Approach Paper

Comparative Analysis

SME Models Supported By IDB:
The Case of Brazil

IDB

Inter-American Development Bank

April 2013

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ACRONYMS

AfDB	African Development Bank
BNDES	Brazilian Development Bank
CNAE	Brazilian National Classification of Economic Activities
CNPJ	Brazilian Firms Identification Number
DINU	National Directory of Economic Unities of Enterprises
FGTS	Service Guarantee Fund
IDA	International Development Association
IBGE	Brazilian Institute of Geography and Statistics
IBRD	International Bank for Reconstruction and Development
IDB	Inter-American Development Bank
IDB-9	IDB's Ninth General Capital Increase
IFC	International Finance Corporation
ISIC	United Nation's International Standard Industrial Classification
LAC	Latin America and the Caribbean
MDB	Multilateral Development Bank
NGO	Nongovernmental Organization
NSG	Non-Sovereign Guaranteed
OECD	Organization for Economic Cooperation and Development
OVE	Office of Evaluation and Oversight
PSD	Private Sector Development
RAIS	Annual Social Information Report
SEBRAE	Brazilian Small Business Support Service
SECEX	Secretary for External Trade
SIGEOR	Results-Oriented Management System
SG	Sovereign Guaranteed
SMEs	Small and Medium Enterprises
TFP	Total Factor Productivity
UAC	Collective Services Unit
UAIT	Access to Innovation and Technology Unit
UAMSF	Access to Markets and Financial Services Unit
UCE	Management Capacitation Unit
UDT	Territorial Development Unit
UN	United Nations
UNIDO	United Nations Industrial Development

I. CONTEXT

A. Introduction

1.1 Small and Medium Enterprises (SMEs) play a major role in most of the economies. In Latin America and the Caribbean (LAC), SMEs account for about 99% of firms and 67% of employment (OECD, 2013). They generate employment and income for about 50% of the formal workforce in manufacturing (Ayyagari et al., 2007; Ayyagari et al., 2011) and most of new jobs and sales growth in the region (Ayyagari et al., 2011).

1.2 Due to their importance, several LAC countries have adopted public policies to promote SMEs through an extensive number of development agencies (OECD 2013).[1] Multilateral organizations have also provided extensive support for SMEs in developing countries. In the second half of last decade the Inter-American Development Bank (IDB) Group generated 361 operations and devoted approximately US$ 7.7 billion (8% of the IDB Group portfolio in US dollars) to support SMEs (IDB, 2012-DP-214). Other multilateral institutions, such as the World Bank, African Development Bank (AfDB) and UNIDO, also support SME initiatives.[2]

1.3 The rationale for pro-SMEs policy and lending support is based on the view that SMEs are particularly affected by market failures that impede them from reaching their potential of generating jobs and income.[3] If the support correctly addressed these market failures, it would allow the SME market to operate more efficiently and in turn lead to increased social welfare that stems either from greater competition or from improved coordination in clusters and value chains (Beck et al., 2005; Ibarraran et al., 2009). Also, support to SMEs is often based on the view that small firms not only create more jobs per unit of investment by virtue of being more labor intensive, but also create jobs that are concentrated among the low-skilled and hence the poor (Rijkers et al., 2010). Finally, export-oriented and high-technology SMEs are seen as having high impact in job creation and spillover effects.

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[1] A broad range of instruments are used to support SMEs and the commonly used instruments are access to finance, innovation, development of skills and human capital, clusters and value chain and fiscal incentives (Ibarraran *et al.*, 2009; OECD, 2013).

[2] The World Bank (IBRD and IDA) devoted US$ 9.8 billion to SME projects for the period 2006-2012. For the same period, IFC investment portfolio identified as benefitting SMEs amounted to US$ 25 billion between 2006 and 2012 (IEG, 2013).

[3] For instance, credit constraints are a result of market failures that affect SMEs disproportionately. They hamper entrepreneurs' efforts to make investments and they prevent SME growth (e.g. Banerjee and Duflo, 2008; Beck and Demirguc-Kunt, 2006 and Lage de Souza, 2012). Another market failure in the context of SMEs and entrepreneurship projects is coordination failure, that impedes necessary actions to reach agglomeration economics and increase sector-wide productivity (Rodriguez-Clare, 2005).

1.4   There is also criticism about the increasing level of support to SMEs. For instance, Beck et al. (2005) provide examples in the literature suggesting that large enterprises are the biggest contributors to productivity growth because they may exploit economies of scale and more easily undertake the fixed costs associated with research and development (R&D). Also, larger firms have lower mortality rate and provide more stable and higher quality jobs than small firms, and consequently might be more effective for poverty alleviation.

