

Technical Cooperation Abstract

I. BASIC PROJECT DATA

Country:	Regional
TC Name:	Broadband, ICTs adoption and productivity in LAC: developing evidence-based public policies.
TC Number:	RG-T2641
Team Leader/Members:	Matteo Grazi (IFD/CTI), <i>Team Leader</i> ; Alessandro Maffioli (IFD/CTI); Lucas Figal Garone (IFD/CTI), and Mariela Rizo (IFD/CTI)
Taxonomy:	Research and Dissemination.
Reference to Request: (IDB docs #)	In process.
Date of TC Abstract:	May 6, 2015
Beneficiary institutions:	The Caribbean Industrial Research Institute (CARIRI) of Trinidad and Tobago
Executing Agency and contact name:	Inter-American Development Bank, through the Competitiveness and Innovation Division (IFD/CTI)
IDB Funding requested:	US\$420,000 Special Broadband Program (SBP)
Local counterpart funding, if any:	US\$100,000
Execution period:	24 months
Required start date:	July 1 st 2015
Type of consultants:	Individual consultants and firms
Prepared by Unit:	Competitiveness and Innovation Division (IFD/CTI)
Unit of Disbursement Responsibility:	Competitiveness and Innovation Division (IFD/CTI)
TC included in Country Strategy(y/n):	No
TC included in CPD (y/n):	No
GCI-9 Sector Priority:	Institutions for Growth and Social Welfare

II. JUSTIFICATION AND OBJECTIVE

- 2.1 It is generally recognized that Information and Communication Technologies (ICTs) have radically changed how modern business is conducted, potentially benefitting firm performance through several channels. In particular, broadband internet connection allows faster communications and quicker processing of information, decreases internal and external coordination costs, and facilitates the process of decision taking and knowledge management¹. However, recent empirical research has highlighted the fact that adoption *per se* is not sufficient to take full advantage of broadband potential. The actual use of more advanced broadband-based applications and complementary investment in other areas - such as organizational changes and human capital - are necessary to obtain significant innovation and productivity gains.
- 2.2 Many public and private institutions throughout Latin America and the Caribbean (LAC) have introduced programs aimed at facilitating the access and use of broadband services in Micro, Small and Medium Enterprises (MSEMs)², as a tool to increase productivity levels.

¹ Cardona et al, 2013; Arvanitis and Loukis, 2009; Atrostic et al, 2004; Gilchrist et al, 2001.

² See Rovira S. and Stumpo G. (2013) "Entre mitos y realidades. TIC, políticas públicas y desarrollo productivo en América Latina", CEPAL for a revision of the main programs implemented in the region.

These initiatives have been very heterogeneous in their form and implementation, failing in many cases to take into account the conditions necessary to maximize the impact of broadband diffusion. Although these programs have become quite popular, rigorous evaluations of the actual effects of these programs is still missing.

- 2.3 This situation, together with the lack of adequate, comparable statistics on the actual use of ICTs in LAC firms, limits the ability of policy-makers to take evidence-based decisions when designing and/or reforming public policies in this area. In fact, most of the innovation and ICT surveys across LAC not only use different formats, but also include questions limited to access to basic technologies. Information on other relevant key aspects – such as use of complex applications, related organizational changes, and ICT training of human resources – is not systematically collected³.
- 2.4 The general objective of this regional Technical Cooperation (TC) is to strengthen the capacity of LAC institutions, the IDB itself, and other stakeholders in the design, implementation, and evaluation of programs aimed at the diffusion and use of broadband services in MSMEs. In particular, the TC will improve the capacity of LAC policy-makers to take evidence-based decisions and contribute to foster the effectiveness of policies aimed at obtaining universal broadband access, adoption and usage. This will be obtained through three set of activities: (i) design, implementation, and evaluation of innovative pilot projects, on the basis of a critical revision of existing initiatives and international best practices; (ii) definition and testing of a common methodological approach to collect indicators on broadband and other ICT diffusion in LAC firms, through a regional dialogue with LAC statistical offices; (iii) dissemination of results among relevant regional stakeholders to promote replication and scaling up of the pilot projects, as well as adoption of the proposed survey.
- 2.5 The IDB has supported various agencies that manage programs aimed at the promotion of access, adoption and usage of broadband in firms both at the national and sub-national levels. The agency that has been pre-identified as a partner for this TC is The Caribbean Industrial research Institute (CARIRI) of Trinidad and Tobago. The CARIRI is an institution owned by the Government of Trinidad and Tobago, but dedicated to the industrial and economic development of the entire Caribbean region. The CARIRI is a lead regional agency in areas such as technology diffusion, innovation, and training. Moreover, the CARIRI is executing a MIF-financed program aimed at facilitating and supporting the adoption of ICTs in SMEs of Trinidad and Tobago (TT-M1009).

