

## TC Document

### I. Basic Information for Technical Cooperation (TC)

▪ Country/Region:	REGIONAL
▪ TC Name:	The Technological Revolution And The Institutions Of The Future
▪ TC Number:	RG-T3500
▪ Team Leader/Members:	Keefer, Philip Edward (IFD/IFD) Team Leader; Benavente, Jose Miguel (IFD/CTI); Catano Guzman, Mariana (IFD/ICS); Fernandez Diez, Maria Carmen (IFD/CMF); Lopez, Osvaldo (IFD/IFD); Negret Garrido, Cesar Andres (LEG/SGO); Pessino, Carola (IFD/FMM); Roseth, Benjamin David (IFD/ICS)
▪ Taxonomy:	Research and Dissemination
▪ Operation Supported by the TC:	
▪ Date of TC Abstract authorization:	07 May 2019.
▪ Beneficiary:	The country members of the IDB
▪ Executing Agency and contact name:	Inter-American Development Bank, Institutions for Development Dept, IFD/IFD
▪ Donors providing funding:	OC Strategic Development Program for Institutions(INS)
▪ IDB Funding Requested:	US\$200,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	24 months
▪ Required start date:	January 1, 2020
▪ Types of consultants:	Individual consultants, non-consultancy services will also be required.
▪ Prepared by Unit:	IFD-Institutions for Development Sector
▪ Unit of Disbursement Responsibility:	IFD-Institutions for Development Sector
▪ TC included in Country Strategy (y/n):	
▪ TC included in CPD (y/n):	
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Institutional capacity and rule of law

### II. Objectives and Justification of the TC

- II.1 This IDB has invested significant resources in the generation of knowledge to identify the potential benefits of new technologies for the public and private sectors of ALC. Bank operations also offer significant and increasing support to the region's technological transition. However, large benefits from technological change remain to be tapped by the region. Lags in accruing these benefits may have more to do with the pace of institutional reform than of technological change, per se. However, we lack a systematic understanding of the impact of institutions on technological change and the implications of technological change for the institutional reform agenda. To better assist governments in the region as they work to take advantage of the technological revolution, this project seeks to provide an integrated vision of the interaction between technological change and institutional reform. This work directly contributes to the

Bank's Institutional Strategy, to work with the region to improve institutional capacity and the rule of law.

- II.2 Institutions affect the willingness of governments and the private sector to embrace and invest in new technology and the benefits that new technology yields for citizens. Technological change also creates new institutional challenges, the response to which also affects the speed and benefits of new technology. The knowledge gap regarding these effects has important operational implications. Mismatches between institutions and technology hinder disbursement and reduce – even erase – the potential benefits of technological modernization. Mismatches have development implications: the same institutional obstacles that hinder technology adoption may also impede the emergence of better government and a more efficient private sector, reducing citizen confidence in government and slowing growth.
- II.3 The project will be organized around three fundamental propositions concerning the interaction of institutions and technological change. In all of these, the underlying theme is that although the information revolution has radically reduced the costs of accessing and processing information, information is not the only obstacle to public and private sector productivity. Institutions affect whether more and better information improve citizen welfare.
- a) **Political and administrative institutions shape public and private sector incentives to adopt new technologies.** Citizens are better off when both the public and private sectors seek to improve the services, they provide citizens and to do so at lower cost. Public sectors with only a weak focus on getting “value-for-money”, or that do not reward innovation in service delivery, are less likely to adopt new technologies. Private sectors that face weak competitive pressures are similarly less driven to improving product quality or lowering cost. The policy advice that emerges from this part of the project will inform governments about (i) how to strengthen incentives in the public and private sectors to improve citizen welfare, and (ii) how these stronger incentives will allow them to accelerate the adoption of new technologies.
  - b) **Institutional bottlenecks can limit the benefits of new technologies.** Through the better management of information, governments and firms can better serve citizens and customers at lower cost. New technologies help them to remove information bottlenecks. However, other bottlenecks to greater public and private sector productivity are unrelated to information. To the extent that broader institutional reforms do not remove obstacles elsewhere in the system, new technology that removes information bottlenecks may not improve outcomes. Three examples make this clear. (i) Better technologies for detecting tax evasion have little effect on tax collection if the institutional framework for prosecuting tax evaders is fragile. (ii) One organization's adoption of technology may have little benefit unless institutions are in place that promote the adoption of technologies by other organizations. The tool “Building Information Modelling” (BIM) significantly reduces the costs of building infrastructure, but only if all firms involved in a project are willing to use it. (iii) Citizen security depends not only on whether police use new technology to identify dangerous places, but on whether government agencies work together to reduce insecurity. Work in this area will yield policy advice to governments about institutional reforms that can allow them to extract the full benefits for society of new technologies.