1.5   Based on the pro-SME view, an extensive number of initiatives were created in the region to support SMEs. However, there are difficulties in learning lessons from these experiences. First, there is no common definition of SME.[4] Second, the task of evaluating SME interventions is challenging, since in general these interventions are as multiple (i.e. access to finance, training, technical assistance, formalization of firms, etc.) as their expected timing and intensity of effects. Finally, there is little coordination among the vast number of existing programs for SMEs, and many experiences have been repeated without being assessed and without any lessons being learned from them (OECD, 2013).

1.6   The evaluation of the effectiveness of SME-oriented projects has gained particular relevance in recent years, as they have been used as an instrument to help achieve IDB's strategic goals, defined by the IDB's Ninth General Capital Increase (IDB-9) mandate, such as poverty reduction and competitiveness. LAC experienced considerable economic growth over the past decade, and SME projects have been considered as tools to contribute and sustain progress based on private sector initiatives.

1.7   The Bank has undertaken significant efforts to evaluate the effectiveness of different individual SME support models and their spillovers. However, less is known on whether and how alternative SME-oriented interventions reinforce each other. Accordingly, the main objective of this evaluation is to provide rigorous evidence of impacts of different models of SME support where IDB has been active.

B.   The Bank Support to SMEs

1.8   The Bank has a rich experience supporting SME interventions in LAC countries through Sovereign (SG) and Non-Sovereign Guaranteed (NSG) lending and technical cooperation. The IDB post-realignment portfolio (2006-2012) related to SMEs consists of 154 SG and NSG operations amounting to US$ 5.7 billion,

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[4]   In the literature, the classification of SMEs varies across countries, and thus it is difficult to find a common measure for SMEs (Ayyagari *et al.*, 2007). The most common criterion used to classify SMEs is based on employment information, and the European Union and Beck *et al.*, (2005) adopt 250 employees as a cut-off to classify SMEs. In order to deal with this heterogeneity, the IDB Group defined guidelines for the classification of firm's size as micro, small, medium and large (See Annex I and OP-580-2 and CII/GP-15-10). These documents consider different parameters for corporate and financial intermediaries operations. For the former, enterprise size is defined in terms of assets, revenues, and number of employees and for the latter enterprise size is defined by the size of the operations with end-beneficiaries.

which represents almost 9% of the IDB portfolio and 34% of total private sector development (PSD) lending.[5] Figures A.1 and A.2 in Annex II show the evolution of the Bank support to SME as a proportion of Bank portfolio and total PSD lending.

1.9 The Bank's support to the SME sector is stressed in various strategies and guidelines. For instance, the Bank's Institutions for Growth and Social Welfare (GN-473-2) strategy states that the aim of SME interventions is to raise productivity. More specifically, the SME guidelines (IDB, 2009-OP-580-2) state that SMEs are important for jobs, productivity gains and long-term growth in LAC. The guidelines indicate that the IDB's strategic support to SMEs focuses on expanding access to finance, improving the business climate, increasing formalization and improving SMEs development programs and policies. This is in line with the other Bank's strategic documents that consider SMEs as a strategic matter for PSD [Private Sector Development Strategy (GN-2598-7)] and the Bank more generally [Report on the Ninth General Increase (AB-2764)].

1.10 The SME Guidelines also point out that SME programs entail greater coordination between the private and public sectors, since SME productivity is hindered by both government and market failures. The probability of success of the programs is linked to the ability to combine effort at all levels (public and private, local and national), and the Bank is in a unique position of working with both private and public institutions. Finally, the Guidelines stress the importance of systemic interventions incorporating both financial and nonfinancial components.

1.11 The Bank has responded with different types of interventions to address market failures that support the development of SMEs across the LAC region. Based on the literature and project review, Table 1 identifies the main approaches to support SMEs in the region and links the motivation for the interventions and expected outputs, outcomes and impacts. Table A.1 in Annex III breaks down by type of approach the IDB's operations aimed at supporting SMEs specifically in the case of Brazil.

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[5]   In order to identify the IDB projects that support SMEs, OVE reviewed 286 individual loan documents for all PSD projects approved between 2006 and 2012 in three sectors: Agriculture and Rural Development (AG); Financial Markets (FM); Private Firms and SME Development (PS).

