships with key suppliers to enhance commitment and reliability.

Area E: Communication

The "Communication" area includes corporate identity management, packaging redesign, and promotional efforts in distribution channels.

Practice 11: Corporate identity management. This practice involves developing a consistent corporate identity for SMEs. Corporate identity helps firms communicate a cohesive brand message across different platforms, including packaging, websites, brochures, and catalogs. Effective brand management includes verifying trademark availability in foreign markets and assessing brand acceptance. A strong corporate identity reinforces product differentiation and ensures a unified message to foreign consumers, who may have little prior knowledge of the brand.

Practice 12: Redesign of packaging and accessories. This practice focuses on adapting packaging to meet foreign market requirements. It includes ensuring product preservation, facilitating transportation, and modifying labels for language, mandatory information, and metric conversions. Additionally, it involves designing complementary materials such as user manuals. Packaging redesign must align with international transport and storage standards to prevent damage and streamline logistics.

Practice 13: Development of dissemination actions with the distribution channels. This practice involves developing strategies to promote brands and products through foreign distribution channels. These promotional efforts can include both formal advertising and informal outreach. Collaborating with distribution channels presents a challenge for exporting SMEs, not only due to financial constraints but also because of the trust-based relationships required. However, these collaborations are crucial for successful international market entry. Coordinating dissemination efforts with distributors increases brand awareness and enhances export performance.

Area F: Distribution

The "Distribution" area covers the evaluation and selection of distribution channels, building trust and commitment with these channels, managing logistics for timely delivery, and providing after-sales services.

Practice 14: Evaluation and selection of distribution channels. This practice involves analyzing and selecting distribution channels based on their ability to represent the firm's brand and products in foreign markets. Key factors to consider include territorial coverage, product mix, storage capacity, client profiles, promotional practices, and sales staff availability. A rigorous assessment of distribution channels is essential, as they ensure the proper placement of products in target markets. Selection should align with the firm's delivery capabilities and desired profit margins.

Practice 15: Building trust with the distribution channels. This practice focuses on establishing trust-based relationships with foreign distributors. Trust is a crucial factor for developing a stable export market in the medium term (Artopoulos et al., 2013; González et al., 2012). Distribution channels serve a dual role: they are strategic partners in product positioning and valuable sources of market intelligence. Research indicates that successful exporters maintain regular communication with their customers through visits and invitations (Milesi et al., 2007). Firms adopting this practice often engage in various activities to demonstrate reliability and product consistency.

Practice 16: Building a relationship of commitment with the distribution channels. This practice involves establishing long-term commitment with distribution channels by honoring contracts and agreements. Commitment also entails maintaining a continuous exchange of information on buyer

behavior and potential market opportunities. By fostering strong relationships, exporting firms can improve market positioning and identify growth prospects.

Practice 17: Logistics management for the delivery of the products in a timely manner. This practice focuses on managing logistics efficiently to ensure timely product delivery to distribution channels. As previously mentioned, foreign markets expect firms to meet strict delivery and replenishment deadlines. To achieve this, exporting firms must not only plan production schedules but also implement effective inventory management processes to prevent stockouts and delays.

Practice 18: Provision of after sales services. This practice involves offering guarantees and post-sale support to distribution channels or customers. After-sales services enhance the perceived value of a product and are an important differentiator in competitive export markets. Exporting firms must design guarantee policies that align with the expectations and legal requirements of target markets, ensuring both distributors and end consumers receive adequate support.

Area G: Administration

The "Administration" area includes adapting the firm's administrative structure and systems to facilitate export operations, as well as establishing pricing and financing policies for distribution channels.

Practice 19: Adaptation of the administrative structure and systems. This practice involves modifying the firm's administrative structure and systems to meet the requirements of international trade operations. In many cases, this entails adopting modern accounting systems and financial mechanisms for handling transactions with foreign firms. Research suggests that export success is closely linked to the proper adaptation of administrative structures and systems (Milesi et al., 2007).

Practice 20: Establishment of a pricing and financing policy for distribution channels. This practice involves developing differentiated pricing and financing policies for foreign distribution channels. It includes setting discount structures and financing terms to enhance market competitiveness. Before engaging with potential distribution partners, exporting firms must thoroughly understand their cost structures to establish pricing strategies that ensure attractive profit margins while maintaining market sustainability.

