



**THE EFFECTS OF TRADE
AND INVESTMENT
PROMOTION:
WHAT DO WE KNOW?**

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Outline

- **The Rationale for Trade and Investment Promotion**
- **Is There Actually a Rationale?**
- **The Effects of Trade and Investment Promotion: What and How**
- **The Effects of Trade and Investment Promotion: Evidence**
- **The Gaps and this Workshop**

The Rationale for Trade and Investment Promotion

- Economically, public interventions in the form of trade and investment promotion might be justified on the basis of market failures, primarily in the form of:
 - information externalities;
 - other sources of externalities; and
 - coordination failures.
- But their existence does not linearly imply interventions, as these have risks and costs...

The Rationale for Trade and Investment Promotion

Information Externalities

- Relevant, accurate, and timely information is a key input to effective marketing decisions.
- This is particularly true for firms operating beyond national boundaries.
- Firms must learn the export process at home, the different ways of shipping the merchandise and their associated costs, the potential markets abroad and their demand profile, the conditions for entering these markets, and channels available to raise awareness of their products and to market them.

The Rationale for Trade and Investment Promotion

Information Externalities

- Firms pursuing cross-border economic opportunities must specifically engage in a costly process of identifying and assessing the reliability, trustworthiness, timeliness, and capabilities of potential trade partners.
- Both survey-based and econometric studies (Rauch and Trindade, 2002; and Feenstra and Hanson, 2004) suggest that lack of information is a relevant barrier for doing business overseas.

The Rationale for Trade and Investment Promotion

Information Externalities

- Information generated by successful searches for foreign buyers may spill over other firms through customs documents, customer lists, and other referrals, employee circulation, and informal information transfers across nearby firms (Rauch, 1996).
- Given that it is difficult to exclude third parties from information and that its use is non-rivalrous, there is a potential for free riding on these successful searches. This is particularly true when companies attempt to enter a new market or to trade a new product.
- Private returns from these exporting activities would be lower than the corresponding social returns, and investment in their development would then be sub-optimally low.



The Rationale for Trade and Investment Promotion

Other Sources of Externalities

- Externalities may also originate from:
 - managerial practices and training activities;
 - technological change; and
 - production linkages of exporters, in general, and multinational firms, in particular.

The Rationale for Trade and Investment Promotion

Other Sources of Externalities

- Exporters can adopt efficient and competitive management styles and provide employees with higher quality training, which may potentially benefit non-exporting firms via turnover of managers and employees (Kessing, 1967; Feder, 1983; and Edwards, 1993).
- Externalities related to technological development may be extensive due to the imperfect tradeability of technology (Westphal, 1990).
- In particular, (multinational) exporting companies may transfer knowledge and provide suppliers with technical assistance and allow for access to new (or improved) inputs by firms in downstream industries (Rodriguez-Clare, 1996; and Kugler, 2001).

The Rationale for Trade and Investment Promotion

Coordination Failures

- Coordination failures may imply that collective action at the sector level may lead to productivity gains and might also potentially provide a rationale for public intervention in this area (Harrison and Rodriguez-Clare, 2009).
- This can be specifically the case with complementary industries, i.e., activities related through backward and forward linkages (Trindade, 2005), and applies to the experience of clusters at the local level (Rodriguez-Clare, 2007).

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Is There Actually a Rationale?

- A number of studies present evidence of:
- **export spillovers**, either associated with employee circulation (Mion and Opromolla, 2010; Choquette and Meinen, 2011) or spatial agglomeration (Koenig, 2010; and Koenig et al., 2011); and
- **productive vertical spillovers** from FDI to local firms, particularly in the supplying industries (Aitken et al., 1997; Lopez-Córdova, 2002; Blalock and Gertler, 2003; Javorcik, 2004; Greenaway et al., 2004; Kugler, 2006; Liu., 2008; Gorodnichenko et al., 2008; and Javorcik and Spatareanu, 2009, 2012).

Is There Actually a Rationale?