TABLE 1 – APPROACHES TO SME SUPPORT

	SME Financing/Credit Guarantee	Training/Youth Training	Value Chain, Networks and Clusters	Innovation	Formalization/ Business Environment (Institutional Improvement)	Access to External Markets
Main Justification/Market failure	Adverse selection/moral hazard in credit markets	Capture externalities	Coordination failure/unexploited agglomeration externalities	Capture externalities	Institutional failure	Information externalities
Output	Provision of credit for SMEs	Training	Consolidation of firm's network	Technology transfer/ R&D/ Equipment/ Training/ Certifications	Formalization/ Property Registration/ Improved regulatory framework	Enhanced knowledge of potential external markets: Seminars, training, counseling
Outcome	Firm Growth and employment creation	Employability, higher wages	Capture externalities	Process Innovations/Product Differentiation	Better business environment	Firm Growth/Exports
Impact	Productivity growth and poverty reduction	Productivity growth and poverty reduction	Productivity growth	Productivity growth	Productivity growth and poverty reduction and	Productivity growth

a) *SME Financing/Credit Guarantee*: Adverse selection and moral hazard in credit markets generate financial constraints, which in turn restrain SME activities (e.g. Beck and Demirguc-Kunt, 2006; Michelacci and Silva, 2007; Canton *et al.*, 2012). These constraints affect SMEs' investment capacity as well as their survival over the business cycle (Vermoesen *et al.*, 2012; Cravo 2011). Thus, a significant number of interventions are designed to alleviate credit constraints to provide SMEs with the capital needed to reach their full potential.[6]

b) *Training/Youth Training:* The limited education of the workforce is a constraint that affects SMEs in LAC (e.g. ILO 2009). The projects focusing on training are based on the idea that skills improve employability and wages of workers and contribute to firm productivity (e.g. Attanasio *et al.,* 2011; Rosholm *et al.,* 2007). Nevertheless, evidence suggests that smaller

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[6] The project BR-0331 (BNDES Micro and SMEs Support Program) is an example of intervention that provides funding to financial intermediaries supporting SMEs financing and credit guarantee schemes.

firms engage less in formal training as the expected return from investment is smaller (e.g. Almeida and Aterido, 2010).[7] [8]

c) *Value Chain, Networks and Clusters*: Interventions of this kind are justified mostly based on the idea that individual firms can benefit from agglomeration externalities and coordination (e.g. Schmitz 1995; Schmitz and Nadvi 1999; Giuliani *et al*., 2005, Martin *et al*., 2011). These projects intend to overcome coordination failures that prevent SMEs from capturing these externalities.[9]

d) *Innovation*: Support for innovation policies in neoclassical economics is based on the idea that social returns to innovation exceed private returns. This reduces the incentive to introduce innovation and justifies the existence of innovation policies (Lundvall and Borras, 2005). Under the Schumpeterian view, innovation is the driver of economic progress. The role for public policy in Schumpeterian economics is to facilitate investment in knowledge-generation and to encourage entrepreneurs to innovate. Policy instruments include funding for research and science (directed towards product differentiation and process innovations), and also funding to start new businesses and become an entrepreneur (Audretsch and Link, 2012).[10]

e) *Formalization/Business Environment/Institutional Improvement:* These programs aim at lowering transaction costs, reducing informality, and improving regulations and market operations. Interventions may include policies regarding business registration, property registration and regulatory frameworks (OP-580-2).[11]

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[7] The projects HA-L1057 (Business Development and Training Services Program for Investment); PR-T1028 (Pilot Training Project and Support for Rural Beekeepers) are examples of IDB projects in training that are related to SMEs. Almeida and Aterido (2010) suggest that smaller firms offer less training because they think informal training is enough due to lack of financing opportunities or poaching of workers (workers move to larger firms). Rosholm *et al* (2007) also provide evidence that returns to training increases with firm size.

[8] See McKenzie (2012) for a revision of business training program evaluations in developing countries.

[9] During the period 2000-2001, IDB supported 36 cluster-related operations amounting to US$ 650 million (IDB-DP-214). The projects CH-L1019; PE-L1035; JA-L1012; AR-L1022; UR-L1020 and BR-L1092 are examples of similar interventions. Pires et al. (2013) and World Development Report highlight the potential impacts on SMEs due to the existence of industrial agglomerations.

[10] The project CR-L1043 Innovation and Human capital for Competitiveness Program is an example of Bank's support to SMEs related to innovation. OECD (2013) indicates that innovation policies in general do not discriminate in favor of SMEs. However, many countries promote the integration of Information and Communication Technologies in the SME sector.

[11] The project CO-T1268 (Strengthening Financial and Capital Supervisory Agency) is an example of a Bank project aimed at improving SME business environment.

f) *Access to External Markets:* The programs that support export promotion are justified as interventions that correct market failures such as information externalities (Volpe and Carballo, 2010a),[12] and help SMEs overcome obstacles to exporting.