- c) **Institutional/regulatory responses to new technology can increase or eliminate its benefits.** Technological changes disrupt institutional equilibria and create social demands for institutional change. The resulting institutional changes may promote the welfare-enhancing uses of the new technology or may substantially curb its use. Examples of these challenges are well-known: how the rules governing privacy and the ownership of personal data should be changed in response to the digital revolution; how should the regulation of services evolve in the face of the growth of the sharing economy; how should labor market relationships be regulated with the growth of the “gig” economy? There is little consensus about the economic and social consequences of different regulatory responses to these questions. The work under this TC will provide guidance to governments of the tradeoffs they should keep in mind as they consider introducing new regulations to contend with the challenges posed by new technology.
- II.4 The work undertaken under this TC is intended to help governments integrate their institutional and technological reform agendas, particularly those related to information/digital technology. To increase country demand for institutional reform, it will show how, and which, institutional reforms can accelerate the adoption of new technologies in both the public and private sectors, and significantly increase the development payoff to adoption. New technologies also pose new institutional challenges (from privacy to financial sector regulation). The work will identify the tradeoffs among different institutional responses to these challenges. Finally, the work will account for the fact that countries differ in the maturity and sophistication of their institutions and in their capacity to adapt new technologies.
- II.5 **Complementarity.** This TC complements other Bank initiatives around the digital transformation and technological transformation, in particular RG-T3456 “Digital Transformation in Tax Administration”; RG-T3301 “Innovation in Information Management: Adoption of Disruptive Technologies for the Promotion of Digital Transformation”; RG-T3259 “Tax compliance in the Developing Digital Economy: The Case of LAC”; RG-T3287 “Enhancing Digital Finance Ecosystems in LAC: Lessons from China”; and RG-T3313 “The Future of Government Work in Latin America and the Caribbean.”
- II.6 **Strategic Alignment.** The objectives of this TC are aligned with the update to the IDB Institutional Strategy 2020 (AB-3008) as it will: (i) build institutional capacity (in support of the “institutional capacity” cross-cutting topic); (ii) help address the structural challenges to using technology to increase public and private sector productivity. It is aligned with the objectives of the Ordinary Capital Strategic Development Program for Institutions (GN-2819-1) to contribute to more effective, efficient and citizen-centered institutions, and with Corporate Results Framework indicator #25: “government agencies benefited by projects that strengthen technological and managerial tools to improve public service delivery.” By providing guidance on institutional reforms that enhance the take-up and benefits of new technologies, the objectives of the TC are aligned with the Corporate Results Framework 2016-2019 (GN-2727-6) and the OC Strategic Development Program for Institutions (INS).
- III. Description of activities/components and budget**
- III.1 The general objective of this TC is to integrate cutting-edge research and worldwide experiences with the region’s own experiences with technological change. Use that

integral vision to develop an institutional agenda for the future to support policy dialog and capacity building in the region.

- III.2 **Overview, Components 1 and 2:** The three propositions above will be examined through the first two components of the project, one yielding broad-based analyses of the three propositions and the other specific sectoral experiences with technological change in Latin America and the Caribbean. These will yield new knowledge products that will be the intellectual property of the Bank.
- III.3 A critical product of both components will be an institutional agenda for the future for the region. When work under this TC is completed, governments of the region will have a more complete roadmap of how the institutional reforms that they can pursue in order to enhance the benefits their countries receive from the technological revolution. To ensure that this roadmap is relevant for them, it will be essential that regional and sectoral interlocutors be involved in the process from the outset, validating and providing feedback on the design of the studies and on the conclusions and institutional recommendations that they yield
- III.4 **Component 1. Identify the institutional agenda that emerges from cutting-edge research and global experiences with technological change (\$60,000).** The products of Component 1 will be based on reviews of cross-country experiences and prior research to draw new conclusions about the institutional reform agenda in Latin America. In the case of the first proposition, the work will identify key institutional features that affect incentives to innovate; review existing evidence about the effects of these features on the adoption of new technologies; and characterize the presence or absence of these features in different countries of ALC.
- III.5 In the case of the second proposition, one product will identify cross-organizational factors that countries should take into account that affect the benefits of technological change, such as those that hinder or promote coordination across organizations. The other product will identify within-organizational factors that condition the benefits of new, especially information, technologies.
- III.6 The final product of Component 1 will identify the most prominent regulatory challenges raised by the information revolution; characterize the tradeoffs that governments should take into account when considering regulatory alternatives over others; and summarize relevant evidence.
- III.7 Jointly, these products will form the basis for an institutional reform agenda that can be shared with countries of the region to help them overcome bottlenecks that prevent them from fully enjoying the benefits of the technological revolution. The preparation of all these inputs will be accompanied by an ongoing dialogue with regional policy makers to ensure an alignment between the challenges identified by subject experts and those perceived by policy makers in the region.
- III.8 **Component 2. Experiences with technological change in Latin America and the Caribbean (\$90,000).** The project will also identify the implications for the institutional reform agenda of the region's experience with technological change in the areas of fiscal policy, the financial sector, public sector management and transparency, private sector innovation and citizen security. These sectors meet three conditions that are important for the work: technological change has happened, at least in some countries and sectors; the three propositions have proven to be salient and important; and there is a demand for better understanding of the interaction between institutions and technology since, despite the technological changes that have occurred, we do not

see corresponding improvements in access to credit, tax collection, spending efficiency, the level of effort exerted by public employees, or crime.