- **Spillovers, however, are far from automatic and generalized.**
- New products that are introduced by pioneering firm that survive in foreign markets tend to have more followers that are generally larger. This is consistent with the idea that these companies either learn from the successes or avoid the failures of the pioneers.
- There are sectors in which pioneering firms enjoy a first-mover advantage and almost no followers appear, which can be typically the case of goods with large production scale and small number of producers and thus potential exporters (Wagner and Zahler, 2011).

Is There Actually a Rationale?

- Not all exports create the same external effects. Some preconditions need to be met.
- Firms that succeed in international markets undergo a previous preparation process by investing in new technologies, hiring workers from other exporting companies, and upgrading their products (Álvarez and López, 2005; Molina and Muendler, 2010; Iacovone and Javorcik, 2012).
- These firms, when pioneering the introduction of new export products or the penetration of new destinations, are more likely to generate successful imitation as opposed to less ready-to-export firms (Artopoulos et al, 2010).

Is There Actually a Rationale?

- Similarly, the intensity of externalities from FDI may be asymmetric across sectors as some activities have stronger and more diversified linkages with the rest of the economy and this may even differ across countries (Volpe Martincus and Gallo, 2009).
- Even within sectors, such externalities may also arise only when “modern technologies” are used (Rodriguez-Clare, 2007). “Advanced sectors” in developed countries that behave as “backward sectors” in developing countries will likely fail to generate externalities (Harrison and Rodriguez-Clare, 2009).
- Deriving benefits from FDI may also depend on the available human capital (Borensztein et al., 1998), the degree of financial development (Alfaro et al., 2004), and the level of openness to trade (Balasubramanyam et al., 1996).

Is There Actually a Rationale?

- Some analyses even directly fail to identify spillovers.
- Barrios et al. (2003) and Bernard and Jensen (2004) find no positive external effects stemming from exporting in Spain and the US.
- Djankov and Hoekman (2000), Javorcik (2002), Lopez-Córdova (2002), and Damijan et al. (2001) do not detect positive horizontal spillovers to firms within the same industry in the Czech Republic, Lithuania, Mexico, and eight transition countries.
- Importantly, our knowledge of the externalities specifically associated with interventions is rather limited.

Is There Actually a Rationale?

- **The existence of externalities or coordination failures is a necessary condition for intervention.**
- The evidence generally seems to point to the presence of spillovers, but they far from being a commonplace. Their magnitude and the extent to which interventions are accordingly calibrated cannot be considered well-established (Pack and Saggi, 2006).

Is There Actually a Rationale?

- The presence of externalities cannot be linearly assumed across the board. The potential for external effects is likely to differ across groups of firms and sectors.
- This has important implications for the design of public interventions in this area. Unless there are cross-good spillovers, there might be no reason to promote sectors where the number of third party beneficiaries is potentially small.

Is There Actually a Rationale?

- There are different channels through which spillovers can take place and their relative importance may differ (even if thinking of employee's circulation, externalities may take the form of transfer of technological and managerial capabilities or business contacts).
- This may not be neutral for the definition of the appropriate mix of policy instruments (e.g., information sharing on production technology or marketing strategy).

Is There Actually a Rationale?

- **Non-trivial complementarities can be expected.**
- The question should be addressed of to what extent does it pay off to intervene to correct an externality (e.g., associated with information gathering) without properly taking into account others that may also affect the outcomes of interest relative to operating on these externalities in an articulated way.

Is There Actually a Rationale?

- **The existence of externalities or coordination failures is not a sufficient condition for intervention.**
- Most interventions have their own costs –including opportunity costs- that need to be factored in, so that these are advisable only if they improve the social welfare (i.e., potential social benefits exceed the corresponding social costs).
- There are also obvious risks of resource diversion associated with potential rent-seeking activities and capture of the responsible agencies by specific interest groups that should not be underestimated.

Is There Actually a Rationale?

- This conditions the particular organizational designs and the type of interventions that would be recommendable, provided a proper justification for these interventions exist.
- The design of interventions calls for information and monitoring, while their effective implementation requires autonomy, skills, and impartiality (Lall, 2005).