Appendix II

Stratified randomization process

The randomization process among eligible applicants took place in two steps. First, using enrollment and administrative data, we generated strata based on firm location and employment. We divided the sample into two groups based on location: firms from Buenos Aires, Santa Fe, or Córdoba (which we refer to as the "Pampas Area") and firms from the rest of the country. This resulted in 90 firms from the Pampas Area and 123 from the rest of the country.

Within each of these two groups, we further stratified firms into nine groups based on employment. Specifically, we created nine groups of 10 firms in the Pampas Area. For firms from the rest of the country, we formed seven groups of 14 firms, one group of 13 firms, and one group of 12 firms. Firms were randomly assigned to those groups.

Next, within each stratum, we randomly assigned firms to the consulting intervention. In the Pampas Area groups, we assigned five firms to the treatment and five to the control group. In the remaining groups, we assigned seven firms to the treatment and seven to the control, except for the groups with 13 firms –where we assigned seven firms to the treatment and six to the control group– and 12 firms –where we assigned six firms to the treatment and six to the control group–.

Appendix III

Additional results

Table A.1 - T-test of attrition analysis

Panel A: Within non attritors				
	Treatment	Control	Difference	P-value
Pre-treatment outcomes				
Export value (IHS)	7.93	8.31	-0.38	0.75
	(7.06)	(7.14)	(1.17)	
Probability of export	0.57	0.59	-0.02	0.81
	(0.50)	(0.50)	(0.08)	
Number of destinations	3.96	3.96	0.00	0.99
	(7.81)	(7.30)	(1.25)	
N	77	71	148	
ln *export value*	13.19	13.36	-0.17	0.69
	(1.90)	(2.09)	(0.43)	
Export quality ($)	28,927	24,528	4,399	0.24
	(18,034)	(16,665)	(3,749)	
N	44	42	86	
Pre-treatment characteristics				
Number of employees	104.1	75.1	-29.0	0.61
	(445.0)	(117.9)	(56.5)	
Average salary	17,908.2	18,612.3	-704.1	0.63
	(8,188.4)	(8,998.5)	(1,468.4)	
N	71	66	137	
Differentiated	0.77	0.69	0.08	0.30
	(0.43)	(0.47)	(0.07)	
Early enrollment	0.47	0.49	-0.03	0.76
	(0.50)	(0.50)	(0.08)	
Good Selection	0.36	0.34	0.03	0.75
	(0.48)	(0.48)	(0.08)	
N	77	71	148	

Panel B: Within total sample

	Treatment	Control	Difference	P-value
Proportion of non attritors	0.72	0.67	0.05	0.43
	(0.45)	(0.47)	(0.06)	
N	107	106	213	

Panel C: Between non attritors and attritors

	Non attritors	Attritors	Difference	P-value
Pre-treatment outcomes				
Export value (IHS)	8.11	9.17	-1.05	0.32
	(7.08)	(7.08)	(1.05)	
Probability of export	0.58	0.65	-0.07	0.37
	(0.50)	(0.48)	(0.07)	
Number of destinations	3.96	3.98	-0.03	0.98
	(7.55)	(7.50)	(1.12)	
N	148	65	213	
ln *export value*	13.27	13.49	-0.22	0.58
	(1.98)	(2.32)	(0.39)	
Export quality ($)	26,779	22,602	4,176	0.20
	(17,417)	(17,049)	(3,256)	
N	86	42	128	
Pre-treatment characteristics				
Number of employees	90.1	71.9	18.2	0.68
	(329.8)	(110.4)	(44.4)	
Average salary	18,247.4	17,375.2	872.2	0.53
	(8,563.6)	(9,461.2)	(1,384.5)	
N	137	58	195	
Differentiated	0.73	0.71	0.02	0.74
	(0.45)	(0.46)	(0.07)	
Early enrollment	0.48	0.54	-0.06	0.43
	(0.50)	(0.50)	(0.07)	
Good Selection	0.35	0.38	-0.03	0.64
	(0.48)	(0.49)	(0.07)	
N	148	65	213	