C. Effectiveness of SME Support Models

1.12 The Bank has undertaken a diverse array of studies assessing the effectiveness of alternative SME Support Models. Examples of evaluated models include access to finance (De Negri et al. 2011; Eslava et al., 2012), clusters (Garone et al., 2012), value chain (Arraiz et al., 2012), innovation (Chudnovsky et al., 2006; Crespi and Pluvia, 2010; Castillo et al., 2013a) and export promotion (Volpe and Carballo, 2010a; Volpe and Carballo, 2010b; Volpe et al., 2010). In addition, recent efforts have evolved towards measuring the spillover effects of innovation policies through labor mobility (Castillo et al., 2013b).[13] These studies have documented, in general, evidence of positive impacts of support to SMEs on employment, exports, wages and productivity. This is consistent with the results of studies conducted outside the Bank (e.g.; World Bank, 2011, Long and Zhang, 2011; and Machado et al, 2011).

1.13 The previous studies focus mainly on individual support approaches and do not provide a comparative analysis of the different types of approaches within a single study.[14] Therefore, the provision of evidence regarding the differential intensity and timing of relative impacts among alternative policies, and whether the confluence of different treatments might result in synergies between them goes beyond the scope of the previous studies.[15]

1.14 Accordingly, ongoing efforts by CTI, INT, RES and SPD are being directed towards evaluating the relative effectiveness of innovation and export promotion policies within a multitreatment setting (Alvarez et al., 2012). Initial findings

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[12] PN-L1014 (Competitiveness and Trade), UR-L1007 (Programatic Competitiveness Loan) are projects aimed at helping SMEs to access foreign markets. There is limited evidence on the effectiveness of export promotion on SMEs in developing countries, but Volpe and Carballo (2010a) provide evidence that smaller and relatively inexperienced firms, as measured by their total exports, benefit most from promotion actions.

[13] In addition, the Bank is sponsoring an ongoing Research Project that includes studies focusing on direct and indirect effects of cluster development interventions as well as innovation spillovers for the cases of Brazil, Costa Rica and Mexico. See: http://www.iadb.org/en/research-and-data/project-details,3187.html?id=8709

[14] There are also a number of similar papers focusing on developed countries but they also do not provide a thorough comparative analysis (e.g. Ventura, 2009; Martin *et al*., 2011; Chandler, 2012).

[15] The difficulty of performing a more comprehensive analysis based on multiple treatments arises from the need for extensive firm level data. An evaluation that intends to shed light on how different types of SME support affect their outcomes requires identifying each individual firm and whether it participated in various programs. This is not an easy task and explains the scarcity of studies considering a comprehensive approach.

show positive synergies between these two policies. Therefore, this OVE proposal complements previous and ongoing work by conducting a multitreatment analysis of the following different SME policies: access to finance, training, clusters, innovation and export promotion.

1.15 The proposed evaluation focuses on an empirical comparative analysis of the main different types of SME-oriented programs supported at large by IDB in LAC and specifically implemented by Brazilian institutions. It aims at providing a valuable collection of lessons about these various approaches supporting SMEs. This evaluation will not evaluate Bank projects directly, but will provide evidence regarding the effectiveness of Bank-supported models implemented by Brazilian institutions.

II.   EVALUATION DESIGN

A.   Objective and Scope

2.1 As part of the Office of Evaluation and Oversight (OVE) Working Plan for 2013–14 (OVE 2012), OVE will conduct a comparative analysis of the main types of SME-oriented programs supported by IDB in LAC region and specifically implemented by Brazilian institutions. This comparative analysis is based on undertaking specific impact evaluations to assess the effectiveness of SME models supported by the Bank. The evaluation will examine whether and how these interventions affected firm level outcomes such as employment, exports and real wages. The overarching objective of this exercise is to provide insight for future strategic decisions regarding the targeting of Bank support to SMEs.

2.2 The rationale for choosing Brazil is twofold. First, this country represents 55% of IDB's total volume of lending aimed at supporting SMEs. Second, country stakeholders have collected data from SMEs exposed to different models of intervention, which allows OVE to learn about alternative SME support approaches even when the Bank does not support all of them in Brazil.[16] OVE has access to comprehensive datasets that facilitate impact evaluations in Brazil.

2.3 OVE will build the analysis based on the models of interventions identified in Table 1, compare their achieved results, and draw lessons for the future design and implementation of SME support strategies and budget allocation considerations.

B.   Evaluation Questions

2.4 The evaluation will look for empirical evidence to assess the effectiveness of the SME models of interventions implemented by Brazilian institutions and that are supported by the Bank in the LAC region. The specific evaluation questions are as follows:

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[16] For instance, unlike national institutions, the Bank did not support SMEs to enhance their access to external market between 2006 and 2012 in Brazil.