III. DESCRIPTION OF THE ACTIVITIES AND OUTPUTS

- 3.1 To accomplish its objectives, the TC will be structured around three components:
- 3.2 **Component I. Design and testing of pilot projects to foster broadband adoption and usage.** This component will support the design, implementation, and evaluation of innovative pilot projects aimed at improving MSME productivity through broadband access, adoption and usage. The pilot projects will focus on testing (i) public regulation aimed at facilitating broadband access and adoption; (ii) public policies which directly promote the

³ For example, the only LAC country that collects information about cloud computing in firms is Costa Rica (Rovira and Stumpo, 2013).

adoption and usage of broadband; (iii) institutional settings that favor the design and implementation of effective policies and regulation. In order to do so, the Component will finance: (i) a comprehensive assessment of existing public initiatives (policies, regulation, and institutional setting) related to broadband access, adoption and usage, with emphasis on the identification of areas of improvement and opportunities for the introduction of innovative and/or complementary initiatives; (ii) on the basis of the review's findings and international best practices, design of an action plan to reform the existing initiatives in order to maximize impact; (iii) implementation of pilot projects to test the viability and evaluate the cost-effectiveness of the reformed and/or newly introduced initiatives; (iv) evaluation of the pilots in the most rigorous possible way, preferably through a randomized control trial (RCT).⁴

- 3.3 This component's products will include: (i) assessment report of existing public initiatives; (ii) action plan for the implementation of reformed and/or innovative initiatives; (iii) technical and operational design of the reformed and/or innovative initiatives (including 2 working groups led by international experts with the implementing agencies' management and staff); (iv) design and implementation of impact evaluations and Cost-Benefit analyses of the tested initiatives (including data collection, preparation, and analysis); (v) design and implementation of trainings of the staff responsible to manage the tested initiatives once fully deployed by the implementing agency.
- 3.4 **Component II. Improving statistical information on broadband and ICTs in firms.** This component will initiate and support a coordinated work in LAC countries to establish a common framework to measure the access and usage of broadband and ICTs in enterprises, in order to obtain adequate comparable statistical information in the area. This will allow scholars and experts to deepen the research on the relationship between broadband, innovation, and productivity in LAC and, consequently, it will foster the ability of regional policy makers to take more effective evidence-based decisions. To achieve this, the Component will finance: (i) the elaboration of an initial conceptual framework, developed by a scientific external advisor, recognized authority in the field; (ii) one Regional workshop to present the conceptual framework to LAC national statistical offices and to reach an agreement on a proposal for a new model for ICT-in-firms survey for LAC; (iii) the testing of the new model, by implementing a pilot survey in one LAC country. The information collected through the new survey could constitute a valuable input for the Broadband Index and Balance Scorecard (DigiLAC), an IDB information tool on broadband in LAC.
- 3.5 **Component III. Dissemination of results.** This component will focus on the diffusion of the main results of the TC, in order to ensure the broader replication and scaling up of the tested reformed and/or innovative initiatives, as well as adoption of the proposed ICT survey. The following activities will be financed: (i) design and implementation of a training program for other LAC agencies implementing interventions aimed at promoting broadband access, adoption, and usage in firms. This activity could be carried out in collaboration with CEABAD⁵, a training center in Broadband supported by the IDB; (ii) production and dissemination of information on the results of the pilot projects. This

⁴ RCTs are the gold standard for measuring an intervention's impact in social sciences. In this way the findings on the effectiveness of the entrepreneurship support services will be unequivocal and conclusive.

⁵ Centro de estudios avanzados de Banda Ancha para el desarrollo

will be obtained using a variety of instruments, depending on the target public. For this purpose, the following products will be elaborated: 1 Policy Brief, 2 Blog Posts, 1 Working Paper and 1 Video; (iii) Dissemination of results of the implementation of the pilot ICT survey through the publication of 1 technical note.

IV. BUDGET

4.1 The indicative amount of funding needed for each component is indicated below.

Table IV- 1. Indicative Budget in US\$

Component	Description	IDB/Fund Funding US\$	Counterpart Funding US\$	Total Funding US\$
Component I	Design and testing of innovative pilot programs	\$300,000	\$100,000	\$400,000
Component II	Improving statistical information on ICTs in firms	\$100,000	-	\$100,000
Component III	Dissemination of results	\$40,000	-	\$40,000
Total		\$440,000	\$100,000	\$540,000

V. EXECUTING AGENCY AND EXECUTION STRUCTURE

5.1 The Bank's Policy GN-2470 establishes that the Bank may execute TC in areas of its expertise provided that the proposed activities are consistent with the Bank's strategies and programs. The IDB has a long tradition in the evaluation of Science, Technology and Innovation (STI) programs⁶ and in the production and analysis of STI⁷ indicators, justifying the fact that the IDB will be the executing agency.

VI. PROJECT RISKS AND ISSUES

6.1 There are no major implementation risks. However, the success of the project will depend on the capacity of CARIRI or other selected partners to effectively manage the pilot program. In order to mitigate this risk, the project team will work closely with partners in all the phases of the project. Moreover, choosing partners with previous successful experience with the Bank will substantially reduce this risk.

VII. ENVIRONMENTAL AND SOCIAL CLASSIFICATION

7.1 Given the nature of the program, there are no associated environmental or social risks. Based on the Environment and Safeguards Compliance Policy (OP-703) this operation is classified as "C." (See [Safeguards Policy Filter Report and the Screening Form.](#))

⁶ In addition to a long list of program evaluations, in 2011 the IDB has published the document: "Evaluating the Impact of Science, Technology and Innovation Programs: a Methodological Toolkit" (Crespi, Maffioli, Mohnen and Vazquez), that is widely used in the region.

⁷ The Division of Competitiveness and Innovation (CTI) publishes periodically since 2006 the document: "Science, Technology and Innovation: a statistical compendium", that has made the IDB a regional reference in the field.