Table A.2 – Impact of treatment on alternative outcomes

Panel A: ANCOVA

	Export destinations					
	2018	2019	2020	2021	2022	2023
Treatment	0.032	-0.327	-0.495	-0.290	-0.456	-0.178
	(0.295)	(0.454)	(0.555)	(0.674)	(0.840)	(0.841)
ln *# of employees 2017*	0.140	0.577	0.364	0.445	0.304	0.641
	(0.150)	(0.350)	(0.444)	(0.415)	(0.519)	(0.531)
ln *average salary 2017*	0.379	0.724*	1.001**	1.065*	0.762	0.867
	(0.247)	(0.373)	(0.449)	(0.574)	(0.653)	(0.624)
Export destinations 2017	0.972***	0.940***	0.934***	0.913***	0.846***	0.774***
	(0.029)	(0.048)	(0.066)	(0.084)	(0.102)	(0.095)
	Export quality					
	2018	2019	2020	2021	2022	2023
Treatment	-472	2,786	-1,310	-1,998	-2,557	-3,872
	(1,691)	(2,801)	(2,724)	(2,769)	(2,801)	(3,625)
ln *# of employees 2017*	504	-447	-1,122	-511	-1,332	-1,766
	(822)	(893)	(1,118)	(1,618)	(1,843)	(1,966)
ln *average salary 2017*	654	809	3,628	-265	3,208	-2,494
	(1,464)	(2,651)	(2,570)	(2,931)	(2,970)	(4,205)
Export quality 2017	0.863***	0.774***	0.817***	0.754***	0.797***	0.674***
	(0.042)	(0.074)	(0.065)	(0.077)	(0.075)	(0.081)
Observations	195/116	195/111	195/104	195/101	195/99	195/91
Strata FE	yes	yes	yes	yes	yes	yes
Control variables	yes	yes	yes	yes	yes	yes

Panel B: Diff-in-Diff

	Export destinations					
	2018	2019	2020	2021	2022	2023
Treatment	0.011	-0.463	-0.786	-0.617	-0.797	-0.555
	(0.326)	(0.492)	(0.582)	(0.690)	(0.841)	(0.889)
	Export quality					
	2018	2019	2020	2021	2022	2023
Treatment	-764	1,266	-2,419	-1,972	-3,982	-5,787*
	(1,783)	(2,483)	(2,578)	(2,923)	(2,623)	(3,248)
Observations	426/240	426/230	426/212	426/206	426/202	426/186
Strata, Firm and Year FE	yes	yes	yes	yes	yes	yes

Note: Robust standard errors (Panel A) and standard errors clustered at the firm level (Panel B) in parenthesis. The number of observations is 195 for Export destinations (Panel A), 426 for Export destinations (Panel B), the lower number refers to Export quality.
*** p<0.01, ** p<0.05, * p<0.1

Table A3 – Descriptive statistics of GEP scores

Panel A: Pre-treatment

	Mean	SD	Min	Max	p10	p25	p50	p75	p90	N
Total practices	**48.5**	**20.8**	**1**	**96**	**19**	**32**	**51**	**65**	**75**	**148**
Treatment	44.4	21.3	1	96	19	29	41	61	75	77
Control	53.1	19.4	5	94	27	40	58	67	73	71

Panel B: Post-treatment

	Mean	SD	Min	Max	p10	p25	p50	p75	p90	N
Total practices	**56.0**	**22.4**	**6**	**98**	**25**	**38**	**58**	**74**	**84**	**148**
Treatment	54.4	22.4	10	97	23	37	57	73	84	77
Control	57.6	22.4	6	98	29	42	60	76	84	71

Table A.4 – Impact of treatment by firm type: differentiated and early enrollment

Panel A: Differentiated (Diff-in-Diff)

	Export value (IHS)					
	2018	2019	2020	2021	2022	2023
*Treatment*Differentiated*	0.798	0.169	0.635	0.014	0.634	0.362
	(0.801)	(0.903)	(1.102)	(1.116)	(1.125)	(1.206)
*Treatment*Non differentiated*	-0.072	-1.590	-2.935	-2.217	-1.409	0.307
	(1.632)	(2.264)	(2.351)	(2.488)	(2.793)	(2.854)
Differentiated	-0.409	-0.194	-0.920	-1.046	-0.891	0.347
	(0.614)	(0.845)	(0.877)	(0.919)	(0.982)	(1.217)
	Exporter					
	2018	2019	2020	2021	2022	2023
*Treatment*Differentiated*	0.078	0.014	0.054	0.009	0.074	0.062
	(0.069)	(0.074)	(0.087)	(0.089)	(0.088)	(0.095)
*Treatment*Non differentiated*	0.011	-0.094	-0.199	-0.147	-0.105	0.061
	(0.127)	(0.165)	(0.167)	(0.175)	(0.194)	(0.195)
Differentiated	-0.030	-0.017	-0.085	-0.099	-0.096	-0.002
	(0.050)	(0.071)	(0.072)	(0.076)	(0.079)	(0.092)
	ln export value					
	2018	2019	2020	2021	2022	2023
*Treatment*Differentiated*	-0.005	-0.017	0.129	-0.007	-0.095	-0.121
	(0.249)	(0.334)	(0.426)	(0.455)	(0.501)	(0.487)
*Treatment*Non differentiated*	-0.198	-0.090	-0.105	-0.113	0.371	-0.443
	(0.340)	(0.299)	(0.391)	(0.568)	(0.477)	(0.581)
Differentiated	-0.081	0.008	0.117	0.095	0.159	0.020
	(0.170)	(0.191)	(0.312)	(0.339)	(0.418)	(0.473)
Observations	426/240	426/230	426/212	426/206	426/202	426/186
Strata, Firm and Year FE	yes	yes	yes	yes	yes	yes