- What effects do different models of SME interventions and various combinations of such interventions have on employment, exports and real wages in Brazil?

- To what extent do the timing and sequencing of SME interventions affect their impact on employment, exports and real wages in Brazil?

C. Methodology

2.5   The evaluation will be based on quantitative methods. SME interventions performance and results will be assessed based on effectiveness criterion captured by impact evaluations. Field missions will be required to support the impact evaluations activities related to confidential data collection and tabulation (see specifics below). Finally, inputs from previous impact evaluations and academic studies will be used to provide further evidence on the evaluation questions.[17]

2.6   The aim of the impact evaluations is to analyze whether firms that received specific SME support performed better in terms of employment, exports and real wages than similar firms exposed to other types of interventions or comparable firms that did not receive support. In other words, the proposed methodology compares firms that received the support with the counterfactual firms that received other types of support or did not receive support.

2.7   In a nutshell, the evaluation will exploit panel datasets at the firm level using the programs' differential phase-in timing. This will allow to control for unobservable characteristics at the firm level that are time invariant as well as secular (aggregate, industry and region specific) time trends, and address endogeneity concerns of program placement. To test the robustness of the results, the analysis will include treatment falsification tests; as well as comparability of pre-treatment trends between different treatments and control groups. In addition, to take into account that different SME support models might impact SME's performance within differential time horizons, OVE will perform event studies to assess the timing in which each intervention might have had effects.[18] The final aim of these strategies is to empirically test whether participation in an SME program is related to better firm-level performance.

2.8   OVE established partnerships with Brazilian stakeholders that support SME interventions in order to construct a comprehensive dataset that allows the evaluation of different impacts stemming from different types of SME's support. The specific data and strategies for the impact evaluation are described below.

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[17]   See references listed in this Approach Paper.

[18]   For comparability with previous studies the evaluation will also implement the estimation strategy that uses a combination of propensity score matching at baseline (between treated and untreated firms) and the difference-in-difference estimator as suggested by Crespi et al. (2011).

i. Control Group

2.9   The control group is constructed based on the Annual Social Information Report (RAIS) dataset which provides information about employees and establishments.[19] This dataset comprises the universe of formal employment and firms in Brazil and provides detailed information about firms (i.e. activity, size, age and region) and employees that allow OVE to construct robust control groups observationally similar to treated firms. Currently, RAIS is a governmental instrument that regulates the concession of the "Salary Bonus", the minimum-wage supplement program. If an establishment fails to report the information required by RAIS, it faces automatic fines that are proportional to the workforce size and the length of the delay. Because the payment of the annual wage supplement is exclusively based on RAIS, employers and workers have strong incentives to fulfill RAIS. The Ministry of Labor and Employment estimates that, currently, around 97% of all formal workers in Brazil are covered by RAIS.

2.10   OVE was granted access to RAIS micro data from 2000 to 2011.[20] In 2000 it comprised about 26 million workers and 2 million establishments. In 2010 these numbers went up to 44 million and 3 million respectively. Establishments and workers have a unique identification number that allows identifying them in other databases.

2.11   Data for establishments can be retrieved according to geographic location (from municipality to macro-region level), sectorial classification, establishment size and legal nature. The Brazilian National Classification of Economic Activities (CNAE) is compatible with the United Nation (UN) sectorial classification and the most disaggregated level has 676 sectors.[21] In addition, data for workers (that are linked to establishment's data) has information about wages, age, gender, lev-

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[19]   RAIS is provided annually by the Ministry of Labor. It was established by the Law nº 76.900 of 23/12/1975 to provide labor market information for the government and research purposes. Originally, RAIS was designed to control the registry related to the Service Guarantee Fund (FGTS), which is the government severance employment fund. It was also used to provide information for the tax collection process and for the concession of benefits by the Ministry of Social Security.

[20]   These databases evolved slowly and RAIS became a well-established set of data in 1985. During the 1990s, they benefited from important advances regarding the data quality. Since 1997 the data has been collected via Internet, which makes the data collection quicker and more reliable. The Ministry of Labor considers that micro data has a good quality and coverage from the year 2000 onwards.