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The Effects of Trade and Investment Promotion: What and How

- Trade and investment promotion actions can help attenuate information problems.
- They can lower the fixed costs that firms incur when entering specific new markets by reducing those costs associated with information gathering (e.g., carrying out overseas market studies on prices, standards, and potential buyers).
- Trade and investment promotion can then potentially facilitate the internationalization of companies and specifically their penetration into new country and/or product markets.
- Participation in global value chains raises specific challenges...

The Effects of Trade and Investment Promotion: What and How

- Effects of trade and investment promotion can be –and have been– examined from both a macro (country- or country-sector-level) and a micro (firm-level) perspective.
- In the former case, samples consist of one or several countries, while in the latter case, single-country case studies prevail.

The Effects of Trade and Investment Promotion: What and How

Intervention/Perspective	Macro Perspective	Micro Perspective
Trade Promotion	Unilateral: Coughlin and Cartwright (1987); Lederman et al. (2010)	Argentina (Volpe Martincus et al., 2012); Belgium (Schminke and van Biesebroeck, 2012); Canada (van Biesebroeck et al., 2011); Chile (Álvarez and Crespi, 2000; Álvarez, 2004; Volpe Martincus and Carballo, 2010); Colombia (Volpe Martincus and Carballo, 2010); Costa Rica (Volpe Martincus and Carballo, 2012); Denmark (Hiller, 2012 / Munch and Schaur, in progress); Netherlands (Creusen and Lejour, 2011); Peru (Volpe Martincus and Carballo, 2008); Sweden (Fergusson and Forslid, 2011); Tunisia (Cadot et al., 2011; 2012); Uruguay (Volpe Martincus and Carballo, 2010) Ireland (Georg et al., 2008); Germany (Girma et al., 2009); United States (Bernard and Jensen, 2004)
	Bilateral: Rose (2007); Nitsch (2007); Gil-Pareja et al. (2008, 2011); Segura-Cayuela and Vilarrubia (2008); Head and Ries (2010); Hawakaya et al. (2011); Yakop and Bergeijk (2011); Veenstra et al. (2011); Volpe Martincus et al. (2010, 2011)	
Investment Promotion	Unilateral: Morriset (2003); Harding and Javorcik (2011, 2012)	
	Bilateral: Hawakaya et al. (2011) (outward FDI)	



The Effects of Trade and Investment Promotion: What and How

- **Unilateral macro studies** examine the relationship between of expenditures on trade and investment promotion and total country exports and total inward foreign direct investments, mainly in a cross-sectional setting.
- OLS is the primary estimation method. IV (to account for potential endogeneity of budget) is also used. DID has been used when panel data were available (Hawakaya et al., 2010; Harding and Javorcik, 2011).

The Effects of Trade and Investment Promotion: What and How

- **Bilateral macro studies** examine the relationship between the presence/the number of diplomatic representations and offices of trade and investment promotion organizations of the exporting countries in the destination countries and the formers' level and diversification of exports by estimating *gravity equations* on both cross-sectional and panel data.
- Again, OLS is the primary estimation method. Variants include Poisson (to account for zeroes), IV (to account for potential endogeneity of foreign offices), and GMM (to account for potential serial correlation and endogeneity of foreign offices).

The Effects of Trade and Investment Promotion: What and How

- **Micro studies** assess the impact of trade promotion programs by carrying out a counterfactual analysis.
- Causal inference about the effect of these programs requires determining how participants would have performed if they had not participated.
- This other outcome is counterfactual and unobservable by definition, as is the difference between a firm's exports if it uses trade promotion services relative to what its exports would be in the absence of these services. Thus, the counterfactual outcome must somehow be recovered from the data available.

The Effects of Trade and Investment Promotion: What and How

- The common practice is to use non-supported firms as a control group. However, there may be systematic differences between supported and non-supported firms that may explain export performance. These difference should be accounted for to avoid biased impact estimates.
- Alternative methods have been proposed in the literature to control for firms' differing characteristics and to construct the correct sample counterpart for the missing information on the outcomes had the firms not received services when no randomized groups are available (e.g., Blundell and Costa Dias, 2009; and Imbens and Wooldridge, 2009).