- III.9 For this work, we will identify one or two key technological advances that are regarded as important to the sector and, through country case studies (one or two per technological advance, as determined in consultation with specialists), review country experiences with these technologies. For each technology, we will identify lessons with respect to each of the three propositions above. What institutional changes would have allowed countries to accelerate the adoption of new technology? What institutional changes would have allowed countries to extract more benefits from the technological changes they implemented? What tradeoffs might countries have more closely considered when they introduced new regulations in response to new technology?
- III.10 We expect that sectoral experts, from and with deep experience in the region, will conduct these analyses. In addition, we will seek to utilize social media in order to attract information from the “grass roots”. How has technological change touched citizens, in their roles as customers, public sector employees, or private sector workers?
- III.11 Components 1 and 2 will yield policy recommendations that provide a roadmap to the region of how best to adjust the institutional reform agenda to adapt to technological change. What institutional changes are needed to maximize the benefits of technological change? What are the tradeoffs implicit among the different regulatory responses to the challenges that new technologies present? And how do the answers to these questions – how does the institutional agenda – differ across countries that are more and less advanced with respect to technology and institutional development?
- III.12 **Component 3. Dissemination and Dialogue (\$50,000).** Outreach will be a feature of the work from the outset. During the project, regional inputs, from policy makers and citizens, will be sought to ensure the relevance of the challenges identified and the formulation of the agenda.
- III.13 When work is complete, we will use multiple channels to disseminate the findings. Components 1 and 2 exhibit substantial synergies: the broad lessons of the first component are relevant for all sectors, and the lessons of some sectors are relevant for others. Hence, presenting the conclusions jointly, in regional dialogues, conferences, and as a book, will be important.
- III.14 In addition, though, and to better reach different audiences, including sector-specific audiences, the individual analyses will also be disseminated through various formats, including blogs and individual Bank publications, such as technical notes. Social media outlets will be exploited to disseminate key messages, both from the overall project and from specific sector analyses. In all cases, the goal of the dissemination effort is not only to disseminate knowledge, but to advance and to create enthusiasm for the institutional reform agenda that emerges from the project.

### Indicative Budget

Activity / Component	Description	IDB/Fund Funding	Counterpart Funding	Total Funding
Component 1	Broad-based analyses	\$60,000	\$0	\$60,000
Component 2	Case studies	\$90,000	\$0	\$90,000
Component 3	Publication costs and Policy Dialogues	\$50,000	\$0	\$50,000
Total		\$200,000	\$0	\$200,000

#### IV. Executing agency and execution structure

- IV.1 This TC will be executed by the Bank, consistent with Annex 10 of GN-2629, which states that “Research and Dissemination (RD) TCs by definition are Bank initiatives, hence it is responsible for the selection and hiring of consultancy services; no justification is required (there should be no counterpart).” Within the Bank responsibility for execution of the TC will rest with the Institutions for Development Department, and specifically the Front Office of the Department, IFD/IFD. The Front Office will be in charge of the selection and hiring of respective consultants and ensuring compliance with Bank policies and procedures. Specifically, the Bank will follow the (a) AM-650 for Individual Consultants; (b) GN-2765-1 and Guidelines OP-1155-4 for Consulting Firms for services of an intellectual nature and; c) GN-2303-20 for logistics and other related services.
- IV.2 Execution by IFD/IFD is justified as the work involves activities that cut across the entire Institutions for Development department, and the Front Office has substantial experience managing research projects of this nature.

#### V. Major issues

- V.1 This is a low risk TC. —The main challenge is to ensure that our clients in the region embrace the results of the work. We will mitigate this risk by engaging significantly with the expert consultants who will undertake the analyses and arranging for workshops at which the individual products will be presented to knowledgeable regional audiences.

#### VI. Exceptions to Bank policy

- VI.1 This operation does not foresee any exceptions to Bank policy.

#### VII. Environmental and Social Strategy

- VII.1 There are no environmental or social risks associated with the activities outlined in this operation; therefore, its environmental classification is "C", according to the Environment and Safeguard Compliance Policy (OP-703), (See [Safeguard Policy Filter Report \(SPF\)](#) and [Safeguard Screening Form \(SSF\)](#)).

#### Required Annexes:

- [Results Matrix - RG-T3500](#)
- [Terms of Reference - RG-T3500](#)
- [Procurement Plan - RG-T3500](#)