[21]   It will be necessary to use a conversion table to construct a data base with a compatible sectorial classification from 2000 until 2010 to consolidate the micro data. The CNAE was created based on the United Nation's International Standard Industrial Classification of All Sectors (ISIC) Rev.3. The ISIC is a product of international agreements among national authorities represented at the United Nations (UN) statistical commission. The first CNAE classification is known as CNAE/95. In 2002, CNAE/95 was updated and labeled CNAE 1.0. These classifications have the same structure and small differences only appear at the third and fourth digit level. Later, in 2006, a new international classification structure, ISIC 4.0, was released. Again, to follow the new international standards, a new revision took place and CNAE 2.0 emerged. An extensive conversion table that links CNAE 2.0 to CNAE 1.0 can be found in the Brazilian Institute of Geography and Statistics (IBGE) web page.

el of education, job spell (in month), declared hours worked, sex, occupation, type of formal contract, nationality, admission and redundancy data.

ii. Treated Firms

2.12 The data for treated firms comprises information provided by two of the Bank's major partners in Brazil that provide support for SMEs, SEBRAE (Brazilian Small Business Support Service) and BNDES (Brazilian Development Bank).[22]

2.13 SEBRAE is a private entity of public interest created to help SMEs; it operates in all Brazilian states and provides support for SMEs using all types of interventions listed in Table 1. SEBRAE has a specific unit (UAMSF – Access to Markets and Financial Services) that develops services and projects related to SME finance and aiming at helping SMEs to reach markets, this effort also includes specific products aiming at exports. The institution also has a dedicated unit designing projects related to access to innovation (UAIT – Access to Innovation and Technology Unity), which develops product in the areas such as certification, technology transfer programs, incubators, product development. Projects related to local development with territorial dimension (e.g. cluster, value-chain) are related to two management units (UAC – Collective Services Unit and UDT –Territorial Development Unit). Also, SEBRAE continuously designs projects related to management of SMEs through its UCE (Management Capacitation Unit).

2.14 In 2003, SEBRAE put in operation the Results-Oriented Management System (SIGEOR), which was designed to structure, manage and monitor projects. Between 2003 and 2005 the system was gradually implemented with pilot projects and became fully operational in 2005, comprising 365 projects amounting to about US\$ 600 million.

2.15 For each project, SEBRAE's system comprises data about individual firms that received support, objectives, components and outputs of the intervention, partners (e.g. government, civil society entities, chamber of commerce, labor unions) and indicators. Importantly, the data lists all firms that participated in the projects with their respective identification number (CNPJ). Thus, the data allows OVE to consolidate a database identifying the type of intervention and the firms that participated in each project from 2005 onwards.[23]

2.16 In addition, BNDES – which provides SME's financing – has a database of the firms that received approval for access to BNDES card (the treatment). BNDES has tracked information about the firms that used and not used the credit card.

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[22] SEBRAE is the main institution in Brazil that provides support for SMEs and its budget was approximately US\$ 1.6 billion in 2011. BNDES has a strong role in SME financing through several financial lines, including BNDES card, which is an automatic credit line to support the growth of small business and only in 2012 reached about US\$ 5 billion in financing to 700,000 SMEs.

[23] OVE has remote access to SEBRAE's system which provides information project by project. OVE will access each project individually and consolidate the available information in a database.

Each lending operation is linked to the firm CNPJ, which allows matching BNDES information regarding credit access with the variables of interest collected in RAIS and SEBRAE's datasets. Data for BNDES card operations are available from 2003 to 2012. Since BNDES requires that the OVE's team works with its database at confidentially basis within its facilities, field missions to cross tab BNDES' information with the datasets described above will be necessary. As a result, OVE will be able to combine two detailed databases with firms that received different types of support. This opens a possibility to provide an analysis on many types and combinations of interventions in a unique impact evaluation.

iii. Variables of Interest

2.17   The main variables of interest for the analysis follow the criteria outlined in Table 1 and data availability considerations. In terms of outcomes, we will focus on firm level total employment (which proxies for firm size) and, where relevant, exports. The common expected impact shared by all models of intervention is productivity. Accordingly, given that the information available does not allow for calculating TFP, we will focus on firm level real wages (which proxy for labor productivity). RAIS data provides firm level data on employment and wages. Additionally, the Secretary for External Trade (SECEX) data provides the list of firms that export/import to measure the effect of SME programs on the likelihood of exporting. The data also provides the firms id number (CNPJ) that can be linked to RAIS, BNDES and SEBRAE's data. SECEX micro data is available from 2001 onwards.[24]

iv. Multitreatment

2.18   The database to be constructed can help evaluate the impact of one SME support program compared with that of another type of support, and whether the joint impact of different types of support are larger than the sum of the two individual interventions.

III. TIMELINE AND STAFFING

3.1   The SME evaluation is part of the OVE Work Plan for 2013-2014 (OVE 2012) and is planned for delivery to the Board by the end of 2013.

3.2   The SME evaluation will be conducted by Jose Claudio Pires (Team Leader, OVE Economics Lead Specialist), Diether W. Beuermann (OVE Economics Specialist) and the OVE's consultants Tulio Cravo and Simon Lodato. OVE team will work in close cooperation with Brazilian stakeholders as discussed above.