The Effects of Trade and Investment Promotion: What and How

- Several methods have been used to assess the effects of interest:
- Difference-in-differences;
- Matching combined with difference-in-differences (SP and MP);
- Endogenous switching binary response models (Aakvik et al., 2005);
- Semi-parametric method for estimating quantile treatment effects (combined with difference-in-differences) (Firpo, 2007); and
- Double-robust estimation (Robins and Rotznisky, 1995) and GMM dynamic panel estimators, among others.

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The Effects of Trade and Investment Promotion: Evidence

Unilateral Macro Studies

- **Budget and Outcomes:** There is a positive relationship between resources invested in trade and investment promotion and exports and investments (Coughlin and Cartwright, 1987; Morrisset, 2003; and Lederman et al., 2006/2010).
- For instance, for the median organization in a cross-sectional sample covering around 80 countries, each 1 USD spent on trade promotion was found to increase exports by 40 USD.
- Extreme caution must be used when drawing inferences from these results.

The Effects of Trade and Investment Promotion: Evidence

Unilateral Macro Studies

- Accounting rules are far from homogeneous. The fraction of available resources specifically allocated to promotional actions varies significantly among organizations.
- Entities may target different activities and the budget size can accordingly vary across countries depending on the functions they have been assigned.
- There may be varying degrees of organizational fragmentation across countries. More generally, they operate in different environments.

The Effects of Trade and Investment Promotion: Evidence

Unilateral Macro Studies

- **Investment Promotion (Sectoral Targeting) and FDI:** Investment promotion is associated with FDI inflows to countries in which red tape and information asymmetries are severe (Harding and Javorcik, 2011).
- **The Way Organizations Operate and FDI:** Organizations that handle investors enquiries in a more professional manner and with better websites attract more FDI (Harding and Javorcik, 2012).

The Effects of Trade and Investment Promotion: Evidence

Bilateral Macro Studies

- **Foreign Offices and Exports:** Both diplomatic representations and offices of trade promotion organizations tend to be associated with larger exports (Rose, 2007; Gil-Pareja et al. 2008, 2011; Volpe Martincus et al., 2010, 2011; Hawakaya et al., 2011).
- **Foreign Offices and Level of Development:** Offices of trade promotion organizations and diplomatic representations are more effective in middle-income developing countries (Yakop and Bergeijk, 2011; Veenstra et al., 2011).

The Effects of Trade and Investment Promotion: Evidence

Bilateral Macro Studies

- **Type of Foreign Offices and Exports:** Embassies have a larger impact on exports than lower forms of diplomatic representations such as consulates (Moons, 2012).
- **Foreign Offices and Export Margins:** Effects are generally stronger on the overall extensive margin (Segura-Cayuela and Villarrubia, 2008) and the product extensive margin (Gil-Pareja et al. 2011; Volpe Martincus et al., 2011).
- **Type of Foreign Offices and Export Margins:** Offices of trade promotion organizations have a larger impact on the export product extensive margins than diplomatic representations (Gil-Pareja et al. 2011; Volpe Martincus et al., 2011).

The Effects of Trade and Investment Promotion: Evidence

Bilateral Macro Studies

- **Foreign Offices and Type of Trade:** Effects are generally stronger on exports of differentiated goods (Segura-Cayuela and Villarrubia, 2008; Volpe Martincus et al., 2010; Gil-Pareja et al. 2011) and on manufacturing products (Hawakaya et al., 2011).
- **Diplomatic Relations and Exports:** Several pre-2000 studies find that the existence of diplomatic relations is positively correlated with exports (Moons, 2012).

The Effects of Trade and Investment Promotion: Evidence

Bilateral Macro Studies

- **State Visits and Exports:** (France, Germany, and US) Official visits are positively correlated with exports. The effect of visits on bilateral export growth is strong, but short-lived, which is driven by repeated visits to a country (Nitsch, 2007).
- **Missions and Exports:** (Canadian) Trade missions do not seem to cause an increase in trade (Head and Ries, 2010).
- **Foreign Offices and Outward FDI:** Offices (of KOTRA and JETRO) abroad are effective in fostering outward FDI, especially in risky countries (Hawakaya et al., 2010).