Note: Standard errors clustered at the firm level in parenthesis. The number of observations is 426 for Export value (IHS) and Exporter, the lower number refers to ln export value.
*** p<0.01, ** p<0.05, * p<0.1

Panel B: Early enrollment (Diff-in-Diff)

	Export value (IHS)					
	2018	2019	2020	2021	2022	2023
*Treatment*Early enrollment*	0.940	0.326	1.348	0.984	1.899	2.200
	(1.230)	(1.366)	(1.630)	(1.669)	(1.652)	(1.763)
*Treatment*Late enrollment*	0.385	-0.602	-1.503	-1.812	-1.273	-1.115
	(0.770)	(1.002)	(1.105)	(1.114)	(1.315)	(1.408)
Early enrollment	0.800	0.649	-0.041	-0.138	0.191	-0.723
	(0.667)	(0.845)	(0.898)	(0.954)	(0.955)	(1.114)
	Exporter					
	2018	2019	2020	2021	2022	2023
*Treatment*Early enrollment*	0.089	0.034	0.133	0.102	0.183	0.223*
	(0.104)	(0.109)	(0.128)	(0.129)	(0.128)	(0.134)
*Treatment*Late enrollment*	0.046	-0.043	-0.125	-0.146*	-0.097	-0.073
	(0.065)	(0.080)	(0.083)	(0.085)	(0.096)	(0.104)
Early enrollment	0.056	0.036	-0.016	-0.034	-0.011	-0.081
	(0.057)	(0.071)	(0.073)	(0.079)	(0.077)	(0.087)
	ln export value					
	2018	2019	2020	2021	2022	2023
*Treatment*Early enrollment*	0.028	-0.098	-0.441	-0.365	-0.093	-0.314
	(0.321)	(0.365)	(0.461)	(0.482)	(0.528)	(0.603)
*Treatment*Late enrollment*	-0.117	0.021	0.507	0.268	0.189	-0.097
	(0.244)	(0.339)	(0.433)	(0.500)	(0.552)	(0.509)
Early enrollment	0.130	0.289	0.297	0.132	0.143	-0.067
	(0.185)	(0.205)	(0.322)	(0.329)	(0.384)	(0.416)
Observations	426/240	426/230	426/212	426/206	426/202	426/186
Strata, Firm and Year FE	yes	yes	yes	yes	yes	yes

Note: Standard errors clustered at the firm level in parenthesis. The number of observations is 426 for Export value (IHS) and Exporter, the lower number refers to ln export value.
*** p<0.01, ** p<0.05, * p<0.1

Table A.5 – Impact of treatment on alternative outcomes by firm type

Panel A: Differentiated (ANCOVA)

	Export destinations					
	2018	2019	2020	2021	2022	2023
*Treatment*Differentiated*	0.153	0.339	0.773	0.983*	1.277*	0.983
	(0.318)	(0.478)	(0.480)	(0.588)	(0.700)	(0.670)
*Treatment*Non Differentiated*	-0.184	-1.890*	-3.868**	-3.642*	-5.046*	-3.213
	(0.647)	(1.091)	(1.659)	(2.045)	(2.664)	(2.675)
Differentiated	-0.427	-1.452**	-1.770***	-1.852**	-2.471**	-1.743
	(0.349)	(0.664)	(0.678)	(0.812)	(1.111)	(1.174)
	Export quality					
	2018	2019	2020	2021	2022	2023
*Treatment*Differentiated*	-853	3,914	-145	-1,698	-1,674	-1,991
	(2,260)	(3,818)	(3,463)	(3,833)	(3,559)	(4,548)
*Treatment*Non Differentiated*	1,337	814	-3,666	-1,833	-3,359	-6,317
	(2,215)	(3,648)	(4,365)	(4,086)	(4,519)	(5,552)
Differentiated	-2,407	-1,995	-616	-1,479	-2,051	-3,736
	(1,601)	(2,009)	(2,435)	(2,835)	(3,045)	(3,638)