3.3   The delivery timeframe for the evaluation is in Table 2 below.

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[24]   SECEX micro data is publicly available at:
http://www.desenvolvimento.gov.br/sitio/interna/interna.php?area=5&menu=2413&refr=603

TABLE 2 – DELIVERY TIMEFRAME

Activity	Due Date
Approach paper	
a.) Draft to Management	April 2013
b.) Send to Board	April 2013
Implementation	April 2013 – October 2013
Evaluation report	
a.) Draft to Management	November 2013
b.) Final report to Board	December 2013

Annex I – IDB's Classification of SMEs

The IDB Group uses the following criteria to classify a project as an SME operation (OP-580-2 and CII/GP-15-10).

(a) For corporate operations, enterprise size is defined in terms of three parameters: assets, revenues, and number of employees. The enterprise will be classified in the corresponding category upon fulfillment of two of the three parameters applicable to each respective combination of country classification and economic sector:

(all numbers are upper limits, currency indicated in US$)

		Corporate					
		Assets		Revenues		Number of Employees	
		Small	Medium	Small	Medium	Small	Medium
A and B[1] Countries	Primary	$7,000,000	$20,000,000	$7,000,000	$20,000,000	200	400
	Industry	$7,000,000	$20,000,000	$7,000,000	$20,000,000	150	350
	Service	$7,000,000	$20,000,000	$7,000,000	$20,000,000	100	300
C and D[2] Countries	Primary	$3,000,000	$10,000,000	$3,000,000	$10,000,000	150	250
	Industry	$3,000,000	$10,000,000	$3,000,000	$10,000,000	100	200
	Service	$3,000,000	$10,000,000	$3,000,000	$10,000,000	50	150

[1] Argentina, Brazil, Mexico, Venezuela, Chile, Colombia and Peru.
[2] Bahamas, Barbados, Costa Rica, Jamaica, Panama, Suriname, Trinidad & Tobago, Uruguay, Belize,
[3] Bolivia, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Nicaragua and Paraguay.

(b) For operations through Financial Intermediaries, enterprise size is defined by the size of the operations with end-beneficiaries according to the following criteria:

(all numbers are upper limits, currency indicated in US$)

	Operations through Financial Intermediaries		
	Size of operations with end-beneficiaries		
	Micro	Small	Medium
A and B[1] Countries	$10,000	$250,000	$1,000,000
C and D[2] Countries	$10,000	$150,000	$500,000

[1] Argentina, Brazil, Mexico, Venezuela, Chile, Colombia and Peru.
[2] Bahamas, Barbados, Costa Rica, Jamaica, Panama, Suriname, Trinidad & Tobago, Uruguay, Belize,
[3] Bolivia, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Nicaragua