The Effects of Trade and Investment Promotion: Evidence

Micro Studies

- **Trade Promotion and Exports:** Trade promotion actions are generally associated with a *contemporaneous* higher rate of growth of firms' total exports (Volpe Martincus, 2010; van Biesebroeck et al., 2011; Cadot et al., 2011).
- In the US, average US states' expenditures on export promotion per firm do not significantly influence firm export probability (Bernard and Jensen, 2004).

The Effects of Trade and Investment Promotion: Evidence

Micro Studies

- Evidence from LAC countries suggest that the size of the effects of trade support programs on firms' export performance appears to be related to the severity of the information problems involved in the specific trading operation and/or faced by the firms carrying out this operation. In particular:

The Effects of Trade and Investment Promotion: Evidence

Micro Studies

- **Trade Promotion and Export Margins:** Trade assistance effects in LAC seem to be greater on the extensive margin of firms' exports (i.e., when firms attempt to increase the number of destinations or goods exported) and, specifically, when they seek to enter an entirely new country or product market (e.g., Álvarez and Crespi, 2000; Volpe Martincus and Carballo, 2008, 2010; Moons, 2012).
- Interestingly, the opposite appears to hold in Canada (van Biesebroeck et al., 2011). In general, effects on the intensive margin appear to be larger for OECD countries (Moons, 2012).

The Effects of Trade and Investment Promotion: Evidence

Micro Studies

- Extensive or Intensive Margin (Peru)



The Effects of Trade and Investment Promotion: Evidence

Micro Studies

- **Trade Promotion and the Type of Exports:** Trade promotion actions seem to generate larger export gains to the degree to which products traded are more differentiated (Volpe Martincus and Carballo, 2012).

The Effects of Trade and Investment Promotion: Evidence

Micro Studies

- What Kind of Trade Does Trade Promotion Promote? (Costa Rica)



The Effects of Trade and Investment Promotion: Evidence

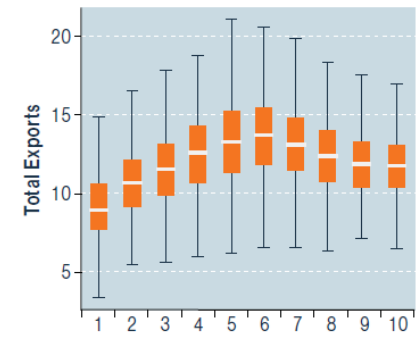
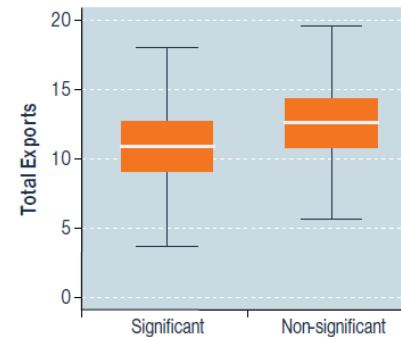
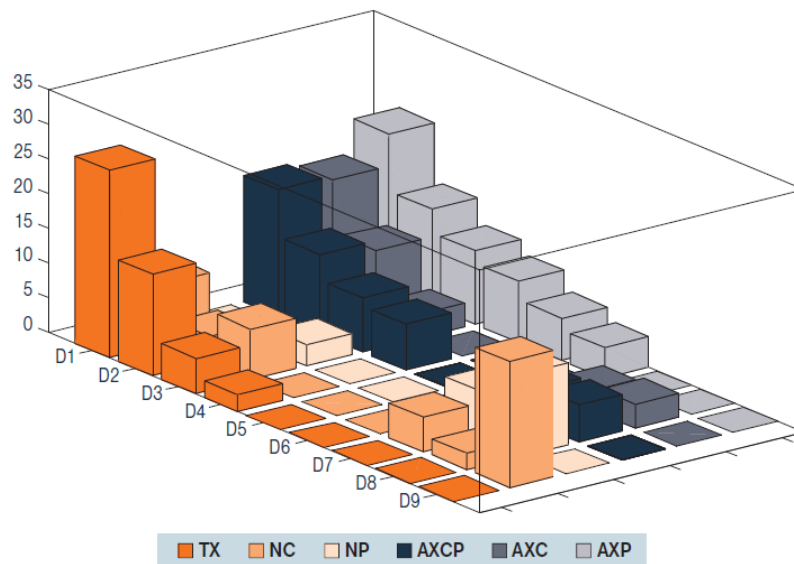
Micro Studies