Panel B: Early enrollment (ANCOVA)

	Export destinations					
	2018	2019	2020	2021	2022	2023
*Treatment*Early enrollment*	0.072	0.635	-0.680	-0.632	-0.762	-0.035
	(0.496)	(0.611)	(0.847)	(1.071)	(1.382)	(1.491)
*Treatment*Late enrollment*	0.012	-1.150	-0.395	-0.094	-0.259	-0.305
	(0.369)	(0.749)	(0.808)	(0.919)	(1.035)	(0.932)
Early enrollment	0.079	-0.756	-0.307	-0.498	-0.273	-0.152
	(0.334)	(0.514)	(0.536)	(0.620)	(0.761)	(0.857)
	Export quality					
	2018	2019	2020	2021	2022	2023
*Treatment*Early enrollment*	638	1,415	-2,846	1,261	-2,632	-3,726
	(2,729)	(3,650)	(3,818)	(4,208)	(4,160)	(5,011)
*Treatment*Late enrollment*	-1,291	4,020	388	-5,161	-2,467	-3,527
	(2,266)	(4,185)	(3,910)	(3,975)	(3,813)	(5,635)
Early enrollment	44	612	213	-2,419	14	-1,231
	(1,909)	(2,132)	(2,413)	(2,787)	(2,616)	(3,238)
Observations	195/116	195/111	195/104	195/101	195/99	195/91
Strata FE	yes	yes	yes	yes	yes	yes
Control variables	yes	yes	yes	yes	yes	yes

Note: Robust standard errors in parenthesis. The number of observations is 195 for Export destinations, the lower number refers to Export quality.
*** p<0.01, ** p<0.05, * p<0.1

Panel C: Good selection (ANCOVA)

	Export destinations					
	2018	2019	2020	2021	2022	2023
*Treatment*Good selection*	0.089	1.260**	0.714	1.050	1.739**	1.893**
	(0.547)	(0.613)	(0.641)	(0.753)	(0.861)	(0.866)
*Treatment*Bad selection*	0.002	-1.083*	-1.061	-0.911	-1.486	-1.150
	(0.339)	(0.594)	(0.728)	(0.899)	(1.206)	(1.184)
Good selection	0.023	-1.038**	-1.019**	-1.250**	-1.772**	-1.654**
	(0.304)	(0.446)	(0.475)	(0.521)	(0.709)	(0.760)
	Export quality					
	2018	2019	2020	2021	2022	2023
*Treatment*Good selection*	639	2,906	117	2,585	163	-1,577
	(3,678)	(5,927)	(5,567)	(6,961)	(6,775)	(7,030)
*Treatment*Bad selection*	-898	2,848	-2,022	-4,337	-3,818	-4,997
	(1,970)	(3,785)	(3,528)	(3,173)	(3,128)	(4,709)
Good selection	-1,353	-1,109	-194	-1,121	-961	-530
	(2,319)	(2,826)	(2,994)	(3,717)	(3,380)	(3,969)
Observations	195/116	195/111	195/104	195/101	195/99	195/91
Strata FE	yes	yes	yes	yes	yes	yes
Control variables	yes	yes	yes	yes	yes	yes

Note: Robust standard errors in parenthesis. The number of observations is 195 for Export destinations, the lower number refers to Export quality.
*** p<0.01, ** p<0.05, * p<0.1

Table A.6 – Impact of treatment on practices by firm type: differentiated and early enrollment

Panel A: Differentiated (ANCOVA)	
	Total score
*Treatment*Differentiated*	1.090
	(3.729)
*Treatment*Non differentiated*	4.617
	(6.229)
Differentiated	2.632
	(5.145)

Panel B: Early enrollment (ANCOVA)	
	Total score
*Treatment*Early enrollment*	3.690
	(4.100)
*Treatment*Late enrollment*	0.855
	(4.922)
Early firm	-1.492
	(4.855)
Observations	137
Strata FE	yes
Control variables	yes