Annex II – IDB's Portfolio of SME Operations

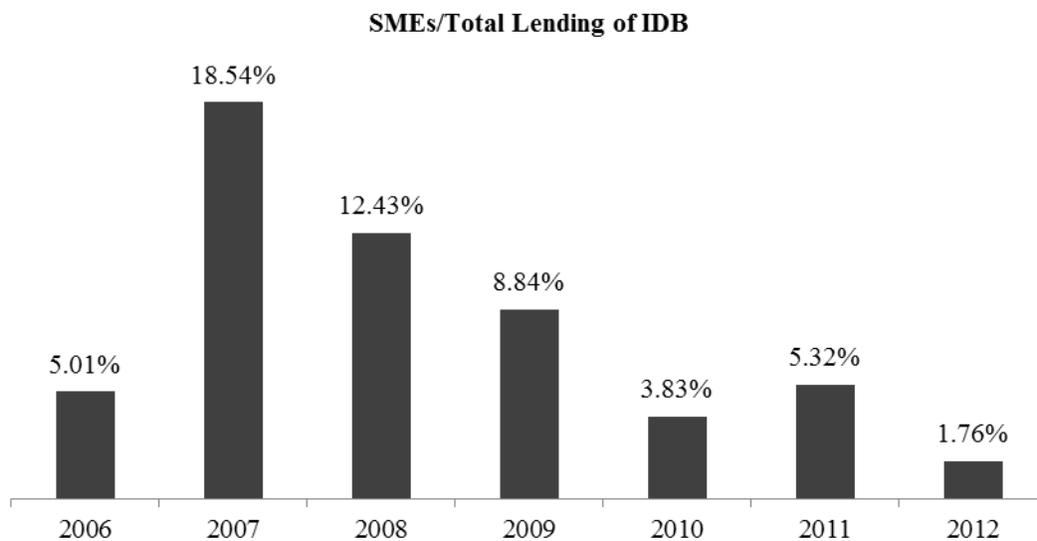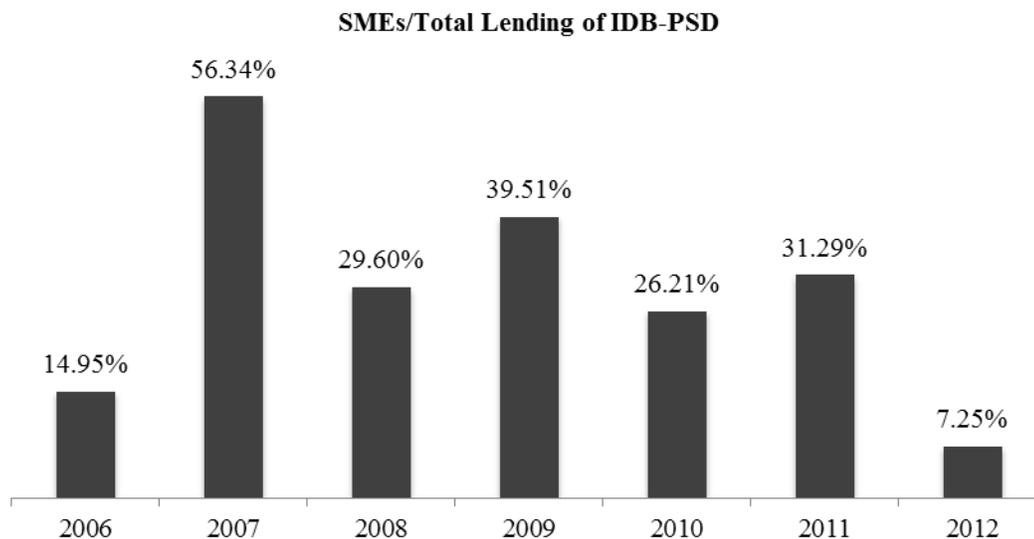**FIGURE A.1- SME LENDING SHARE IN IDB**

SMEs/Total Lending of IDB

FIGURE A.2- SME LENDING SHARE IN PRIVATE SECTOR DEVELOPMENT

SMEs/Total Lending of IDB-PSD

Annex III – Approaches to SMEs support: IDB's operations in Brazil

TABLE A.1 – IDB's SME OPERATIONS IN BRAZIL (2006-2012)

Project Number	Project Name	Year	Amount	Approaches to SME Support					
				SME Financing	Training	Value Chains, Clusters	Innovation	Institutional and Business Environment	Access to External Markets**
BR-L1023	Strengthening of the Entrepreneurial Activity Program Estado de Bahia (SEBRAE-BA)	2006	$ 10,000,000			▒		▒	
BR-L1054	Financing MSMES - BNDES II	2007	$ 1,000,000,000	▒					
BR-L1073	Banco Industrial e Comercial S.A. (Bicbanco) A/B Loan	2007	$ 20,000,000	▒					
BR-T1058	Cluster Support Program of the State of Parana	2007	$ 150,000	▒		▒			
BR-L1178	BNDES: Third Program under the CCLIP Line to Support MSMEs	2008	$ 1,000,000,000	▒					
BR-L1021	Cluster Competitiveness Support Program for Minas Gerais (SEBRAE-MG)	2009	$ 10,000,000		▒	▒	▒		
BR-L1180	Program to Support Micro, Small and Medium-Sized Enterprises (BNDES)	2009	$ 1,000,000,000	▒					
BR-T1129*	Afro-Brazilian Access to Business Credit	2009	$ 140,000	▒					
BR-T1135*	Supportto Secretaria of Sao Paulo in Regional Productive Development	2009	$ 7,787	▒		▒			
BR-L1270	Mundo Vox Tenda	2010	$ 10,000,000	▒	▒				
BR-L1280	Banco Sofisa Lending Facility	2010	$ 25,000,000	▒					
BR-T1188*	Mundo Vox Tenda	2010	$ 270,000	▒					
BR-L1298	Banorte Todo Dia -The Bank of the Neighborhood	2011	$ 5,000,000	▒					
BR-L1338	BIC Bank - access2services Facility	2011	$ 50,000,000	▒					
BR-T1215*	University of the Little Market - Nurturing Micro and Small Business	2011	$ 365,000	▒	▒				
BR-X1023*	Selection and Training Program for SMEs at the Base of the Pyramid	2011	$ 500,000	▒	▒				
			$ 3,131,432,787						

*Technical Cooperation/Grant

**There were no Bank's operations supporting Access to External Markets approach inBrazil during 2006-2012

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