- **Trade Promotion, Export Experience, and Firm Size Categories:** In Latin America (Argentina and Chile), relatively small firms with limited previous involvement in international markets seem to benefit more from trade assistance (Volpe Martincus et al., 2010, 2012).
- Again, the opposite appears to hold in Canada (van Biesebroeck et al., 2011). Findings are likely interrelated.

The Effects of Trade and Investment Promotion: Evidence

Micro Studies

- What are the Distributional Effects of Trade Promotion? (Chile)



The Effects of Trade and Investment Promotion: Evidence

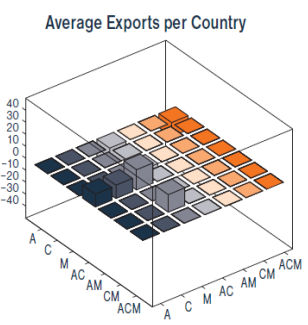
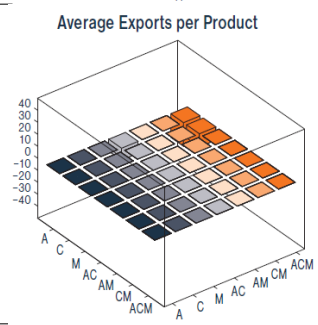
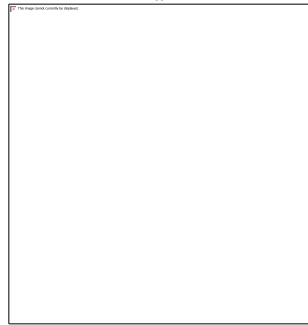
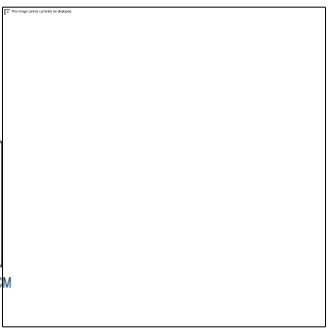
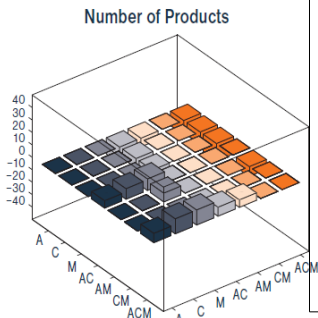
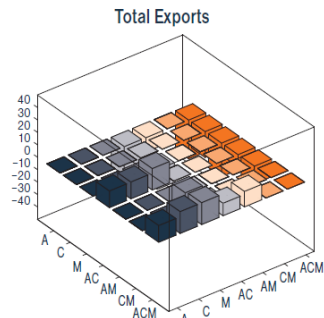
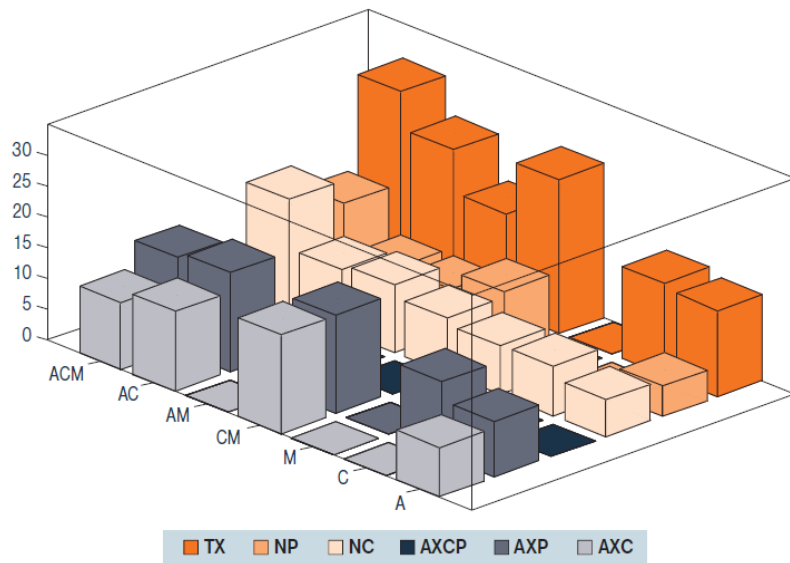
Micro Studies

- **Trade Promotion under Multiple Instruments:** Trade shows and trade missions do not significantly affect the probability that (Chilean) firms become permanent exporters, its exporter committees do (Álvarez, 2004).
- Bundled services combining counseling, trade agenda, and trade missions and fairs that provide support throughout the export process—from initiation of commercial contacts to establishment and consolidation of business relationships—seem to be more effective in enhancing (Colombian) firms' export perspectives than individual actions such as missions or fairs (Volpe Martincus and Carballo, 2010).

The Effects of Trade and Investment Promotion: Evidence

Micro Studies

- Which Export Promotion Programs are Most Effective? (Colombia)



The Effects of Trade and Investment Promotion: Evidence

- The methods used in firm-level studies for substantial improvements in the accuracy of impact estimates, but, as almost any method, are not exempted from limitations.
- Identification is based on the assumption that time-varying unobserved effects do not affect selection into support and exports. There might be non-observed time-variant firm-specific factors that lead to improved export performance that are overrepresented in the group of assisted firms.
- If this is the case, then these procedures would overestimate the true causal effects of this assistance on export performance. Unfortunately, this possibility cannot be excluded.

The Effects of Trade and Investment Promotion: Evidence

- In these evaluation exercises, general equilibrium effects are assumed away. However, if there exist information spillovers linked to participation in specific export promotion actions, then the outcome differences between assisted and non-assisted firms corrected by observable heterogeneity across these groups would underestimate the true impact of these actions.
- Under perfect contemporary dissemination of information across firms, this impact would not be statistically different from zero and could not be identified.

The Effects of Trade and Investment Promotion: Evidence

- In some countries, firms may potentially get assistance from different public and private entities.
- If the influence of interventions other than trade promotion that can potentially affect export outcomes is not properly accounted for, they become an unobserved factor.
- If firms' participation status in these other assistance programs change over time, as it usually does, we are back to the first scenario described above.

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The Gaps and this Workshop

- So far...
- **No explicit study on spillovers associated with trade promotion**
 - ✓ (Incipient in) Cadot et al. (2012)
- **Very few studies on subnational trade promotion organizations**
 - ✓ Gil Pareja et al. (2011) and Schminke and van Biesebroeck (2012)
- **Very few firm-level studies for Europe/Asia and no study for Africa**
 - ✓ Creusen and Lejour (2012); Hiller (2012); and Schminke and van Biesebroeck (2012); and Cadot et al. (2012)
- **Very few papers on the effect of trade promotion on market entry**
 - ✓ Creusen and Lejour (2012)



The Gaps and this Workshop

- **Virtually no explicit study on the effects of trade promotion on export survival and persistence of effects**
 - ✓ Cadot et al. (2012), Hiller (2012), Schminke and van Biesebroeck (2012)
- **No studies on trade promotion by private sector organizations**
 - ✓ Hiller (2012)
- **Very few studies comparing trade promotion instruments**
 - ✓ Cadot et al. (2012) and Creusen and Lejour (2012)
- **No study on the interplay between trade promotion programs and other public programs supporting private sector activities**
 - ✓ Álvarez et al. (2012)

The Gaps and this Workshop

The Gaps and The Gaps in this Workshop

- **Finding input providers through export promotion?**
- **No evaluation based on experimental methods** (IDB/INT is currently working with organizations in LAC in this area)
- **No study on the effects of trade promotion on service exports** (IDB/INT is preparing an evaluation in the framework of an operation with Uruguay)
- **No firm-level evaluation of investment promotion programs** (IDB/INT is currently working with Alberto Abadie to develop an evaluation approach).



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